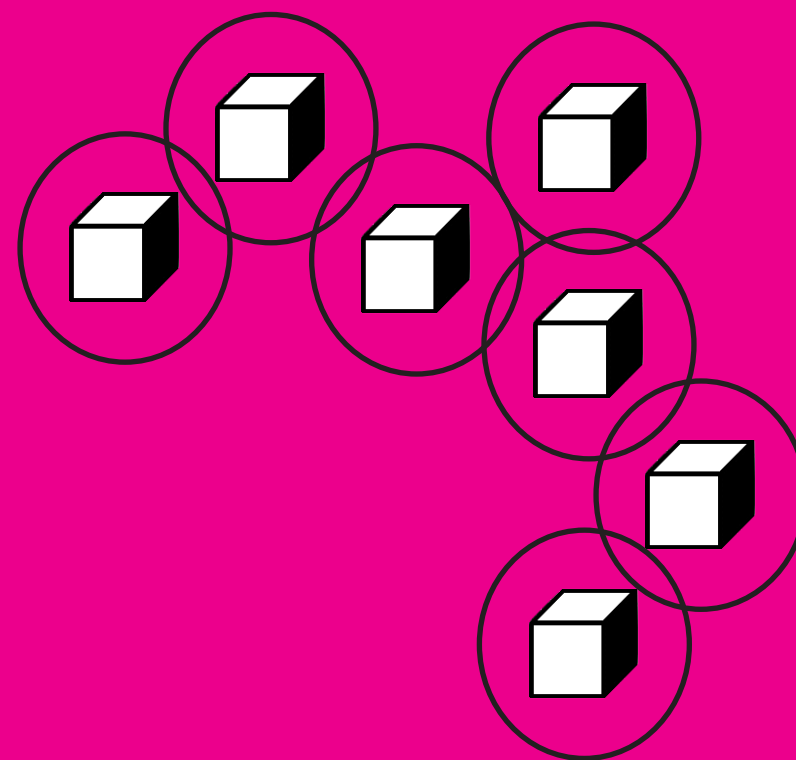


An Introduction to
**DEVELOPMENT
PLANNING
IN THE THIRD WORLD**



**DIANA CONYERS AND
PETER HILLS**

A WILEY SERIES ON
PUBLIC ADMINISTRATION IN DEVELOPING COUNTRIES

FINANCING REGIONAL GOVERNMENT
International Practices and their Relevance to the Third World
By K. J. Davey: University of Birmingham

LOCAL GOVERNMENT STUDIES IN THE THIRD WORLD
The Experience of Tropical Africa
Edited by P. Mawhood: University of Birmingham

MANAGEMENT OF PASTORAL DEVELOPMENT IN THE THIRD
WORLD
By Stephen Sandford: Overseas Development Institute

AN INTRODUCTION TO DEVELOPMENT PLANNING IN THE THIRD
WORLD
By Diana Conyers: University of Nottingham
and
Peter Hills: University of Hong Kong

An Introduction to Development Planning in the Third World

Diana Conyers
*Institute of Planning Studies,
University of Nottingham*

and

Peter Hills
*Centre of Urban Studies and Urban Planning,
University of Hong Kong*

JOHN WILEY & SONS

Chichester · New York · Brisbane · Toronto · Singapore

Copyright © 1984 by John Wiley & Sons Ltd.

All rights reserved.

No part of this book may be reproduced by any means, nor transmitted, nor translated into a machine language without the written permission of the publisher.

Library of Congress Cataloging in Publication Data:

Conyers, D.

An introduction to development planning in the Third World.
(Public administration in developing countries)

Includes bibliographies and indexes.

1. Underdeveloped areas—Economic policy.
 2. Economic development—Planning.
 3. Economic development projects—Planning.
- I. Hills, Peter J.
II. Title. III. Series.

HC59.7.C634 1984 338.9'009172'4 83-10565

ISBN 0 471 90231 4

British Library Cataloguing in Publication Data:

Conyers, Diana

An introduction to development planning in the Third World.

—(A Wiley series on public administration in developing countries)

1. Underdeveloped areas—Economic policy
2. Economic development

I. Title II. Hills, Peter

339.5'009172'4 HC59.7

ISBN 0 471 90231 4

Typeset by C. R. Barber & Partners (Highlands) Ltd.,
Fort William, Scotland.
Printed by the Pitman Press Ltd., Bath, Avon.

*For the Students at the
Institute of Planning Studies
University of Nottingham*

Acknowledgements

It is not possible to acknowledge by name all the people who have contributed in one way or another to the writing of this book. Our decision to write the book arose from our experiences in teaching planning courses for overseas students, particularly—but not only—in the Institute of Planning Studies at the University of Nottingham, and its contents reflect both our attempt to survey a wide range of earlier planning literature and our individual—and very different—personal experiences in practical planning situations. We are, therefore, indebted to colleagues and students in several different countries and work environments, as well as to other writers in the field of planning studies.

We would, however, like to acknowledge specifically the assistance of Renata Loj—who typed the manuscript, Gillian Thomas—who prepared the diagrams, and Lynne Bellamy—who supported and encouraged us in many ways. Finally, we would both like to thank Maria, Jonathan, and Timothy Hills for their toleration and support.

DIANA CONYERS
PETER HILLS

Contents

Introduction	xiii
--------------------	------

PART ONE: THE NATURE AND SCOPE OF DEVELOPMENT PLANNING

Chapter 1 Introduction to Planning	3
Introduction	3
Elements of planning	3
Types of planning activity	8
Planning, planners, and plans	13
Planning, policy-making, and implementation	14
The political context of planning	17
Conclusion	18
Guide to further reading	19
Chapter 2 Concepts of Development	21
Introduction	21
Development and underdevelopment	22
Development as a goal	23
Development as a process	31
Conclusion: the diversity and dilemma of development	36
Guide to further reading	37
Chapter 3 The History of Planning in the Third World	41
Introduction	41
Economic development planning	42
Physical planning	53
An integrated approach to development planning	58
Guide to further reading	60
Chapter 4 Summary and Conclusions	62

PART TWO: TECHNIQUES FOR PLANNING

Chapter 5 The Planning Process	67
Introduction	67
Rationality in planning	67

Uncertainty in planning	70
Perspectives on the nature of the planning process	71
A view of the planning process	73
Techniques in planning	81
Choosing planning techniques in the Third World	83
Conclusions	85
Guide to further reading	85
The planning process	86
Chapter 6 The Collection, Analysis and Presentation of Data	88
Introduction	88
The role of data in planning	88
Identifying data needs	89
Data collection	101
Analyzing, presenting and storing data	109
The organizational machinery for handling data	112
Conclusion	113
Guide to further reading	114
Chapter 7 Modelling and Forecasting	117
Introduction	117
The nature of models	117
Mathematical models in planning	118
Forecasting techniques	123
Constraints on the use of mathematical models	127
Conclusions	128
Guide to further reading	128
Chapter 8 Appraisal Techniques	130
Introduction	130
What is appraisal?	130
Appraisal problems	133
Appraisal techniques	134
Presenting appraisals	147
Selecting options	147
Conclusions	148
Guide to further reading	148
Appendix: Example of the data required in a cost-benefit analysis and the consequent calculations	151
Chapter 9 Implementation, Monitoring, and Evaluation	154
Introduction	154
What is implementation?	154
Factors affecting plan implementation	156
Some implementation techniques	159

Managing the implementation process	163
Monitoring and evaluation	169
Conclusions	175
Guide to further reading	175

Chapter 10 Summary and Conclusions	178
---	------------

PART THREE: ORGANIZATION FOR PLANNING

Chapter 11 Organization and Planning	185
Introduction	185
The nature of organization	185
The organization of planning	189
Some practicalities	190
Guide to further reading	191

Chapter 12 The Operational Level of Planning Activity	193
Introduction	193
Project planning	193
Sectoral planning	197
Integrated area planning	200
Comprehensive national planning	206
Guide to further reading	208

Chapter 13 The Spatial Level of Planning Activity	211
Introduction	211
Planning and implementation: spatial implications	211
The concepts of centralization and decentralization	213
The case for centralization	216
The case for decentralization	219
The choice of spatial planning levels	223
Guide to further reading	226

Chapter 14 Planners and Planning Agencies	229
Introduction	229
The professional planner	229
Planning agencies	234
Education for planning	241
The planner in society	245
Guide to further reading	250

References	251
-------------------------	------------

Author Index	259
---------------------------	------------

Subject Index	259
----------------------------	------------

Introduction

When Albert Waterston published his classic work on development planning in 1965 (Waterston, 1965), one commentator, A. H. Hansen (1969, p. 249) while congratulating Waterston on the scope and depth of his work, questioned 'the status and—ultimately—the utility of the "teach-them-to-plan" type of book'. Since this book—although nothing like Waterston's monumental undertaking—might also be regarded by some as a 'teach-them-to-plan' book, we must also examine our justification for both its existence and its format. Our main justification for writing the book is that we believe that it fills a gap in contemporary literature on development planning. Its main objective is to provide an introduction to the nature, scope, methods, and organization of planning in developing countries and, in so doing, to bring together material from a number of different disciplines. We have, in particular, attempted to combine two main streams of the planning profession—that of economic development planning and that of physical or land-use planning—which have tended until now to be treated, at least in the Third World, as separate and unrelated fields of planning activity. We have also attempted to examine the relationship between planning in developed countries and planning in developing areas, and in particular to consider the extent to which approaches and techniques of planning evolved in the former countries (or by so-called 'experts' from these countries) are applicable in the latter.

It is obvious from the above that our scope is very broad. Inevitably, therefore, we have had to limit the depth with which we examine any particular aspect of planning. Thus we have not been able to discuss specific methodological or organizational issues in detail and, in particular, we have had to be selective in our coverage of specific planning techniques. In short—and to borrow an expression from decision-making theory (which we shall consider later in the book), we have been forced to adopt a 'satisficing' rather than an 'optimizing' approach to the book.

In selecting which topics to cover, and the depth with which they should be covered, we have been guided by two main considerations: firstly, the need to provide an overview of the full range of planning issues and approaches; secondly, the desire to emphasize those specific issues and techniques most likely to be useful to the reader. We have thus tended to focus on those techniques which are particularly relevant to conditions in developing countries and those which are applicable in a wide range of planning situations, rather than those which are confined to one specific type of planning problem or one particular disciplinary field of planning. In other words, the book is intended for the

'generalist' planner—or alternatively as an introductory general text for the more specialized planner.

The question of what is and is not relevant to Third World planners also warrants some discussion. The widespread, and often disastrous, tendency in the early post-war years to reproduce 'western' or 'northern' planning models and techniques in developing countries with little or no adaptation, has since been generally recognized and criticized. However, in some cases there has perhaps been an over-reaction, in the sense that it has sometimes been implied that nothing practised in the developed world is applicable in developing countries. Our stand—and perhaps increasingly that in development studies as a whole (Seers, 1982)—is somewhere in between these two extremes. We maintain that some transfer of methods and approaches is possible and one of our concerns here is to explore the extent to which this is so and the modifications which have to be made in the process. We would, in fact, go further and suggest that there is also much that the developed world can learn from planning experience in the Third World and, although this point is not specifically pursued in this book, we hope that planners in the developed countries will find some things of interest and relevance in it.

We hasten to add at this point that one of the problems of discussing relations between developed and developing countries—or between North and South, or whatever other terminology is used—is that we run the risk of assuming that environmental conditions, and therefore planning needs, are the same throughout the developing world. This, of course, is not the case. Lack of space has prevented us from introducing many detailed examples and case studies in this book. However, it should be mentioned that we have tended to draw more on the experiences of those countries with which we are ourselves most familiar, notably those of sub-Saharan Africa and the South Pacific. Our orientation may therefore be somewhat biased towards the conditions, needs, and experiences of those areas.

Another cautionary note concerns the extent to which this book can or should be regarded as a guide for planners. One of the reasons for Hansen's reservations about 'teach-them-to-plan' books was his belief that there are no easy answers to the problems of development in general, and development planning in particular, and there is a risk that books such as that of Waterston may make planning seem unrealistically easy. We agree with this, and thus emphasize that this book should not be regarded as a manual or a ready-made set of guidelines on how to plan. In fact, on the whole our aim has not been to offer specific solutions or prescribe specific practices and procedures, but rather to present to the reader the main issues which require consideration and the range of options available to him. Having said that, however, it should be noted that we have made a few presumptions about the approach to planning which we consider most applicable. The nature of these presumptions will become obvious as the book progresses; basically, however, they relate to our belief that planning should be seen as an ongoing process of decision-making and the implications of this in terms of the need for an integrated or multidisciplinary approach to planning and

in terms of the roles of various individuals and organizations—including professional planners and planning agencies—in the planning process.

We also realize that the many practical problems facing the planner in the Third World—ranging from inadequate data to acute shortages of essential administrative resources and rapid political change—limit the extent to which any systematic approach to planning can be adopted. We have attempted to take such problems into account in the book, especially in terms of the choice of planning techniques and the organizational aspects of planning, but it is still possible that we are over-ambitious in our expectations. Consequently, we emphasize that the book should be seen as an agenda setting out the various issues and options for discussion, rather than as a blueprint to be followed step by step.

Finally, a word is needed about the respective roles of the two authors in the production of this book. Hansen's comments on Waterston's book are again of interest here, since they were in fact made as part of a comparison between two (at the time) recent publications, the other being *Administration in Developing Countries* by F. W. Riggs (1964). The main point which Hansen actually makes is the enormous gap between the approaches adopted in these two books, and he goes on to call for greater synthesis of the two approaches thus represented—that of the 'social scientist' (in this case Riggs) and that of the 'public administration adviser' (Waterston). Thus he concludes (p. 251) that 'if the social sciences are to acquire operational utility in this field, a mighty effort must be made to bridge the gap'.

Our own backgrounds and approaches are not as different as those of Riggs and Waterston. Nevertheless, this book is to some extent a synthesis of two significantly different views of planning. Thus Peter Hills' main experience is in planning in developed countries and his interest in the subject material of this book arose from his experience of teaching planners from the Third World in the UK, and the issues which this raises. Diana Conyers' experience, on the other hand, has been in the Third World and it is only recently, on returning to the UK, that she has begun to make conscious comparisons with planning in developed countries. Similarly, Hills' main experience is in physical and land-use planning, while that of Conyers is in national and regional development planning, and Hills' main expertise is in planning techniques while Conyers' interest is in the organizational aspects of planning.

These divisions of experience and interest are reflected in the division of responsibility for the various parts of the book. Thus Part One, which is concerned with the nature and history of planning, is in the main a joint effort. Part Two, which examines the process of planning and specific planning techniques, is primarily the responsibility of Hills, while the last part, which focuses on the organization of planning, has been written by Conyers.

Part One
*THE NATURE AND SCOPE OF
DEVELOPMENT PLANNING*

Chapter 1

Introduction to Planning

Introduction

The term 'planning' is used in so many different ways that there is often confusion about what people actually mean when they talk about planning or when they use words such as 'plans' and 'planners'. Moreover, many of its uses are so broad that the basic elements of planning are difficult to identify and it cannot easily be distinguished from related activities, such as policy-making or plan implementation. It was partly this confusion over the use of the term planning which led one writer on the subject to call his article 'If planning is everything, maybe it's nothing' (Wildavsky, 1973).

The purpose of this chapter is to remove some of the confusion which surrounds the word planning and, at the same time, to clarify the way in which we shall be using certain basic terms and concepts related to planning in the rest of this book. We shall begin by attempting to identify the main elements of planning and the different forms which it may take. Then we shall look at the relationship between planning, planners and plans and at the related processes of planning, policy-making, and implementation.

Elements of planning

There are, as we have already indicated, innumerable definitions of planning. Most textbooks on the subject offer new definitions and many national policy documents or statements by individual political leaders introduce their own definitions to suit the particular image of planning which they wish to convey. Nevertheless, despite the surfeit of existing definitions, some sort of working definition of planning is necessary for the purposes of this book. We shall, therefore, define planning as *a continuous process which involves decisions, or choices, about alternative ways of using available resources, with the aim of achieving particular goals at some time in the future*. This definition attempts to incorporate the main points included in most other definitions and thus to convey the most important elements of the concept of planning. In order to explore the nature of planning in more detail, we shall now examine each of these basic elements in turn.

'To plan means to choose'

President Nyerere of Tanzania introduced this definition of planning in a speech to launch his country's Second Five-Year Plan (Nyerere, 1969, p. x) and, in so

doing, he expressed very clearly one of the most important elements of planning. Planning involves making decisions about which of a number of courses of action to adopt—in other words, making choices.

There are two main types of choices involved in planning. President Nyerere's main concern in his speech to the Tanzanian people was that they should not be disappointed if the plan did not appear to meet all their needs or expectations. He emphasized that it was not possible to provide everything for everybody all at once and that the plan represented the result of a process of choosing which things should be given priority. Planning, he said, 'means choosing between many desirable activities because not everything can be done at once' (Nyerere, 1969, p. ix).

However, planning also involves making choices between alternative courses of action; in other words, about alternative ways of achieving the same objective. Let us take one of the simplest examples of planning, that of planning a journey. In most cases there will be a number of alternative ways in which the prospective traveller can reach his destination—including different routes and different modes of transport—and planning the journey involves deciding which of these ways to take.

Although these two types of choice are different, they involve similar processes of decision-making. The relationship between planning and decision-making is so important that much of the more theoretical literature on planning is concerned with alternative approaches to decision-making, particularly with the factors which are taken into account when making decisions and the sequence of actions within the decision-making process. Furthermore, many of the specified techniques used by planners are designed to improve the way in which decisions are made. We shall examine many of these techniques and the nature of the decision-making process in Part Two. Meanwhile, as we go on here to look at the other basic elements of planning we shall also learn more about planning decisions.

Planning as a means of allocating resources ✓

Another important element of planning is that it is concerned with the allocation of resources. We use the term 'resource' here to refer to anything which is considered by those making decisions to be of potential use in achieving a particular objective. This definition thus includes not only natural resources (land, water, mineral wealth and so on) but also manpower (or 'human' resources), capital resources (such as roads, buildings and equipment) and finance. Moreover, it also recognizes that the definition of what is and what is not a resource may vary, depending on the user's objective and on his perception of its value and his ability to make use of it.

Planning involves making decisions about how to make the best use of the available resources. Consequently, the quantity and quality of these resources has a very important effect on the process of choosing between different courses of action. On the one hand, the fact that there are almost always limits to the

quantity and quality of resources available, is the main reason why planning involves deciding which of a number of desirable courses of action should be given priority. Thus Nyerere, in the speech from which we quoted above, emphasized that limitations of such resources as finance and skilled manpower made planning particularly important for Tanzania. On the other hand, where choices have to be made between alternative courses of action, the availability of resources plays an important part in determining both the range of alternatives available and the one which is likely to be most acceptable.

Because planning is concerned with the allocation of resources, an important component of the planning process is the collection and analysis of information about the availability of existing resources. This raises both conceptual and methodological questions. It raises conceptual questions about how thorough the process of information collection should be, in terms of the quantity and quality of the information which should be available before planning decisions are made, and we shall examine these further in Chapter 5. It also raises methodological questions about ways of collecting and analysing information, which we shall consider in Chapter 6.

Planning as a means of achieving goals ✓

It is not enough to say that planning involves making decisions about the use of resources because the 'best' use of any particular set of resources will depend very much on what one is trying to achieve. In other words, planning involves making decisions about alternative ways of achieving particular goals. We already implied this when we used the example of planning a journey. In that case the goal of the planning exercise was to reach a particular destination and the traveller had to decide the best way of getting there. This example illustrates the importance of having some sort of goal, since there would be little point in planning a journey unless one knew what one's destination was.

Let us look at the relationship between planning and the achievement of goals in a more complex planning situation, that of agricultural planning. Agricultural planning involves making decisions about the type of agricultural activities to be developed, the location of these activities, the methods of production to be used, the type of infrastructure and extension services required, and so on. But it is very difficult to make these kinds of decisions unless one knows what one is trying to achieve. For example, is the main aim to increase domestic food production or to increase the production of export crops? And is it more important to maximize output per hectare or to ensure an equitable distribution of the benefits from agricultural production?

The concept of planning as a means of achieving goals raises issues about the nature of the goals and the process of goal formulation. One of the problems which planners often have to face is that their goals are not adequately defined. Very often they are too vague. For example, the goal of 'increasing agricultural production' would not provide much guidance for the agricultural planners. In

other cases the goals are unrealistic, given the resources available to achieve them. In many cases, planners are also faced with the task of trying to achieve more than one goal and on some occasions one of these goals is inconsistent with another. Thus it would be difficult for planners to maximize output per hectare and reduce inequalities between farmers because these two goals are often in conflict with each other. Less common, but more serious when it occurs, is the situation where there are no meaningful goals at all, or where the goals are obviously contrary to the interests of the majority of the country's population.

What should the planners do in such cases? They have a number of options. They may try to plan as best they can, using the vague or poorly defined goals as a starting point and hoping that, as time goes on, the situation will become clearer or they will receive other vague directions to indicate which way they should be going. This approach, which is generally called *incremental* planning, may be illustrated by further reference to the example of the agricultural planners who are merely told to 'increase agricultural production'.

They may begin by considering ways of increasing several different types of agricultural production—including, for example, production both for domestic use and for export or both crop and animal husbandry—until they receive further guidance about the particular type of production which should receive priority. In some cases they may attempt to hasten the process of goal formulation by seeking further clarification on specific issues from, for example, the minister responsible for agriculture or other appropriate sources.

Alternatively, the planners may decide to formulate their own goals. Thus the agricultural planners may themselves decide that, for example, priority should be given to increasing the production of food crops for domestic use and then plan accordingly. The problem in this case arises if, at a later stage, these goals are questioned or alternative goals formulated by the politicians or others responsible for goal formulation.

As a final alternative, the planners may decide to do nothing until they receive clearer or more acceptable goals. However, it should be remembered that deciding to do nothing is, in fact, making a decision to carry on in the same way as one is presently doing. Thus, in the case of the agricultural planners it would mean continuing existing agricultural programmes. It is, therefore, not quite such a negative action as it may at first appear to be.

We mentioned above that one option is for the planner to set his own goals. This raises another complex set of issues about who should be responsible for the formulation of goals and whose interests should be represented when formulating these goals. These issues lead us on to questions about the relationship between politics and planning and the respective roles of politicians and planners, and to a discussion of the role of popular participation in the planning process. We shall return to all these issues at various stages in the book. We shall examine some of the more theoretical or conceptual points in Chapter 5, when we look at processes of decision-making in more detail, and we shall consider the implications for the organization of planning—including the role of the planner and aims and methods of popular participation—in Part Three. We

shall also touch upon them again in the last section of this chapter, when we consider the relationship between policy-making and planning.

✓ *Planning for the future*

There is one other important element of planning which is incorporated in most definitions—that is the time element. The goals which planning is designed to achieve obviously lie in the future and planning is thus inevitably concerned with the future.

This concern with the future manifests itself in two main ways. One manifestation is that an important part of planning involves forecasting, or making predictions about, what is likely to happen in the future and, more specifically, predicting the outcome of alternative courses of action in order to determine which one to adopt. It is, of course, impossible to know exactly what is going to happen in the future and planning therefore inevitably involves a degree of uncertainty and risk. However, there are various techniques which planners can use to improve the accuracy of their predictions and to deal with the problems of risk and uncertainty. We shall examine some of these in Part Two, particularly in Chapter 7.

The other manifestation of planning's concern with the future is its role in scheduling future activities. Planning involves not only deciding what should be done to achieve a particular goal but also deciding the sequence in which the various activities should be performed in order to proceed in a logical and orderly manner, step by step, towards the achievement of the goal. The various ways in which this can be done will also be examined in Part Two, especially in Chapter 9.

How far into the future does planning extend? This depends entirely on the nature of the particular planning activity. At one extreme there are some activities which individuals or organizations may have to plan on a daily—or even an hourly—basis, and at the other extreme some planning exercises involve making predictions about the state of the world several decades into the future. For example, the Independent Commission on International Development Issues (usually called the Brandt Commission), which was set up in 1977, was concerned with examining 'relevant trends in the world economy, particularly for the 1980s but also looking further into the future' (Independent Commission on International Development Issues, 1980, p. 297) and its plans for the period from 1980 to 1985 were regarded merely as a short-term 'emergency programme'. However, the types of planning with which we shall be dealing in this book generally have a time horizon somewhere between these two extremes, usually within the range of one to ten years.

Discussion of alternative time horizons for the preparation of plans runs the risk of giving the impression that planning is a finite activity. It suggests that a plan is prepared for a fixed period of time (for example, for the next five years) and that when the plan has been prepared, planning comes to a halt—until the end of the five years, when it is time to start planning for the next five-year period. We shall see in subsequent chapters that in the 1950s and 1960s many planners

adopted this view of planning but that, more recently, it has become generally accepted that planning should be regarded as a continuous activity. This means that, although it may be necessary to plan for a specific time period, the plans should be constantly monitored and reviewed during this period and, if appropriate, extended into another planning period. We shall consider the methodological implications of this in Part Two, especially in our examination of the various techniques for the monitoring and evaluation of plan performance in Chapter 9.

Finally, it should be noted that, although planning is inevitably concerned with the future, this does not prevent planners from devoting a great deal of their attention to studies of past and present situations. In fact, studies of the present are essential in order to provide information about existing conditions and needs and the resources currently available for development, while historical studies can provide a useful basis for predicting possible future trends.

Types of planning activity

The concept of planning which we have described so far covers a very wide range of activities. At one extreme, our example of a man who plans a journey from his home to a destination perhaps a few hundred kilometres away is engaged in planning. He has to choose between alternative routes and methods of transport, taking into account the resources (money, types of transport) and time available to him and the location of his destination and he has to schedule the various stages of his journey. Similarly, the farmer who has to decide what crops to grow each year is planning. He has to decide how much of each crop to plant and where and when to plant it, and when making such decisions he has to consider the availability of resources such as land, rainfall, seed, manpower, finance, and technical equipment. Moreover, he also has to consider what his main goal is: for example, to maximize his production of either food crops or cash crops—or perhaps to maximize his leisure time.

At the other extreme, economists in the ministry of finance or in a national planning agency, who are responsible each year for advising how the country's income should be balanced against its expenditure, are also involved in planning. In this case they are making choices between alternatives such as increasing taxes (and if so, which taxes?) and reducing government expenditure (on what items and in which parts of the country?) or between expanding export production (by what means?) and reducing imports (of what goods?); and in making such choices they have to consider not only a few easily identifiable resources but the whole complexity of the national economy. On an even larger scale, attempts to design a 'new international economic order'—such as the proposals made by the Brandt Commission which we mentioned earlier—are also examples of planning, this time at an international level.

In this section we suggest some ways of classifying these different types of planning activity and consider which types are within the scope of this book. There is no one generally accepted method of classifying planning activities. We

have chosen here to examine four different—but related—criteria which can be used. These criteria are:

1. the nature of planning goals;
2. the scope of planning activities;
3. the spatial level of planning activity;
4. the operational level of planning activity.

Let us look at each of these in turn.

The nature of planning goals

One way of classifying different planning activities is to group them according to the nature of the goals which they are designed to achieve. We may regard this as a functional or 'goal-oriented' classification.

This method of classification has been used to identify a number of broad categories of planning. For example, Albert Waterston, in an authoritative study of development planning, identifies four broad categories of planning (Waterston, 1965, Chapter 2):

1. 'war-time planning', which might be more aptly described as planning in a case of emergency, thus including such situations as national disasters;
2. 'town and country planning' (now more often known, especially in the Third World, as 'land-use planning', 'physical planning', or 'urban and regional planning'), which is concerned with the allocation of land between different functions or activities;
3. 'anticyclical planning', which is designed to maintain stability in a national economy and, in particular, to counteract the alternate booms and depressions which have dominated recent economic history in most developed nations;
4. 'development planning', which is, in Waterston's words, concerned with increasing the 'rate of economic and social progress' (Waterston, 1965, p. 27).

Alternatively, a goal-oriented approach may be used to produce a far more detailed classification, based on the identification of much more specific goals, such as the maximization of profits in a private company, an increase in the rate of growth of a country's national income, the reduction of regional inequalities within a country or the world as a whole, an improvement in health standards, the alleviation of transport problems in an urban area, and so on.

As the title of this book suggests, our concern here is with planning to achieve *development*. This eliminates some kinds of planning activity. For example we shall not be concerned with the particular kind of planning required in a case of emergency, or with planning specifically to maximize the profits of a private company. However, it does provide us with very broad terms of reference, since the general term 'development' covers an enormous range of specific goals and,

therefore, a very wide range of planning activities. In the next chapter we shall examine the concept of development in some depth in order to explore the nature of these goals and in Chapter 3 we shall argue that the term 'development planning' should be defined very broadly to include, among other things, many of the activities conventionally included under the heading of 'physical' or 'land-use' planning.

Scope of planning activities

Another way of classifying different types of planning is to consider the scope of the activities which planning is designed to influence. This approach tends to result in a classification on disciplinary or professional lines. For example, a distinction is sometimes made between socioeconomic planning, natural resource planning, and architectural and engineering planning or design—while socioeconomic planning is itself often subdivided into the social and the economic components. Alternatively, planning is sometimes divided according to 'sectors', such as agricultural planning, industrial planning, transport planning, education planning, and so on. This approach to classification suggests not only the subject-matter of the planning exercise but also the professional roles or positions of the people involved in it.

We shall see in the next two chapters that the concept of development is now interpreted so broadly that our concern with planning for development necessitates that we adopt a very broad, interdisciplinary approach to planning. We shall not be specifically concerned with the types of planning—or design—practised by architects or engineers but we shall be concerned with a wide range of disciplinary interests, including those of economists, sociologists, political scientists and natural scientists, and we shall be particularly concerned with the need to adopt an integrated or interdisciplinary approach to planning.

Spatial level of planning activity

We have already indicated that planning may be undertaken at any level from that of the individual (such as the traveller planning his journey or the farmer planning his crop production pattern) to that of the world as a whole. Another way of classifying planning is, therefore, according to the spatial level at which it is practised. Thus we may distinguish categories such as international planning, national planning, regional or local planning, town or village planning, and the kind of planning practised by an individual person, family or enterprise.

In this book we shall be concerned mainly with the middle levels of this hierarchy of spatial planning levels. We shall not be directly concerned with either international planning or with the planning activities of individual people, families, or enterprises—although that does not mean that we shall not be considering such things as the impact of international markets on national agricultural production or the attitudes of individuals towards specific planning proposals. Our main concern, however, will be with planning development at the

national level and at the various sub-national levels to which national planning is often decentralized. Chapter 13 is specifically concerned with the choice of spatial levels for planning purposes.

Operational level of planning activity

It is also possible to classify planning activities according to another type of level, which we have here called the 'operational' level of planning activity. If we consider our general area of concern in this book to be that of planning development within a nation state, it is possible to identify several different operational levels at which this task of national development planning may be tackled. One possibility is to tackle the task as a whole; this is often known as comprehensive national development planning because the word comprehensive indicates a concern with all aspects of the subject. In most cases, however, national development planning is subdivided into a number of more manageable operational levels, either instead of, or as components of, comprehensive national planning. The three most common levels into which it is subdivided are probably project planning, sectoral planning and 'integrated area' planning. Let us look briefly at each of these.

Project planning. The simplest type of planning is perhaps project planning. The term project is used here to refer to an activity, or set of related activities, which is planned and implemented as an identifiable whole. It usually has a specific geographical location and it often has a clearly defined time-span. It includes the more obvious kind of project, which is identifiable as a physical object—such as a road, dam, school, hospital or housing complex—and the less obvious kind—such as a project to improve nutrition or commercialize livestock production in a particular area. The important thing about project planning is that its boundaries are relatively clearly defined and it can be undertaken in isolation, irrespective of any other form of planning activity. It should, however, be added that project planning does not have to be carried out in isolation and, for reasons which we shall examine later, it is usually more effective if undertaken as part of a wider planning exercise.

At this point it may be useful to consider the difference between the terms 'project' and 'programme'. Although there is no clearly defined distinction between them, the term 'programme' is normally used to suggest an activity, or set of related activities, which is, like a project, identifiable as a whole but which is not necessarily confined to a specific geographical location. Thus if, for example, the activity consisted of the improvement of nutrition or the commercialization of livestock production in the whole country, rather than in a particular area, it would normally be referred to as a programme rather than a project. It should be noted that a programme can usually be distinguished from normal routine activities (such as, in the above examples, the normal nutrition work of medical officers or the routine work of livestock extension staff) by the fact that it has specific objectives, a defined time-span and, in many cases, special resources

allocated to it. Although it is often useful to distinguish between project and programme planning, the way in which they tackle a planning problem is similar and so we shall use the term project planning in a general sense here to include both activities.

Sectoral planning. Sectoral planning means planning for a particular part or sector of a country's development. It is usually possible to identify a number of different functional sectors which normally correspond with the division of the government into ministries, departments, divisions or other organizational units. Thus sectoral plans could be prepared for sectors such as agriculture, education, health, transport, housing, and so on. Sectoral plans are normally prepared for the whole country—or for all parts of the country to which they are applicable. Sometimes they are produced independently of each other (for example, the ministry of health may decide to prepare a health plan irrespective of the planning activities in other ministries), while in other cases they may be coordinated by some sort of national planning agency, usually as part of a national development plan.

Integrated area planning. The third kind of operational level is integrated area planning. This involves planning for all sectors or types of activity within a particular geographical area. We have used the term 'integrated area planning' in preference to other terms—such as 'regional planning'—partly to avoid confusion arising from the use of terms such as 'region' to refer to particular spatial levels and partly to emphasize the multi-sectoral or integrated nature of this kind of planning. Integrated area planning may be practised in one area independently (for example, in an area with a special problem or particular development potential) or in all areas simultaneously. In the latter case the various area plans may be collated to produce a national plan—or alternatively they may be produced by disaggregating and expanding an existing national plan. The planning areas may be of any number or size, and this brings us back to the question of the different spatial levels at which planning is practised.

It should be noted that, although this classification into the three main operational levels of planning provides a useful basis for analysing different types of planning activity, it is—like most classification schemes—not entirely foolproof. For example, it may not always be possible to clearly distinguish between project (or programme) planning and sector planning, or between project planning and area planning. Thus one might say that the planning exercise associated with the construction of a large mining project should be regarded as area planning rather than project planning because one should plan for the integrated development of the whole area likely to be affected by the mine.

Figure 1 shows the three operational levels of planning, and their interrelationships, in diagrammatic form. The rows represent sectoral planning, which is confined to one sector but covers all the geographical areas of a country. Thus the shaded area indicates the scope of planning in the education sector. The columns represent planning for the various geographical areas of the country,

involving a multi-sectoral approach within each area, as in the case of planning for Area G, which is indicated by shading in the diagram. Finally, the crosses (x) represent specific projects. The diagram is intended to emphasize not only the differences between the three operational levels but also their interrelationships. Thus Project 4 (which might be, say, a new secondary school) should be seen not as an isolated project but as a component of both a plan for the education sector and a plan for Area G.

Sector \ Area	A	B	C	D	E	F	G	H
Agriculture	Project 1 x							
Industry								
Education							Project 4 x	
Health								
Housing		Project 2 x						
Transport								
Etc				Project 3 x				

Figure 1. Relationship between different operational levels of planning

Planning, planners and plans

The concept of planning which we have introduced in this chapter is that of a complex process of decision-making involving a wide range of interrelated activities and conducted at a variety of different spatial and operational levels. It is now necessary to consider briefly the role of *planners* and *plans* in this process.

The relationship between planning and planners often causes confusion. There is a tendency to regard planning as something that is done by a special group of people called 'planners' and thus to assume that no-one other than planners can plan and, therefore, there can be no planning if there are no 'planners'.

We shall discuss the nature and role of a planner in detail in Chapter 14. At this point we shall merely make a few basic points with the aim of removing some of the confusion and clarifying our use of the term 'planner'. Firstly, it is important to recognize that planning, in the sense used here, can be practised by a wide range of individuals and groups or organizations. In this sense the world is full of 'planners' and anyone who is involved in planning is a 'planner'. But there is also a special cadre of *professional planners* who—because of their professional training or the particular positions which they occupy—have a special role to play in the planning process. In order to avoid confusion, we shall in the rest of

the book use the word planner to refer only to these professional planners, not to anyone involved in any way in planning. It is very important that other people—including politicians, administrators, and the general public—are also involved and the main role of the professional planner is to act as a coordinator, collecting and analyzing the information and proposals for action provided by the others, rather than actually making all the decisions himself. Moreover, it should also be recognized that planning can, in fact, take place without any professional planners, although their existence can enhance the planning process in many ways.

The relationship between planning and plans is the source of a similar misunderstanding. Planning is sometimes regarded as the process of producing a 'plan', in the sense of a physical document which incorporates the findings or proposals resulting from the planning process. There are two misconceptions involved here. Firstly, the production of a 'plan' should not be regarded as the purpose of planning. The purpose of a planning exercise should be to achieve the particular goals which were identified or prescribed before the exercise began and the 'plan' should be regarded merely as a means of expressing the way in which these goals will be achieved.

The other misconception is the implication that the product of a planning exercise must be a physical document which provides a blueprint for future action. In some cases this may be the most appropriate form but on many occasions it may be more useful to present the output in other ways—for example, in the form of organizational charts, annual budgets, or written memoranda instructing people to undertake particular tasks. These alternative forms have the double advantage of providing a better basis for the implementation of plans and providing greater flexibility if (as is often the case) revisions have to be made at a later stage. In the rest of this book we shall use the word plan in this broad sense to mean any product of the planning process, not only a physical plan document.

The relationship between planning and plans raises many issues about the methods of planning and about the relationship between planning and implementation. In subsequent chapters we shall see that in the last 15 years there has been an important move away from planning as the preparation of plan documents, towards the concept—which we have tried to convey in this chapter—of planning as a process of decision-making; and we shall examine the methodological and organizational implications of this move. We shall also touch upon the relationship between planning and implementation in the next section of this chapter.

Planning, policy-making and implementation

So far in this chapter we have tended to assume that, although planning is a broad term used to refer to a wide range of activities which may be performed at various spatial and operational levels, the actual process of planning is an identifiable activity which can be distinguished from other related activities. At

this point it is necessary to consider whether or not this is actually the case and, in particular, to examine the relationship between 'policy-making', 'planning' and 'implementation'.

It is possible—and useful—to attempt to distinguish between these three related activities. In very simple terms, we may say that policy-making involves making decisions about the general directions in which change or development should occur—particularly decisions which have direct or indirect implications of a controversial, sensitive, value-laden or 'political' nature, while planning is the process of deciding what courses of action can best bring about these changes or developments and how they should be undertaken, and implementation is the actual execution of these courses of action.

In order to illustrate this distinction, let us look at the process of formulating plans for the housing sector in an imaginary country. In this case, the process of policy-making might result in (among other things) a decision to meet urban housing needs primarily through the provision of site-and-service schemes, where the government provides sites supplied with basic services on which people then build their own houses. Planning would then involve making decisions about how many such schemes should be established, where they should be located, what types of services should be provided, how sites should be allocated to individual occupants, and what restrictions (if any) should be imposed on these occupants in terms of the way in which they develop the sites. It would also include decisions about how much the schemes will cost, how funds will be obtained, and who will be responsible for their organization and implementation. Finally, the implementation stage would consist of the actual establishment of the schemes, including preparation of sites, provision of services and selection of occupants.

This example points out two aspects of the relationship between policy-making, planning and implementation which warrant further comment. Firstly, it suggests that the three activities follow on one from the other, beginning with policy-making, progressing to planning, and then to implementation. This in turn indicates the role of planning as a sort of intermediate stage between policy-making and implementation, or in other words its importance as a way of enabling general policies to be translated into practical action programmes which produce visible results. Secondly, it suggests—rather more indirectly—a division of responsibility between different types of person or organization. It suggests that policy-making is, at least in part, the responsibility of politicians or others who are in a position to make 'political' decisions, while planning is the responsibility of people who, because of their position or their professional training, are known as planners, and implementation is undertaken by a separate cadre of administrators.

This conception of the relationship between the three activities is useful as a starting point for discussing the theoretical boundaries of planning and the role of the planner. However, it has some serious limitations when one looks in more detail at the nature of these activities. It then becomes apparent that it is seldom possible to draw clear boundaries between policy-making, planning and

implementation or between the roles of the politician, the planner and the administrator.

In the first place, planning and policy-making are not always clearly separable activities, one following the other. If we go back to the example of the site-and-service schemes, although the basic policy decision is the decision to meet housing needs by the provision of site-and-service schemes, many subsequent policy decisions have to be made during the stage which we have called planning. For example, since it is unlikely to be possible to establish schemes in all the areas where they are needed at the same time, some order of priority has to be determined and this is likely to be a rather sensitive issue, since it will have implications for the distribution of services between different geographical areas and may be influenced by political pressure from certain politicians or political groups. Consequently, this may be regarded as a policy issue, which the planners may have to refer back to politicians or others in a position to make such decisions. Other policy decisions which may have to be made in this example include decisions about what standards of services should be provided on the site and what criteria should be used in selecting the occupants. It should be noted here that the question of what is and what is not a policy issue depends very much on what sort of issues happen to be especially controversial, sensitive or 'political' in any particular situation.

One indication of the relationship between policy-making and planning is the role of policy-making in the formulation of the goals of planning. The formulation of goals generally involves making policy decisions about the nature of the development one is aspiring to achieve, although it is—at least in theory—possible to conceive of goals which do not have any significant policy component. This relationship is reflected in the fact that much of policy-making is concerned with the definition, elaboration or refinement of goals and that, although planning and policy-making cannot be clearly separated, policy decisions tend to precede planning decisions, in the same way that goals have to be formulated before their implementation can be planned.

The close relationship between planning and policy-making is also reflected in the fact that plan documents frequently include a mixture of 'policies' and 'plans' and often the two cannot easily be separated. Furthermore, most plan documents and other forms of plans—including the obvious but very important example of annual budgets—have to receive political approval and are, therefore, in a sense policy documents.

Similarly, the distinction between planning and implementation is not as clear-cut as one might think. We shall see later that one of the main reasons for the move away from planning as the preparation of a plan document was the fact that this approach resulted in a gap between the planning and implementation stages, which in turn meant that the plans were often not implemented. Attempts to fill this gap have resulted in what might be regarded as an intermediate stage between planning and implementation. This stage, which is discussed in detail in Chapter 9, is often referred to as the process of 'making a plan operational'. Furthermore, as we have already indicated, planners also have an important role

to play during and after the implementation stage in monitoring implementation progress and making consequent adjustments to plans—and even to policies—as and when required. For example, monitoring the implementation of the first site-and-service schemes might suggest the need to modify the plans for future schemes or even to reconsider whether site-and-service schemes are really the answer to urban housing problems.

Finally, the division of responsibility between politicians, planners, and administrators is a gross over-simplification of reality. For instance, planners play an important role in policy-making by providing much of the information used to make the policy decisions and by offering advice based on their own assessment of the situation. Similarly, both politicians (or other policy-makers) and administrators should, as we suggested in the previous section, be involved in planning. Politicians often provide information, guidance, and—in many cases—actual directives about alternative courses of action, based either on the views of the people they represent or on their own personal preferences; while administrators supply much of the basic information required by planners and provide practical advice on the implementability of alternative proposals. The administrators' involvement is very important because they are the people who will have to implement the plans and they are unlikely to be enthusiastic about the implementation if they consider the plans to be unworkable or undesirable.

The political context of planning

One of the most significant implications of the interrelationship between planning, policy-making and implementation—and therefore between planners, politicians and administrators—is the fact that planning cannot be considered in isolation from the social, administrative and, in particular, political environment in which it has to operate. It is especially important to take into consideration the political system in the country concerned (for example, the way in which political leaders come to power, whether it is a one-party or multi-party system and the degree of centralization or decentralization), the political ideology of the government in power and the social structure of the society.

Factors such as these have a direct impact on the role, methods and organization of planning and on the content of plans, with the result that there are inevitably enormous variations from one country to another. Thus, for example, the role and nature of planning in a one-party African state such as Tanzania or Zambia must be very different from that of the small, democratic but politically fragmented countries of the South Pacific or the vast class-ridden state of India, while the situation in India is entirely different from that in Latin America, despite the common problem of major social inequalities. Moreover, the situation in all these nations is so different from that in the countries where many of the basic concepts and techniques of planning have evolved—Western Europe, North America, the Soviet Union, China—that one is forced on many occasions to question the applicability of these concepts and techniques.

The political environment also affects the role of the individual planner,

limiting the way in which he can operate, the type of proposals he can incorporate in his plans and the impact which he is able to have on the course of events. Professional planners are frequently frustrated by what they often regard as 'political interference' and by their inability to achieve any meaningful results because of the nature and distribution of socioeconomic and political power. In some cases this leads to a crisis of conscience for the individual planner, at which point he (or she) has to decide whether to continue in his present role or seek other ways of achieving his objectives.

We shall consider many of the implications of these issues in subsequent chapters. Thus in the next chapter we examine alternative development policies, which bear a very close relationship to the political environment of the countries concerned, and their implications for planning. In Part Two we look critically at the relevance of concepts and techniques of planning developed in 'the North' for the countries of 'the South', while in Part Three we consider the political and administrative organization of planning and, in the final chapter, the relationship between politicians, planners and administrators and the dilemmas faced by the individual planner.

Conclusion

We have in this chapter covered a wide range of theoretical or conceptual issues, some of which are not easy to grasp when expressed in general terms, out of the context of practical planning situations. We shall elaborate on most of the issues introduced here in Parts Two and Three, and in doing so we shall attempt, with the help of specific examples, to demonstrate how this rather theoretical view of planning can be applied to the 'real world' situation. Meanwhile, let us briefly summarize the main points made so far.

Firstly, we have adopted a working definition of planning as a continuous process which involves making decisions (or choices) about alternative ways of using available resources with the aim of achieving particular goals at some time in the future. Moreover, we have examined the main elements of planning which this definition implies.

Secondly, we have accepted that there are many different kinds of planning and we have looked at four different criteria which may be used to classify them: the nature of the goals which planning is designed to achieve, the scope of the activities covered by the planning exercise, and the spatial and operational levels at which planning occurs. We have also stated that our concern in this book is with planning to achieve development and that, because of the nature of 'development', this requires a broad, interdisciplinary approach to planning; and we have explained that we are concerned with the process of planning at national and sub-national levels and with planning particular projects (or programmes), sectors and geographical areas, as well as comprehensive national development planning.

Thirdly, we have looked at the relationship between planning, planners and plans and we have emphasized two important points. Firstly, it was emphasized

that although professional planners have an important role to play in planning, they are not the only people who plan and planning can, in fact, take place without professional planners. Secondly, it was pointed out that the preparation of plans should not be regarded as the purpose of the planning process and that the plans themselves may take many different forms, other than that of a conventional plan document.

Fourthly, we have emphasized that although it is useful to distinguish planning from policy-making and implementation, the three activities are closely interrelated and neither planning nor planners can operate in isolation. Finally, we have pointed out the implications of this in terms of the organizational structure within which planning operates and have emphasized, in particular, the way in which the political environment limits the role and nature of planning—and planners.

Guide to further reading

Since many of the issues raised in this chapter are dealt with in more detail in subsequent chapters, we list here only a few general works on the nature and scope of planning as a whole, drawing on the literature from both economic development planning and physical planning and from planning in both developed and developing countries. Further reading on particular aspects and types of planning is indicated at the end of appropriate chapters.

The most useful books, or parts of books, on the nature and scope of planning are probably:

- Faludi, A., *Planning Theory and A Reader in Planning Theory* (Oxford, Pergamon Press, 1973).
- Waterston, A., *Development Planning: Lessons of Experience* (Baltimore, Johns Hopkins Press, 1965) (paperback edition, 1979), chapters 1–4.
- Faber, M., and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus, 1972), volume 1.
- Hall, P., *Urban and Regional Planning* (Harmondsworth, Penguin Books, 1974), especially chapters 1 and 10.
- McLoughlin, J. B., *Urban and Regional Planning: A Systems Approach* (London, Faber, 1969).
- Chadwick, G., *A Systems view of Planning* (Oxford, Pergamon Press, second edition 1978), especially chapter 2.
- Eversley, D., *The Planner in Society* (London, Faber, 1973).
- Carley, M., *Rational Techniques in Policy Analysis* (London, Heinemann, 1980), part 1.

In addition, there are a number of journals which from time to time have useful articles on current thinking about the nature of planning. The most useful are the *Third World Planning Review* and the *Journal of Development Planning*, which are concerned specifically with planning in developing countries, and *Progress in*

Planning, the *Journal of the American Planning Association* (formerly the *Journal of the American Institute of Planners*), *Town Planning Review* and *The Planner*, which focus mainly (but not exclusively) on planning in Europe and North America.

Chapter 2

Concepts of Development

Introduction

Since our concern in this book is with planning development, it is essential to understand something about the nature of development—and underdevelopment. In this chapter we shall see that concepts of development and underdevelopment have changed significantly over time and that, even today, there are a number of different schools of thought. In Chapter 3 we shall examine how this has affected the evolution of development planning.

One of the problems which we face when considering the nature of development is that people's views depend on the situation in which they are placed. Most—although not all—of the discussion on development emanates from three main interest groups: governments, non-government organizations and individuals in the Third World; international agencies, such as the various United Nations (UN) agencies and the World Bank; and academics from the developed world. As one might expect, these three groups tend to differ in their views of development. Moreover, it is one of the unfortunate consequences of underdevelopment that, even now, most of the published material on development—including this book—is produced by the last two groups, not by people from the Third World. Consequently, the views expressed in much of the literature on development may be somewhat biased or distorted.

Even within each of these groups there are major differences in attitudes and opinions. For example, the governments of Third World nations differ radically in their approaches to development and within any one of these countries there are likely to be differences in attitude between politicians, civil servants and the general public, between urban and rural dwellers, between rich and poor, and so on. There are similar differences between international agencies and among members of the academic community in developed nations. Many of the differences among academics can be attributed either to different disciplinary backgrounds—since, as we shall see later, development has now become an interdisciplinary subject—or to different political or ideological viewpoints.

In this chapter we shall attempt to provide some sort of overview of these different perspectives on development. Thus, for example, we shall consider the development policies of Third World nations as well as the view of academics in the developed world and, as we have already indicated, we shall adopt an interdisciplinary approach to development. There are two main reasons for doing this. Firstly, such an overview is necessary in order to understand the way in which development planning has evolved. Secondly, it will help to identify a

number of common characteristics or trends in thinking about development, which exist despite the differences in individual viewpoints. Nevertheless, it is perhaps inevitable that, like all writers on development, we are to some extent biased as a result of our own environments, professional backgrounds and experiences. It will therefore be necessary for the reader to bear this in mind and to make his own interpretation of development to suit his particular needs.

Development and underdevelopment

In order to understand the various interpretations of the terms 'development' and 'underdevelopment' it is first necessary to consider the meaning of the word 'develop', from which they both stem. Dictionary definitions of the verb 'to develop' suggest that it means to change gradually, progressing through a number of stages towards some sort of state of expansion, improvement, or completeness or a state in which the subject's true identity is revealed (compare Wilber and Jameson, 1979, p. 5). We shall see below that when the word 'develop' was first used with reference to countries (or other groups of people), this definition reflected quite accurately the concept of development in the users' minds.

It should be noted that dictionaries also point out that the verb 'to develop' can be transitive or intransitive. This means that, when we use the word with reference to countries, it is possible for a country either to develop itself or to be developed by some outside agency. The significance of this will become apparent when we later examine the causes of development.

The application of the word 'develop'—and the related words 'developed' and 'development'—to countries was rapidly followed by the introduction of the terms 'underdeveloped' and 'underdevelopment' to describe a lack of development. Much more recently, the verb 'to underdevelop' has also come into use. This verb is normally used in the transitive form, in the sense of a nation or group of people being underdeveloped by some outside force. We shall examine the significance of this later also. It is important to note that the terms 'development' and 'underdevelopment' may be used in two related but significantly different ways. On the one hand they may be used to refer to a state of being. Thus 'development' is used to mean the state of being developed, while 'underdevelopment' refers to a state of being underdeveloped or not developed. However, they may also be used to refer to the actual act or process of changing. Thus 'development' is used to mean the process of developing or becoming developed—either because of the subject's own actions or as a result or some sort of outside force—and 'underdevelopment' is used to refer to the process of becoming underdeveloped or less developed.

This distinction has implications for planning. When we talk about planning 'to achieve development', we are using the word development in the sense of a state of being and regarding planning as a means of achieving this state; in other words, 'development' is identified as the goal of the planning process. However,

when we talk about 'planning development' we are using the word in the sense of the process of developing and we are concerned with the role of planning in guiding or influencing this process. Although this book is concerned with both 'planning to achieve development' and 'planning the development process', the distinction between the two is important because when planners or policy-makers disagree about development planning issues it is necessary to know whether they are in disagreement about the type of development they wish to achieve (in other words, the goals of planning) or about how to achieve those goals. Our examination of changing concepts of development in this chapter will therefore be divided into two parts; we shall look first at the concept of development as a goal or 'end-state' and then at development as a process. However, before we begin our examination of these two concepts of development it is necessary to consider very briefly the various alternative words which are sometimes used in place of the adjective 'underdeveloped'. During the late 1960s and much of the 1970s the word 'underdeveloped' tended to be replaced by more euphemistic terms, such as 'developing', 'less developed' or 'low income'. These terms were regarded not only as less derogatory but also as more optimistic, in the sense that they implied that the countries concerned were on the road to development. At the same time the expression 'the Third World' was also introduced as an alternative way of referring to these countries, the 'first' and 'second' worlds being the developed nations of 'the West' and 'the East' respectively. More recently, however, the expression 'underdeveloped countries' has come into use again, particularly in these countries themselves; while the term 'the South' has to some extent superseded 'the Third World', thereby suggesting that differences between North and South are now more important than those between East and West. Although the choice of terminology is to a great extent a matter of personal preference or current 'fashion', we shall later see that the introduction (or reintroduction) of particular terms does reflect significant changes in thinking about development and underdevelopment.

Development as a goal

In the previous section we suggested that the state of development may be regarded as the very broad goal of the particular form of planning with which we are concerned. In this section we thus examine the nature of this goal and, in particular, the way in which it has changed over time.

The early concept of development

The term development was not widely used with reference to countries or groups of people until after the Second World War. Before that time people who had some knowledge of both developed and underdeveloped societies were aware of the significant differences between them, but little attention was given to the

possibility of the latter ever becoming more like the former. People in developed nations were concerned only with changes designed either to improve their access to the natural resources of the underdeveloped world or, in a few cases, to introduce some of the more basic characteristics of 'civilization', including the provision of a few basic services and conversion to Christianity. This view of the underdeveloped world was reflected in the frequent use of the term 'primitive' to describe such societies. Meanwhile, in the underdeveloped countries themselves, knowledge of the developed world was often so limited that the potential for change was not at that time fully recognized.

After the Second World War, however, the notion of development began to appear. The colonial powers began to accept the need for social and economic development and even the reality of political independence in their territories, and this acceptance was partly the result of growing pressures for development and independence from the citizens of these countries. No doubt this change in attitude would eventually have occurred anyway; but it was at least hastened by the experience of the war years, when people from developed and underdeveloped nations fought and suffered together, thus making both groups more aware not only of their common humanity but also of the enormous differences in their standards of living. From then onwards people in both developed and underdeveloped countries began to think about the development of the latter as a realistic and desirable possibility.

For many years it was assumed that the state of development to which the underdeveloped nations should aspire was more or less synonymous with the type of society which existed in the developed nations. This society was described by Rostow, an economist who was responsible for some of the earliest theories of development, as a 'high mass consumption' society (Rostow, 1960). As this description implies, it was assumed that development means a high national income, accompanied by a market economy and a 'specialized' society, in which most people work not to meet their own immediate consumption needs but to produce particular goods and services needed by others and purchased in cash. In other words, development was seen in terms of the structure and growth of the national economy and degrees of development (or underdevelopment) were most often measured in terms of national income. The two most common indicators of development were per capita income (national income divided by the size of the population) and the average annual rate of growth in national income.

This concern with the economic aspects of development was due to a number of factors. Firstly, some of the most obvious differences between the developed and underdeveloped nations were differences in the size, structure and rate of growth of their national economies. Secondly, it was then widely believed, particularly by economists in the developed world, that economic change must precede any other form of change and should, therefore, be regarded as the most important indicator. Thirdly, and closely related to the previous point, the colonial powers were concerned to encourage some economic growth in their territories in order to provide revenue to finance the provision of social services, for which there was an increasing demand.

The need for change

This concept of development persisted more or less unquestioned in both developed and underdeveloped (or, as they were by then known, developing) nations—and in international development agencies, until the mid-1960s. By then, however, people were beginning to question whether the concept of a 'high mass consumption' society was really the goal to which developing countries should aspire and this process of questioning has continued in various forms and to varying degrees ever since.

Why has this change in attitude occurred? One of the most obvious reasons is that it has become increasingly evident that most developing countries cannot expect to achieve this goal, at least in the foreseeable future. The rate of achievement has varied considerably. Some countries, particularly those with a large and varied natural resource base—such as Brazil—have made considerable progress in terms of increasing national growth and restructuring their economies; but even they have had to accept that there are limits to what they can achieve in this direction, while for the majority of poorer developing countries there appears to be no immediate alternative to a predominantly rural and at least partially subsistence-based economy.

Another important reason for the gradual realization by many people that this concept of development, which is measured primarily according to economic criteria, has its own problems. In particular, it is often accompanied by a variety of social and political problems, including the breakdown of traditional social and political institutions—which in turn results in increases in crime, deprivation and dependency, new types of health problems and, perhaps most important, increasing inequalities between individuals, groups and regions. Furthermore, it also tends to be accompanied by problems related to the physical environment, such as pollution of land, water and the atmosphere and the exhaustion of natural resources; in some cases it also has unanticipated economic consequences.

Evidence to this effect has come from both the developed and developing worlds. In the developed nations of Western Europe and North America, increasing concern about social and environmental problems and, more recently, economic problems such as unemployment and inflation, has led many people to question whether their countries are really as developed as they have been led to believe.

Similarly, in the developing world, problems associated with rapid economic growth, particularly through industrialization and inflation, have led to similar doubts. It is very difficult to measure the relationship between economic growth and other indicators of well-being, partly because of inadequate data but also because the relationship varies greatly from one country to another and over time. The World Bank, in its *World Development Report 1980*, concluded that:

looking at changes over time within particular countries, the connection between growth and poverty reduction over periods of a decade or two appears inexact. There is general agreement that growth, in the very long term, eliminates most

absolute poverty, but also that some people may (at least temporarily) be impoverished by development. ... What is clear is that different countries have had different experiences. The proportion below the absolute poverty line apparently has not fallen in some slow-growing countries (including rural India between 1956 and 1974) or in some periods in faster-growing countries. But it appears to have fallen markedly over the past 25 years in several fast-growing countries (including Thailand and Yugoslavia) and in some slower-growing ones (including Costa Rica and Sri Lanka). (World Bank, 1980, pp. 35-6)

However, it is not merely a question of absolute poverty. In some countries which have experienced rapid economic growth, such as Brazil, Mexico and some of the oil-producing states, this growth has been accompanied by many of the social and environmental side-effects cited above; while in countries with less rapid growth such problems have been encountered on a smaller scale in association with areas of rapid urban growth or major economic development projects, such as large-scale mineral exploitation. Moreover, the recent experience of countries such as Brazil and Mexico also suggests that this type of 'development' does not even solve all economic problems; thus in Brazil and Mexico debt-servicing absorbed 35% and 64% respectively of the value of export production in 1979 (World Bank, 1981, Annex Table 13, pp. 158-9).

Increasing inequalities between groups and between regions have been a cause of particular concern in many countries. Data on income inequalities, which are in any case inadequate as a measure of relative poverty, are particularly difficult to obtain. However, the information which is available suggests that inequalities tend to be higher in the 'middle-income' countries which are often those which have experienced relatively rapid economic growth in recent years, than in either 'low-income' countries or developed nations (World Bank, 1981; Adelman and Morris, 1978; Mehmet, 1978). In most of the middle-income countries for which data are available over 50% of income is in the hands of the top 20% of the population, and in a few cases—including Brazil—the top 10% (World Bank, 1981, Annex Table 25, pp. 182-3).

While emphasizing the severity of the problems which tend to be associated with economic growth and 'high mass consumption' societies, it should nevertheless be emphasized that this does not mean that there are no benefits to be gained from such growth, or even that the problems outweigh the benefits. Nor does it mean that all governments or individual citizens in the Third World consider them to be serious problems. The standard of living in most developed countries is still, at least superficially, more attractive to the average person from the Third World than that in his own country—in the same way that, within the Third World, urban life often appears to be so attractive to the rural dweller. Moreover, and perhaps more important, many of the problems which we have identified do not directly affect those people in decision-making positions and so they are not necessarily reflected in national development policies—or they are reflected in general policies but these policies are not translated into reality. For example, politicians and senior civil servants are not likely to suffer directly from such problems as urban unemployment and overcrowding or environmental

pollution (although they are often the ones who suffer most from mental stress and the direct effects of urban crime) and they are likely to gain rather than lose from increasing inequalities, since they will inevitably be part of the top 10% or 20% of the population.

The other major reason for the gradual change in attitude towards developmental goals is that alternative models of development began to appear. The most obvious of these are the socialist nations of the USSR and Eastern Europe, which have not only provided models themselves but have also influenced some Third World countries—particularly China and Cuba—which have in turn become models for other nations to follow, or at least to look to for alternative ideas and inspiration.

The extent to which the socialist model has influenced individual Third World governments, international agencies or concerned academics in the developed world has varied considerably, depending mainly on the political and ideological leanings of the government, organization or individual concerned. It has in particular resulted in a tendency to divide developing countries into 'capitalist' and 'socialist' groups—although in practice the majority probably fall somewhere in between these two prototypes—and to identify two distinct schools of thought among academics concerned with development. We shall see the impact of this later when we examine different views of the process of development.

Towards a new concept of the state of development

The extent to which the factors identified in the previous section have actually influenced concepts of the state of development to which countries can and do aspire varies greatly, especially within the Third World. We have already seen that the more conventional goal of a 'high mass consumption' society is still very attractive, at least to those sectors of the population who have some chance of benefiting from it. Nevertheless, it is possible to identify some common trends in the stated goals of many Third World countries (even if progress in achieving these goals is very limited) and in the thinking of most international development agencies and academics in the developed world.

The most fundamental feature of what we may, for want of a better term, call the 'new' concepts of development is their concern with mankind. Development is conceived as a state of human well-being rather than as the state of the national economy. This concern was expressed in a statement known as the Cocoyoc Declaration, which was adopted by participants at a seminar organized by the United Nations Council on Trade and Development (UNCTAD) and the United Nations Environment Programme (UNEP) in Cocoyoc, Mexico, in 1974. The Declaration states:

Our first concern is to redefine the whole purpose of development. This should not be to develop things but to develop man. Human beings have basic needs: food, shelter, clothing, health, education. Any process of growth that does not lead to

PERPUSTAKAAN S-2 JURUSAN PWK-ITB

their fulfilment—or, even worse, disrupts them—is a travesty of the idea of development. (Cocoyoc Declaration, quoted in Ghai, 1977, p. 6)

It is also reflected in the development policies of a number of Third World countries. For example, Zambia's development philosophy, which is actually known as Humanism, has been described as a means of reversing:

the situation from Property-centredness to man-centredness. Property is to serve man and not Man to be controlled by property. After all, property is only an attribute of man as a creative being. (Kandeke, 1977, p. 45)

This general concern with 'man-centred' development is manifested in two main ways. Firstly, it is associated with increasing concern about the non-economic aspect of development. Development is conceived and measured not only in economic terms but also in terms of social well-being, political structures and the quality of the physical environment.

At this point it is necessary to clarify our use of the words 'economic', 'social' and 'political' in this context. So far in this chapter we have assumed that there is universal agreement on the use of these three words. In actual fact, however, confusion often arises—partly because the economic, social, and political aspects of development are so closely interrelated that they cannot be clearly separated and partly because there is a tendency for members of each of the three disciplines concerned (economists, sociologists and political scientists) to define their discipline so broadly that it incorporates a large part of the other two. A detailed discussion of the nature of each discipline and the interrelationship between them would absorb a great deal of space and achieve few useful results (compare Apthorpe, 1970, Chapter 1; Conyers, 1982, Chapter 1; van Nieuwenhuijze, 1979).

For our present purposes, therefore, it is only necessary to clarify three aspects of the relationships between the three disciplines. Firstly, it should be recognized that all three disciplines are concerned with the role, activities and organization of man and society—hence the high degree of overlap between them. However, they view this general subject area from different perspectives and within a different methodological framework. Secondly, at the risk of some oversimplification, we may for the purposes of this book define these three perspectives as follows:

1. the *economic* perspective reflects a concern with production or output and related activities, particularly (but not exclusively) with the commercial or monetary aspects of these activities;
2. the *social* perspective reflects a concern with those aspects of development which are not directly or primarily concerned with production, output or material needs but with the more general well-being of individuals or groups of people;
3. the *political* perspective is concerned with the distribution of power between

different groups or individuals, particularly the power to control, or make decisions about, the use of resources.

Thirdly, while making these distinctions, it should also be recognized that the three are inextricably related to each other—and also to the physical or natural environment within which development occurs.

—The new concepts of development are thus characterized by relatively less concern with the quantity of production or output, material needs or monetary gain and more concern with the general quality of human life and the natural environment. This is reflected in dissatisfaction with the use of indicators such as per capita income or the rate of growth of national income as targets or measures of development and a corresponding search for alternative or additional indicators, such as life expectancy, standards of health or literacy, access to various social or public services, freedom of speech, the degree of popular participation in government or decision-making, or environmental conservation. We shall consider the use of such indicators again in Chapter 6.

It should also be noted that the concern with the non-economic aspects of development is reflected not only in increasing emphasis on social, political or environmental considerations individually but also in the concept of 'integrated' development, in which the interrelationship of economic, social, political, and environmental factors is emphasized. This is demonstrated by the attention devoted to 'integrated development programmes' and to the introduction of concepts such as 'ecodevelopment' (Riddell, 1981; Sachs, 1981) and 'integrated human development'. The concept of integrated human development, for example, is described in the constitution of Papua New Guinea as the right of:

every person to be dynamically involved in the process of freeing himself or herself from every form of domination or oppression so that each man or woman will have the opportunity to develop as a whole person in relationship with others. (Papua New Guinea, 1975, p.2)

The other, closely related manifestation of the concept of 'man-centred' development is a concern with the distribution of the benefits of development. In other words, the degree of inequality—which encompasses inequality between individuals or social groups and inequality between regions, including the gap between rural and urban areas—is regarded as an important criterion for measuring development and the reduction of inequalities is considered to be one of the most important goals of development. This concern with equity was well expressed by Dudley Seers, one of the first economists in the developed world to emphasize this aspect of development. Seers (1969, p. 3) wrote:

The questions to ask about a country's development are therefore: What has been happening to poverty? What has been happening to unemployment? What has been happening to inequality? If all three of these have declined from high levels, then beyond doubt this has been a period of development for the country concerned. If one or two of these central problems have been growing worse, especially if all three

have, it would be strange to call the result 'development', even if per capita income doubled.

It should, incidentally, be noted that in this quotation Seers has used the word 'development' to refer both to the process of change and the state resulting from this process. We shall examine the implications of this discussion for the process of development later in the chapter.

One of the outcomes of this re-evaluation of the goals of development has been the emergence during the 1970s of the 'basic needs' approach to development. In this approach development is defined in terms of the extent to which the 'basic needs' of the population are met. Three broad categories of need are identified: consumption goods (such as food, clothing and shelter); basic services like education, health and a clean water supply; and the right to participate in one's own development (Ghai, 1977). The individual's right to productive employment is also regarded as an essential component, partly because it is a means of earning an income which can in turn be used to purchase basic goods and services, but also because of the sense of personal satisfaction which it bestows upon the individual. Furthermore, the approach is concerned with meeting the basic needs of all the population, which in effect means concentrating on the poorer sectors of the population, since in most countries the basic needs of the more affluent sectors have already been met. Thus the approach has direct distributional implications.

The basic needs approach to development has a number of shortcomings, including the conceptual problem of defining what is a basic need and the more fundamental operational problem encountered by any approach to development which is dependent for its success on the affluent minority of the population agreeing to divert resources to meet the needs of the poor majority. It is perhaps significant that the approach was conceived by, and has received most of its support from, international agencies—especially the International Labour Organization (ILO)—and 'western' academics, rather than Third World governments.

Nevertheless, the approach provides a useful way of conceptualizing the main components of the new approaches to development which have emerged in recent years. Ghai (1977, pp. 3-4) says that:

the basic needs approach can ... be seen as a logical outgrowth of the 'new development strategies', incorporating many of the ideas found there but going beyond them in a number of areas. ... These extensions include the broadening of the concept of development to include so-called non-material needs, the concrete specification of poverty in terms of some core basic needs, the overwhelming priority given to the meeting of basic needs of *all* families in the shortest time possible, the emphasis on redistribution of income and wealth and the creation of egalitarian societies, the key role accorded to public services in combatting poverty and at least some rudimentary analysis of power structures in societies.

Furthermore, the basic principles underlying the approach are probably supported, at least in theory, by many individuals and governments in the Third World.

So far in this section we have emphasized the common elements of the various attempts to identify new developmental goals and we have used the basic needs approach to illustrate the way in which these elements can be combined into a particular model of development. However, another important component of recent thinking about development is that, in fact, there is not one model of development to which all countries should aspire. It is not merely a question of rejecting the conventional concept of development as 'high mass consumption' society but of acknowledging that development may take many forms and that 'the best model of development is the one that any society forges for itself on the anvil of its own specific conditions' (Goulet, 1978; quoted in Wilber and Jameson, 1979).

This is not, in fact, inconsistent with the basic needs approach. Earlier we referred to the lack of any clear definition of what actually constitutes a basic need as a weakness of the approach; but actually it is also one of its strengths, since it leaves room for every country or group of people to define its own basic needs. Furthermore, 'basic needs are not presented in a static manner to be frozen once and for all at fixed levels but as evolving over time in line with the growth of the economy and the aspirations of the people' (Ghai, 1977, p. 14).

Finally, it should be noted that these changes in the concept of development also have implications for the so-called 'developed' countries. We have already suggested that some people in the developed world have begun to question the desirability of many aspects of their own 'high mass consumption' societies and the concept of a number of alternative models of development raises the question of whether the so-called 'developed' countries are really more developed—or more accurately, in what respects they are more (and less) developed. For the sake of convention and convenience we shall continue to refer to these countries as 'developed', but with the proviso that this implies a much narrower concept of development than the one we have described here.

Development as a process

The changes which have occurred in the concept of development as a state of being to which countries can and do aspire have obviously affected thinking about the process of achieving—or not achieving—this objective. In other words, they have resulted in corresponding changes in thinking about the processes of development and underdevelopment.

The process of development was originally conceived in terms of economic growth. It was assumed that the underdeveloped countries (as they were then called) would have to pass through a number of stages of economic growth, similar to those which the countries of Western Europe had experienced (Rostow, 1960). This assumption is reflected in the choice of the word 'development', which—as we pointed out at the beginning of the chapter—literally means a process of change or evolution towards some 'natural' or preconceived final form. A great deal of discussion was devoted to the question of how to stimulate the 'take-off' which would be needed to launch the

underdeveloped countries into this process of economic growth, in the same way that the industrial revolution had marked the take-off for economic growth in Europe.

At that time the existing state of underdevelopment in these countries and the problems they encountered in reaching the initial take-off stage were both attributed to resource deficiencies. At first the emphasis was on the inadequacies of their natural resource base (including the 'inhospitable' climate, poor soils and the absence of the basic mineral resources, such as coal and iron ore, which had played an important part in stimulating the industrial revolution in Europe) and a lack of capital and economic infrastructure. Development effort was thus focused on ways of overcoming these deficiencies. Somewhat later, attention turned towards 'human resources', in the belief that social and cultural factors—including lack of education, ill-health and the impact of traditional social structures and cultural attitudes—were also hindering the achievement of the required take-off stage. As Apthorpe (1970, p. 7) has described, there was:

[a] tendency for development studies ... to explain the failure of predominantly economic development plans (as most plans are), by invoking the following reason. There must have been a troublesome knob on the development machine, marked 'the human factor', which was twiddled wrongly, inadequately or not at all, and therefore, somehow, 'the non-economic variables' were left out of account.

As the above quotation suggests, this resulted in some effort to understand the social and cultural environment and, by such means as improved education and health services, to change it so that it would help rather than hinder the process of economic growth.

Throughout this period it was assumed that the nature of economic growth, and consequent changes in the structure and organization of society, would be similar to those in the developed world. Much emphasis was therefore placed on industrialization and urbanization (although it was accepted that, as in Europe, agricultural change would be needed to support industrial growth) and terms such as 'westernization' and 'modernization' were frequently used to describe this development process (compare Brookfield, 1975, chapter 3).

Since the late 1960s, however, fundamentally different approaches to the processes of development and underdevelopment have emerged. Firstly, the redefinition of the goals of development has resulted in much greater emphasis on the non-economic aspects of development—not merely as a means of achieving economic growth but as important objectives in themselves. This is reflected in the much greater attention which individual nations and international agencies now give to the social, political and environmental aspects of development and also in recent literature on development, some of which is listed in the guide to further reading at the end of the chapter. Similarly, there is also much more effort to examine the impact of alternative development policies on social and regional inequalities and to identify specific policies which reduce such inequalities, particularly those which are directed towards the rural areas and the poorest sectors of the population.

It should be noted that this approach to development sometimes leads to conflicts between economic and non-economic objectives. In some cases social, political or environmental development contributes to economic development and *vice-versa*; but on other occasions this is not the case and a choice has to be made between economic and non-economic objectives. This dilemma was well expressed by President Nyerere of Tanzania, when he stated (1968, p. 316) that:

there are more things in life than the amassing of riches, and ... if the pursuit of wealth clashes with things like human dignity and social inequality, then the latter will be given priority.

Tanzania, unlike many Third World nations, has made a very serious effort to implement this policy. It has made considerable progress, particularly in the provision of social services, but it has also suffered considerably in the process, particularly at the hands of international development agencies, such as the International Monetary Fund (IMF), which have tried to force it to put more emphasis on 'the amassing of riches' (Lappé and Beccar-Varela, 1980; Green *et al.*, 1980).

Secondly, there has been a major re-evaluation of the obstacles to development—and the causes of underdevelopment. We mentioned at the beginning of the chapter that the word 'underdevelop' is now used as a transitive verb, in the sense that a country or a group of people can be underdeveloped by some outside force. This use of the word 'underdevelop' reflects the realization that underdevelopment is not caused merely by a lack of resources, capital or appropriate skills or attitudes. It is also caused by the nature of relationships between groups or nations. Two types of relationship play a particularly important part: class relationships within a country and international relationships between developed and developing countries.

We have mentioned on a number of occasions the existence of social and economic inequalities within most Third World nations and we have pointed out that the adoption of development policies which favour the poorer sectors of the population is often hampered because the power to make and implement such policies rests with the affluent minority. The fact that in many countries these inequalities between classes are increasing rather than decreasing has led to the realization that in such cases the development of a minority of the population is occurring at the expense of the underdevelopment of the majority. This in turn means that the development of the majority is unlikely to occur unless there is a major change in the distribution of economic and political power within the country. In other words, a political revolution is more important than an industrial revolution in such countries.

This line of thought has been influenced not only by the reality of the experiences in many parts of the Third World but also by the impact of Marxist thinking, especially in those countries of the Third World which have chosen to follow the 'socialist' rather than the 'capitalist' road and among those social scientists in the developed world who have adopted a neo-Marxist approach to

development (compare, for example, Gurley, 1979, and Foster-Carter, 1974). The main problem, however, is that although this concept of the nature and causes of underdevelopment has had a major impact on thinking and writing about development, its impact on the actual pattern of development in the Third World has been very limited, except in the case of a few countries, such as China, Cuba, Vietnam, the Democratic Republic of Korea and—to a lesser extent—Tanzania, Mozambique and Angola.

It should be mentioned that the problem of class structures in the Third World is closely related to the question of the role of the state in development. For a variety of reasons, including the lack of private entrepreneurship and the desire to bring about rapid social and economic change, the state plays a major role in economic development activities and in the provision of infrastructure and services in most Third World countries, even in those which have not attempted to follow a socialist path. However, the effectiveness of the state in this respect has in many cases been seriously hampered by the fact that those in control of state enterprises (including politicians, senior civil servants and managers of parastatal enterprises) have rapidly become members of the privileged elite of the country. In other words, private capitalism has been replaced by state capitalism. We shall return to some aspects of this later in the book, when we consider the role of the state in planning.

The relationship between developed and developing nations is not unlike that between classes within a nation. The experiences of the 1960s and 1970s—somewhat ironically called by the UN the first and second development decades—suggest that the gap between the developed world and the majority of developing nations is increasing rather than decreasing. Thus, for example, during this period the national income of the developed or (to use the World Bank's terminology) industrialized countries increased at an average rate of 3.2% a year, while that of the least developed (or low income) countries increased at an average of only 1.7% a year (World Bank, 1980, p. 34).

Furthermore, an analysis of the reasons for this suggests that a very important factor is the balance of economic and political power between the developed and developing countries—or the North and the South, as the two groups are often called in this context. The economic and political strength of the North, which can be traced back to the colonial period, is such that the South has very little chance of even maintaining its current economic position in relation to the North, let alone improving it. The deteriorating terms of trade for most developing countries, due to the fact that the prices of their imports are increasing much faster than the prices of their exports, is only one of many indicators of this. The result is that although nearly all Third World countries are now independent states, the majority are still heavily dependent economically on the North and also, through more subtle ties, socially and politically dependent.

Opinions differ as to the best way of tackling these problems of dependency. The 1980 report of the Brandt Commission, which was commissioned specifically to examine these issues, adopted the view that continued interdependence between North and South is more or less inevitable but maintained that both

parties can benefit from this relationship. It recommended a number of measures—including more aid from the North to the South, improvements in the terms of trade for the South and a new international monetary order—designed to improve the relative position of the South (Independent Commission on International Development Issues, 1980). Others, however, believe that the Brandt Report is unrealistic, since the relationship between North and South—like that between rich and poor within a country—is basically one of exploitation rather than mutual benefit, a conclusion which past experience certainly tends to support (compare Hayter, 1981). They see the only solutions being either increased independence in the South—a strategy which many countries are already pursuing, although some more earnestly than others—or a radical change in the balance of power between North and South. Once again, the main problem is that those who would benefit most from such reforms are those least able to have any significant effect on the course of events.

The other major change in the approach to the processes of development and underdevelopment is the search for methods of development which are better suited to the conditions and resources of the Third World. The most obvious manifestation of this is the emphasis which Third World governments, international agencies, and academics now give to the design and use of more appropriate forms of technology. However, it is also reflected in many other ways, including attempts to find more appropriate political and administrative systems, reform the educational curriculum, redefine standards for the provision of certain services, and encourage or revive traditional cultural forms. In Part Two of this book we shall consider appropriate planning methods for the Third World. In all cases the aim is to find methods which make the best use of the available resources and are in harmony with the physical, social, economic and political environment.

This move can be attributed to a number of factors, including the practical necessity of adopting methods which can be applied with the resources available; the need to reduce social, economic and technological dependence on the North; and a greater respect for local or traditional attitudes and practices. The last factor is part of the more general recognition that there is no one model of development. In the same way that different countries may aspire to different states of development they may also tackle the process of development in different ways. The impact of this on methods of development has been considerably influenced by the examples of a few countries which have pioneered alternative methods, of which the most obvious example is China. Many Third World nations which do not agree with China's political philosophy have nevertheless tried to learn from its experience in such fields as appropriate agricultural and industrial technology, primary health care and attitudes towards educational reform (compare Aziz, 1978).

While emphasizing the significance of these changes in the approach to development and underdevelopment, it should at the same time be pointed out that the extent to which such changes have actually been adopted within the Third World varies considerably from one country to another. As in the case of

development goals, there are many factors which discourage their incorporation into national policy and, in particular, the actual implementation of such policy. These factors include both internal and external forces. In the first category one of the greatest obstacles is, as we have already suggested, the distribution of power within a country. Also important, especially in the search for appropriate methods, is the widespread tendency still to assume that any approach or method originating in the developed world must be 'better' than anything designed or produced locally. In the case of external forces, we have already seen how the Third World's continued dependence on the so-called developed world makes the adoption of alternative approaches to development on the one hand even more important but on the other hand very difficult actually to achieve. One writer has poignantly suggested that 'Europe did not discover the underdeveloped countries; on the contrary she created them' (Griffin, 1968, p. 38); and in many countries this process of underdevelopment which began in the colonial period is still under way.

Moreover, it would also be misleading to suggest that these changes in approach necessarily offer all the solutions to the problems of development. The situation is far more complex, as the following quotation suggests:

A look at the postwar record indicates that countries prospered and stagnated regardless of social system or development strategy. Brazil and Mexico grew while their poor suffered. Costa Rica grew and Cuba failed to grow while their poor prospered. Both China and Taiwan are cited as 'models' of development. Both Tanzania and Peru are floundering. Capitalism has not brought freedom to Chile or South Korea and socialism has not brought liberation to Cambodia or North Korea. (Wilber and Jameson, 1979, p. 31).

We may not necessarily agree with the authors' interpretation of the 'successes' and 'failures' of the individual countries cited; but this merely reinforces their basic point about the complexities of the development, since it suggests that one individual or nation's definition of what constitutes successful development is not necessarily the same as that of another.

Conclusion: the diversity and dilemma of development

The conclusions which emerge from the discussions in this chapter may be divided into three broad categories. Firstly, the term 'development'—and the many related terms, including the particularly important concept of underdevelopment—may be used in many different ways and it is important to distinguish between these different uses. In particular, there is a distinction between the concept of development as a state of being, which becomes the goal of development planning, and the concept of development as the process of change which planning tries to influence.

Secondly, it is possible to identify a number of important changes in the concepts of development and underdevelopment since these terms were first used in relation to countries or groups of people. In particular there has been a move

away from development as a process of economic growth designed to achieve a society modelled on the so-called developed nations, towards development as the process of improving the general quality of life—or meeting the basic needs—of the majority of the population. We shall in the next chapter see that this has resulted in a much broader, more interdisciplinary approach to development planning and in much greater concern with issues related to equity.

Finally, it has to be recognized that development is a much more complex concept than was once imagined. There is no one state of development to which all countries can or should aspire, no one way of achieving any such state and no one way of measuring the extent to which it has been achieved. Furthermore, there are no easy or obvious answers to many of the most fundamental problems affecting the Third World—or the world as a whole.

For the planner in the Third World there are perhaps two main implications of this portrayal of the complexity of development. One is that each country must define its particular development goals and the broad path it intends to follow to achieve these goals and this must provide the policy framework within which all development planning takes place. And the other is that planners—and policy-makers—cannot expect that their actions will solve all the problems of underdevelopment. This does not mean that they should reduce their efforts; merely that they should recognize the dilemmas of development. We shall return to some of the implications of this for the planner in the last chapter of the book.

Finally, for those individuals or organizations in the developed world who are concerned about problems of development and underdevelopment, perhaps the most important implication is that people in the North should not attempt to impose their views about development onto people in the South. In a critical review of the role of the World Bank, Art van de Laar (1980, p. 251) states that:

The 1970s have seen a proliferation of new approaches to development thinking. ... Whatever the merits of these theories, which are currently intensely debated, it is clear that they are suggestive of different strategies being offered to policymakers. While the World Bank is certainly active in this renewed academic debate, its claim to be able ... to provide a highly informed and impartial source of precise and professional development reports which should become increasingly useful tools to *all* organizations working in the field of development ... is an attempt to impose *its* views on how organizations should view development. In the current confused state of development theorizing, such claims are preposterous and untenable.

Although this comment is directed, with considerable justification, specifically towards the World Bank, it should be a warning to any individuals or organizations based in, or dominated by, the countries of the so-called developed world.

Guide to further reading

There is a vast amount of literature on development and underdevelopment. We attempt here merely to list some of the more widely known sources of material. In

PERPUSTAKAAN S-2 JURUSAN PWK-ITB

order to demonstrate the role of different 'interest groups', we have divided this material into three categories: material produced within the Third World, material produced by international agencies and material written by academics in the developed world. We conclude with a note on useful journals in this field.

Material from the Third World

- Amin, S., *Accumulation on a World Scale: A Critique of the Theory of Underdevelopment* (New York, Monthly Review Press, 1974).
- Furtado, C., 'An age of global reconstruction'. In Jameson, K. P. and C. K. Wilber (eds), *Directions in Economic Development* (Notre Dame, University of Notre Dame Press, 1979), pp. 130-82. Furtado has also published a number of other works on underdevelopment, with particular reference to Latin America.
- Kaunda, K. K., *Humanism and a Guide to its Implementation* (Lusaka, Government Printer; Part 1, 1967 and Part 2, 1974).
- Mabogunje, A. L., *The Development Process: A Spatial Perspective* (London, Hutchinson, 1980).
- Nyerere, J. K., a large number of speeches and other writings, many of which are reproduced in three main published collections: *Freedom and Unity* (1966), *Freedom and Socialism* (1968) and *Freedom and Development* (1973); all are published in Dar es Salaam by Oxford University Press.
- Rodney, W., *How Europe Underdeveloped Africa* (Dar es Salaam, Tanzania Publishing House, 1972).

Material by international agencies

- Ghai, D. P. et al. (eds), *The Basic Needs Approach to Development* (Geneva, International Labour Organization, 1977). The ILO has also produced reports on the basic needs approach in a number of specific countries.
- International Labour Organization, World Employment Programme Research. A series of working papers on a wide range of issues have been produced under the auspices of this programme. Copies are available from the ILO in Geneva, or from its regional offices.
- Independent Commission on International Development Issues (Brandt Commission), *North-South: A Programme for Survival* (London, Pan Books).
- United Nations. The UN produces a wide range of publications, including statistical reports and reports on a wide range of methodological issues. References to some of these will be made in later chapters.
- World Bank. Since 1979 the Bank has produced an annual survey of world development conditions, entitled *World Development Report* and published by Oxford University Press.
- World Bank, *The World Bank and the World's Poorest* (Washington, DC, World Bank, 1980).

World Bank, *The McNamara Years at the World Bank* (Baltimore, Johns Hopkins Press, 1981).

The World Bank also sponsors numerous studies on specific aspects of development, many of which are published by Johns Hopkins Press. Some of these will be mentioned in later chapters.

Material produced by academics in the developed world

- Adelman, I., and C. Morris, *Economic Growth and Social Equity in Developing Countries* (Stanford, Stanford University Press, 1973).
- Bernstein, H. (ed), *Underdevelopment and Development: The Third World Today* (Harmondsworth, Penguin Books, 1973).
- Brookfield, H., *Interdependent Development* (London, Methuen, 1975).
- Chenery, H. et al., *Redistribution with Growth* (Oxford, Oxford University Press, 1974).
- Carr, M., *Economically Appropriate Technologies for Developing Countries* (London, Intermediate Technology Publications, 1976).
- De Kadt, E., and G. Williams (eds), *Sociology and Development* (London, Tavistock Publications, 1974).
- Dumont, R., *False Start in Africa* (originally published in French by Éditions du Seuil, Paris, 1969) and *The Growth of Hunger* (London, Marion Boyars, 1979).
- Goulet, D., *The Cruel Choice* (New York, Atheneum, 1972).
- Harrison, P., *The Third World Today and The Third World Tomorrow* (Harmondsworth, Penguin Books, 1979 and 1980).
- Hayter, T., *The Creation of World Poverty* (London, Pluto Press, 1981).
- Higgins, B., *Economic Development* (New York, Norton, 1968).
- Hoogvelt, A. A. M., *The Sociology of Developing Countries* (London, Macmillan, 1976).
- Jameson, K. P., and C. K. Wilber (eds), *Directions in Economic Development* (Notre Dame, University of Notre Dame Press, 1979).
- Lipton, M., *Why Poor People Stay Poor: Urban Bias in World Development* (London, Maurice Temple Smith, 1977).
- McRobie, G., *Small is Possible* (London, Jonathan Cape, 1981).
- Myrdal, G., *Asian Drama: An Enquiry into the Poverty of Nations* (Harmondsworth, Penguin Books, 1968).
- Rostow, W. W., *The Stages of Economic Growth: A Non-Communist Manifesto* (New York, Cambridge University Press, 1960).
- Roxborough, I., *Theories of Underdevelopment* (London, Macmillan, 1979).
- Schaffer, B., and G. Lamb, *Can Equity be Organized?* (Farnborough, Gower Publishing Company, 1981).
- Schumacher, E. F., *Small is Beautiful* (London, Blond & Briggs, 1973).
- Wilber, C. K. (ed), *The Political Economy of Development and Underdevelopment* (New York, Random House, 1973).

Journals

It is not possible to list all the relevant journals on development, since there are many on specific aspects of development studies and on specific geographical areas. There are, however, a few widely-known journals of general interest, of which the most important are probably the following: *World Development*, *Journal of Development Studies*, *Journal of Developing Areas*, *Public Administration and Development* and *Third World Quarterly*. In addition there are a number of useful periodicals on development studies produced in a more popular magazine style, including *New Internationalist* and *South*.

Chapter 3

The History of Planning in the Third World

Introduction

Chapter 1 attempted to classify different types of planning activity and explained that, while this book is concerned with the activity of *development* planning, it adopts a somewhat broader approach to development planning than that of many other books. Chapter 2 then demonstrated that development planning can be interpreted as 'planning to achieve a state of development' or 'planning the development process' and it described how the concept of 'development'—as both state and process—has changed, and in particular broadened in scope a great deal since the Second World War. In this chapter we attempt to bring these two parts of the discussion together to explain how changing concepts of development have affected the history of planning in the Third World and have led to the need for a broader approach to development planning.

In most countries of the Third World today there are two distinct types of planning machinery, staffed by different types of professional planner. The most important of these, in terms of the number of staff employed and the degree of influence over national decision-making, is that of 'economic' or 'development' planning, which normally has its own ministry or other government agency, although it is sometimes combined with that part of government responsible for finance. When the words 'planning' and 'planner' are used without any form of prefix, the speaker is normally referring to this type of planning. However, in most countries there is also a less important planning organization, known by a variety of names—including 'physical planning', 'land-use planning', 'urban and regional planning' and 'town planning'—and usually located within a ministry responsible for lands, surveys, urban development or housing. This type of planning has its roots in the 'physical', 'land-use' or 'town and country' planning practised on a much larger scale in the developed countries of Western Europe, North America and Australasia, and it is interesting to note that in such countries the words 'planning' and 'planner' are usually used to refer to this type of planning, rather than to 'economic' or 'development' planning.

In order to understand the nature of planning in the Third World today, and in particular to appreciate the need for a broader approach to development planning, it is necessary to review the history of, and approaches to, both types of planning. For convenience we shall in future refer to these two types as *economic development planning* and *physical planning*, while recognizing that, as we have already indicated, other names are often used, especially in the case of physical

TERPUSTAKAAN S-2 JURUSAN PWK - ITB

planning. Our main focus will be on the history of economic development planning, partly because of its greater importance in most Third World countries and partly because—as its name suggests—it is more obviously related to the planning of development. However, we shall attempt to demonstrate that physical planning also has a role to play in planning development and that it has, directly and indirectly, influenced the nature of planning more than might at first be apparent.

Economic development planning

In Chapter 1 we referred to Waterston's classification of planning activities into four broad categories: war-time planning, town and country planning, anticyclical planning and development planning (Waterston, 1965, p. 27). The last of these four categories, that of development planning, is what we refer to here as economic development planning. Waterston goes on in his book to explain his use of the term development planning. He states that, for the purpose of his survey of development planning:

Countries were considered to be engaged in development planning if their governments were making a conscious and continuing attempt to increase their rate of economic and social progress and to alter those institutional arrangements which were considered to be obstacles to the achievement of this aim. (Waterston, 1965, p. 27)

We have added the prefix *economic* development planning for two reasons. Firstly this type of planning is in some countries referred to as economic development planning, or more simply as economic planning. Secondly, as these terms suggest, this type of planning was for many years preoccupied with the economic aspects of development and most development planners—including Waterston—were, and still are, economists. We shall examine the implications of this, and the changes which are now gradually occurring, later in this section.

Origins and growth

In most countries of the Third World economic development planning is a post-war phenomenon, although some very preliminary attempts at planning were made in some countries before the Second World War, usually under the auspices of the colonial powers. After the war, however, its importance accelerated rapidly and by the early 1960s there were very few developing countries which were not practising, or at least attempting, some form of economic development planning. It probably reached its peak of popularity in the mid-1960s and Waterston, writing in 1965, described the situation at that time very aptly when he declared that:

Today, the national plan appears to have joined the national anthem and the national flag as a symbol of sovereignty and modernity. (Waterston, 1965, p. 28)

The origins and rapid growth of economic development planning in the Third World can be attributed to several factors. The most obvious factor was the desire to achieve development. We saw in Chapter 2 that after the Second World War concern with development increased rapidly in the underdeveloped countries themselves and in the colonial powers under whose jurisdiction much of the Third World remained. Planning was seen as a means of accelerating the process of economic development and preparing a sound economic basis from which the colonial territories could launch out as independent nations.

The countries of south and south-east Asia, most of which became independent soon after the war, took the lead. For example, India, which has one of the longest histories of systematic development planning, established its Planning Commission in 1950 and its First Five-Year Plan began in 1951; while in the Philippines the first five-year plan document appeared even earlier, as part of the programme of post-war recovery drawn up with the assistance of the United States (Waterston, 1965, chapter 2; Griffin and Enos, 1970, chapter 13).

In Africa political independence came somewhat later, and planning thus evolved rather more slowly, under the control of the metropolitan powers. The United Kingdom, for example, required all its territories to prepare plans for the period 1946–56, as a basis for the allocation of increased funds which were made available under the 1945 Colonial Development and Welfare Act; but the resulting plans were very rudimentary (Waterston, 1965, p. 34). However, by the early 1960s, when most countries had, or were about to, become independent, the desire for planning emerged within the countries themselves.

In other parts of the Third World the rise of economic development planning followed a similar pattern, with only relatively minor variations in timing and objectives. These variations can generally be explained in terms of the historical circumstances of individual countries or regions. Thus, for example, in the South Pacific, where most countries did not achieve independence until the late 1970s, the rise of planning occurred rather later (Langmore, 1972; Ballard, 1981). Similarly, in Latin America, where political independence had occurred long before the birth of development planning, planning was introduced with somewhat less enthusiasm, since it was not encouraged either by the sudden achievement of political independence or by colonial pressures. Nevertheless, by the early 1960s the majority of Latin American nations had established some form of development planning, often with the main aim of attracting foreign aid, particularly from the United States (Griffin and Enos, 1970, chapter 13).

However, concern with development and the achievement of political independence cannot alone explain why planning was seen by both Third World governments and colonial powers as such an important means of achieving development. Two other factors played a significant part. One was the growth of economic planning in the socialist world. In the Soviet Union, which is generally regarded as the first country to practise systematic economic development planning, the first five-year plan was adopted in 1929. Prior to the Second World War the impact of the Soviet Union's planning experience on Third World countries was limited, partly because the majority of these countries were at that

time still under colonial rule. However, even at that time it aroused some interest, particularly in countries such as India and the Philippines (Waterston, 1965, chapter 2). After the war the Soviet planning model spread to the countries of Eastern Europe—which came under Soviet influence at that time—and to China, thus providing a much wider range of experiences from which the developing countries could draw. Furthermore, as these countries became politically independent, the opportunities for communication between them and the Soviet bloc increased.

The Soviet approach offered a number of attractions for the newly independent states of the Third World. Planning in the Soviet bloc, as in the Third World, was seen as a way of bringing about radical social and economic change, although the type of change desired was rather different. Furthermore, the particular approach to planning was designed especially for use in countries with a high degree of state control over the economy, and many developing countries considered that a considerable amount of state control was necessary—and in many cases also desirable, as a means of bringing about the type of development required. Consequently, the degree of direct influence which the Soviet approach has had on planning in individual countries is to some extent dependent on the degree of state control considered desirable in a particular country, those with a one-party system of government lending themselves particularly well to this approach. However, it is significant that even those countries characterized by a multi-party system of government, and relatively less state control, have introduced a system of national economic planning which resembles in many respects the Soviet model.

The other influential factor was the experience of planning gained in Europe and the United States during the Second World War. We noted earlier that one of Waterston's categories of planning was 'war-time' planning. Although we suggested in Chapter 1 that the concept of war-time planning could be extended to include planning in any case of national emergency, Waterston was referring to the particular type of planning adopted in Europe—particularly the United Kingdom—and the United States during the Second World War. This experience demonstrated to economists and others concerned with the national economy in these countries that it is possible for a government to influence the rate and direction of growth of a mixed economy (that is, an economy with both private and public sectors), rather than rely entirely on market forces, should it wish to do so. Moreover, it also provided some useful lessons about the techniques of economic planning.

Since the war the role of economic planning in countries like the United Kingdom and the United States has diminished. In the United Kingdom, for example, most of the economic planning would fall into Waterston's category of 'anticyclical' planning, rather than economic development planning. As Waterston (1965, p. 14) explains:

The principal aim of the anticyclical planning is to achieve, within the prevailing economic and social framework and the limits prescribed by the need to maintain

economic and social stability, a level of effective demand which allows the fullest utilisation to be made of capital stocks, labor force and other resources. Policies and measures adopted to attain plan objectives and targets operate largely through the market and demand is controlled mostly through monetary and fiscal measures.

It is not possible to draw a clear line between anticyclical planning and economic development planning and it would be unrealistic to suggest that there are no elements of development planning in the United Kingdom. However, the fact that for most of the post-war period there has not been a comprehensive social and economic development strategy, a ministry or other government agency specifically responsible for national economic planning or any form of national plan document suggests that most of its economic planning is anticyclical rather than developmental. The only periods when this was not the case were the immediate post-war period, when some attempts were made to extend the war-time economic controls into the peace-time situation, and a period during the mid-1960s, when the Labour Party government established a Department of Economic Affairs, which attempted to produce a national plan. However, for a variety of reasons neither of these efforts lasted very long. Thus in the second case the national plan never became more than a paper document and the Department of Economic Affairs was abolished in 1965.

In some other countries of Western Europe, notably France, economic planning has played a more important role and assumed a developmental function. Nevertheless, this role is still relatively small when compared with that in either the Soviet bloc or the majority of Third World nations.

The war-time experience did, however, have an important effect on the rise of economic development planning in the Third World. It encouraged the British and other colonial governments to introduce planning in their territories during the period leading up to independence and, after independence, it influenced the Western economists who were employed as economic advisers to the newly independent governments and the foreign aid donors (including both individual governments and international aid agencies) who increasingly demanded the preparation of a national plan as a prerequisite for the provision of financial aid.

The crisis in planning

Since the mid-1960s there have been significant changes in development planning. In order to understand the nature of these changes it is necessary to look at the approach to development planning adopted in the immediate post-war period and at its achievements and shortcomings. Two main aspects of planning during this period warrant particular attention.

Firstly, development planning was, as we have already implied, concerned primarily with *economic* development, and in particular with the growth and structure of the national economy. This concern is demonstrated in a classic text on economic development planning by Jan Tinbergen. The author acknowledges that development has both social and economic components but believes that

PERPUSTAKAAN S-2 JURUSAN PWK-ITB

these must both be expressed in terms of 'an *economic policy*'. He then goes on to explain that:

The aims of an economic policy may be either ultimate or derived. Ultimate aims may be defined as the greatest possible satisfaction of the whole population, although this definition means very little because it is so general. A first derived aim is one stating the quantity of consumer goods and the productive efforts of all kinds that are deemed necessary to bring about the greatest possible satisfaction of the population, and a second derived aim is one stating the objectives in income and production that are an assumed requirement for the quantities of consumer goods and the productive efforts necessary to the achievement of this greatest possible satisfaction. A further step in the direction of derived aims brings us to the economic measures that the government should take if these objectives in production are to be achieved; in other words, the means. (Tinbergen, 1967, p. 39)

The concern with economic objectives was manifested in a preoccupation with macroeconomic planning—that is, planning the economy as a whole, with the aim of increasing the rate of growth and productive capacity and altering the balance between different sectors—and to a lesser extent, with the planning of major economic development projects. Particular emphasis was placed on increasing the coverage of plans and the ultimate objective was considered to be the production of a 'comprehensive' plan, which covers all sectors and—in mixed economies—includes the private as well as the public sector (compare Waterston, 1965, chapter 4).

This focus on the economic aspects of planning can be explained primarily by the fact that, as we saw in Chapter 2, 'development' was at that time conceived primarily in terms of the rate of growth and structure of the national economy. However, it is probably also significant that both war-time planning in Europe and the United States, and Soviet planning, were preoccupied with economic considerations.

The other important aspect of development planning at that time was its methodological approach. This approach could be criticized on a number of counts. Firstly, there tended to be far too much emphasis on simply writing plans or vetting projects. In many countries planning was, and indeed still is, regarded as little more than producing some kind of document on either a five-yearly or an annual basis. This blueprint for the future, often incorporating totally unrealistic objectives, frequently became an end in itself rather than a means for achieving development.

Secondly, such plans were rarely 'operationally oriented' and no real attempt was made to consider how they might be implemented. Indeed, the gap between planning and implementation was, and still is, one of the major shortcomings of planning in the Third World, and it is consequently an issue which has received a great amount of attention in recent years.

Thirdly, many economic development plans were excessively rigid. Killick (1981) suggests that this may be counter-productive, if not damaging, to a country's interests if the government's ability to adjust and respond to changes in the economic environment is impaired. He also argues that the need for short-

term economic management may not be adequately recognized if government is preoccupied with medium-term development planning. Excessive rigidity has also been criticized by Caiden and Wildavsky, who argue (1974, p. 308) that:

Poor countries cannot and should not attempt at all costs to follow a fixed path. Just the opposite. They should enhance their ability to change course at short notice. They cannot avoid error but they might be able to reduce the cost of making mistakes.

Fourthly, there were problems resulting from the nature of the relationships and the interactions that occurred between the politician, the planner and the traditional administrator—what Seers termed 'the basic triangle of forces'. He argued (Seers, 1972, p. 20) that:

though each of this trio may play his role quite reasonably by his own lights, the outcome is often nonetheless quite irrational, because of basic differences in the way they approach their joint task, due to differences in the education and experience which have moulded them.

The major problems associated with the traditional approach to development planning may therefore be summarized as:

1. too much emphasis on the plan and not enough on its implementation;
2. overemphasis on the medium term;
3. excessive rigidity; and
4. differences in perspective and inadequate communication between politicians, planners, and administrators.

During the 1960s there was increasing disillusionment with this approach to planning and by the end of that decade it was widely accepted that it was not achieving its objectives. As people became aware that development involves more than just economic growth and that, in fact, economic growth may sometimes hamper the achievement of other goals—such as social equity—it became obvious that development planning must also adopt a broader approach. It also became increasingly evident that planning as it was practised at that time was having very little effect on the actual course of events. Large amounts of money and manpower were being used to prepare elaborate plan documents but when, at the end of a plan period, a review of progress was made, it was revealed that few of the targets or objectives specified in the plan had actually been achieved—and those that had been achieved had often occurred as a result of coincidence rather than action designed specifically to implement the plan.

Awareness of these problems led to recognition of what was, at a conference of economic development planners held at the University of Sussex in 1969, referred to as a 'crisis in planning' (Faber and Seers, 1972). Not surprisingly there was widespread dissatisfaction with what Dudley Seers termed 'pseudo-planning'. Seers himself observed (1972, p. 19) that: 'the experience of the last decade

suggests that we now need to think out again the purpose of planning and its procedures'. It is important to emphasize that the role of development planning has not diminished as a result of the recognition of this crisis, probably because, as we saw in the previous chapter, most Third World countries still face serious problems of underdevelopment and the gap between rich and poor countries is increasing rather than decreasing; consequently, the need to plan development has not been reduced. However, the somewhat naive belief that planning will solve most of the country's development problems has generally been replaced by a more realistic view of both its potential and its limitations, and this realization has been accompanied by significant changes in the approach to planning. As Oscar Mehmet, an economist who has been very critical of conventional approaches to planning, has expressed it:

The crisis in planning is not a crisis in relevance. If anything, economic planning is more relevant and more urgently needed than ever before. Rather the crisis is one of approach. It relates to the objectives and strategies of planning. (Mehmet, 1978, p. 271)

The nature and extent of the changes which have occurred have varied considerably from one country to another and, in many countries, the process of change is still in the relatively early stages. Nevertheless, it is possible to identify some general trends which are of particular importance, and these are outlined in the next two parts of this section of the chapter.

Changes in scope

The crisis in planning has resulted in significant changes in the scope of development planning, which are closely related to changes which have occurred in the concept of development itself. Two types of change are particularly important. Firstly, the scope of development planning has gradually broadened to include much more than just the economic aspects of planning. It is now generally recognized that planning must take into account political, social and physical environmental considerations as well as economic factors. Thus, for example, at the national level the objectives of development plans should include the achievement of political goals, the provision of social needs and the conservation of the natural environment, as well as growth or structural change of the national economy. Similarly, when planning a particular project—such as a mine, an industrial venture, or a new road—the planners should consider the political, social, and environmental costs and benefits of the project as well as its financial costs and benefits. As we suggested in the discussion of changing concepts of development in Chapter 2, non-economic factors were at first taken into consideration only because they were seen as obstacles to the process of economic growth, but gradually they have been recognized as important objectives in their own right.

This broadening of the scope of development planning has resulted in changes

in the techniques of planning and in the type of people employed as planners. Most of the changes in techniques have been concerned with incorporating social and environmental factors into processes of decision-making, such as cost-benefit analysis and other forms of project appraisal. We shall examine these in detail in Part Two. Changes in the planners themselves have occurred partly through the realization that economists involved in planning must broaden their skills and attitudes (compare Joy, 1968; Mehmet, 1978) and partly through the increasing employment of other professional staff—particularly sociologists or 'social planners', environmental specialists and political scientists—in planning offices and on planning teams. In most countries the majority of development planners are still economists by training, but it is usually accepted that other professions have at least a role to play.

The broader scope of development planning has important implications for the nature of planning as a discipline. It has resulted in the rise of new branches of planning, dominated not by economists but by other professions. Social planning has, in particular, in recent years become an important subject of study in its own right, with its own methodology, its own textbooks and its own training programmes (Apthorpe, 1970; Conyers, 1982; van Nieuwenhuijze, 1979). Similarly, in the case of the physical environment, there is now a large volume of literature on environmental planning techniques and specialized courses are offered in these, although environmental planning has not yet emerged as an identifiable discipline in quite the same way as social planning. Moreover, since these other branches of planning are just as concerned with planning development as economic planning, it is no longer valid to use the terms 'development planning' and 'economic development planning' interchangeably.

It is also important to note that broadening the scope of development planning has not only resulted in the incorporation of non-economic factors into planning but also in a concern with the interrelationship between economic, social, political and environmental factors. In other words the emergence of the concept of 'integrated' development, which we described in Chapter 2, has resulted in a corresponding concern with 'integrated' development planning, in which all aspects of development are taken into consideration. This approach to planning has become particularly important at the regional or area level, since integration of the different aspects of development is more obviously needed and more easily obtainable within the confines of a specific geographic area (compare Livingstone, 1979). Our use of the term 'integrated area planning' in Chapter 1 did, in fact, suggest this. We shall return to the concept of integrated development planning in the last section of this chapter.

The other significant change in the scope of development planning is related to questions of distribution and equity. It was pointed out in Chapter 2 that the experience of the early post-war years demonstrated that economic growth frequently results in increased inequality and that this realization resulted in a search for patterns of development which would reduce rather than increase inequalities, so that development would benefit the majority of the population rather than just a small minority. This change in the approach to development

PERPUSTAKAAN S-2 JURUSAN PWR-ITB

has necessitated corresponding changes in the approach to development planning. Mehmet, in a book entitled *Economic Planning and Social Justice in Developing Countries*, from which we have already quoted, explains that:

Planned economic growth in LDCs during the post-war period was regarded as a deliberate attempt at maximising income per capita subject to financial and resources constraints. Levelling of incomes among persons, ethnic groups or regions was only paid lip-service. (Mehmet, 1978, p. 37)

He then goes on in the book to explain the changes needed in order to 'make development planning an egalitarian tool so that planning promotes not income concentration but social justice, serving the needs of all groups of citizens' (Mehmet, 1978, p. 175).

The changes advocated by Mehmet and others concerned with 'egalitarian' planning can be divided into three types. Firstly, there are changes in the development policies which provide the framework for planning. We touched upon these when we looked at the components of the 'new' approach to development in Chapter 2 and further discussion is inappropriate here since our main concern is with planning rather than policy-making, to the extent that the two can be separated. It should, however, be noted that, in spite of the title of Mehmet's book, his main concern is with economic policies rather than with the process of planning.

Secondly, there are changes in planning techniques. Concern with the distribution of the benefits—and costs—of development demands a new approach to the assessment of alternative development policies and programmes. For example, alternative industrial development programmes must be evaluated not only according to their impact on national industrial growth but also according to their impact on low income groups and less developed regions. This in turn calls for more detailed planning of individual sectors and projects and it calls for different types of information and new measurement criteria. We shall examine some of the implications of this in more detail in Part Two.

Thirdly, there are changes in the organization of planning. Mehmet emphasizes that an egalitarian approach to planning should involve greater popular participation in the planning process 'so that social choices reflect the needs and preferences of all social groups' (Mehmet, 1978, p. 177). This has implications for the spatial level of planning activity and for the relationship between political representation and planning, both of which we shall examine in detail in Part Three.

Changes in approach

The so-called crisis in planning also resulted in changes in the approach to planning, designed in particular to improve plan implementation. We pointed out earlier that in the early years of economic development planning the

implementation of plans was more a matter of luck than good planning. The various changes in approach which have been introduced in an attempt to reduce this gap between planning and implementation can be divided into two broad types. Both will be discussed in detail in subsequent parts of the book but a general overview of their nature and scope is relevant here.

Firstly, there has been a move to see planning not so much as the preparation of plans but as an integral part of a much more complex and continuous process, which results not merely in paper plans but in an actual change in conditions. The basic principles of this new approach are to be found in Seers' analysis of the 'crisis in planning', to which we have already referred. This was a very significant contribution to the debate on development planning and merits our further attention. Seers argues (1972, p. 33) that the role of the planning office should be that of:

the nerve centre of the government machine, continually scanning experience and helping the government adjust its policies accordingly, in the light of a long term strategy. Evaluation of major policy decisions, and even possibly sets of projections, can help it learn the lessons of experience.

Furthermore, he observed that:

Perhaps the most important job of a planning office is to plan planning itself—to aim at the improvement of the government machine as an instrument for influencing social and economic development.

What we can see quite clearly in Seers' comments is a recognition of the need for planning to be based on a process of learning to enable policy-makers to respond to changing circumstances. Planning should be a continuous process characterized by regular reviews of policy effectiveness and adjustments in policy where necessary. Planning must be flexible so that it can respond to uncertainty more effectively.

Writing more recently, Cacho (1975, p. 42) has commented that:

A plan should be regarded as a living instrument, flexible and evolving in response to changes in the numerous assumptions on which its direction, policies and programs are based.

It should not be:

... a once-and-for-all purely reference document of fixed prescriptions for the period to be covered.

However, as Cacho recognizes:

The concept of planning as a continuous process signifies a fundamental change in the approach to development management ...

At the same time there has been more emphasis on detailed planning at the sectoral, regional and project level, rather than focusing all attention on planning at the macro-level. Project planning, in particular, has received a great deal of attention since the early 1970s and represents a key focus of activity in the field today, a point reflected in the fact that project appraisal techniques have reached a far higher level of refinement than many other components of development planning methodology. We shall examine the advantages and disadvantages of a project approach to planning in Chapter 12.

This concept of planning has also resulted in less emphasis on the preparation of plan documents and more emphasis on 'translating' plans into guidelines for implementation, especially by improving the links between planning and budgeting, since budgeting is the main means of allocating resources for plan implementation. The importance of regular monitoring of progress during implementation, so that problems can be identified as soon as they arise and plans can be amended accordingly, has also been recognized. Finally, it has resulted in less emphasis on planning for fixed periods of time (such as the previously very popular five-year plans) and more emphasis on annual plans, which are linked to the annual budget, and on 'rolling' plans, which are extended year after year. We have already introduced this view of planning as a continuous process in Chapter 1 and we shall examine the implications for the use of specific planning techniques in Part Two.

The second type of methodological change resulting from the 'crisis' in planning can be attributed to the realization that plans must be realistic, in the sense that they take account of the social, economic, and political environment in which they have to be implemented. This means that planners must be aware of the resources available for implementing the plan—especially the financial and manpower resources—and the various other constraints which will determine what can and cannot be achieved. In other words, plans should represent what can realistically be achieved, not what the planners would ideally like to see happen.

This, in turn, has implications for the type of data required for planning, the way in which alternative courses of action are identified and appraised, and the role of the planner. In particular it has implications for the relationship between planners, politicians and administrators, since it means that plans must be acceptable both to the politicians who will have to endorse and support them and to the administrative or technical staff who will have to implement them. And last—but certainly not least—it strengthens the arguments for more popular participation in planning because plans must be relevant to local needs and conditions and acceptable to the people who are supposed to benefit from them. We shall return to all these issues in Part Three. Meanwhile, let us leave our account of development planning for the time being at this point and turn our attention to the other type of planning activity found in most Third World nations—that of physical planning.

Physical planning

Physical planning is one of several terms used to describe a variety of planning activities which are concerned directly or indirectly with controlling and managing the use of land. As the other terms often used to describe this type of planning—for example, 'land-use planning', 'spatial planning', 'urban and regional planning' and 'town and country planning'—suggest, it ranges in scope from the detailed design of the layout of individual sites in either urban or rural areas to the spatial distribution of activities between different regions of a country. Its nature and scope and its relationship with economic development planning can best be understood by looking at its origins and growth in both developed and developing nations.

Physical planning in the developed world

Like economic development planning, physical planning originated in the early part of the twentieth century but did not become of major importance until after the Second World War. However, unlike development planning, it has always been more important in the developed countries of Western Europe, North America and Australasia than in the Third World. Let us examine the case of physical planning in the United Kingdom, which is fairly typical of the situation in other 'western' nations and has influenced the nature and scope of physical planning in the former British colonial territories.

The machinery for physical planning was formally established in the United Kingdom after the Second World War to serve two main purposes (Hall, 1974). Firstly, it was designed to control the detailed use of land in urban and rural areas. This included determining the distribution of land between different functions—such as agriculture, industry, commercial development, housing, and recreation—and ensuring that individual sites were developed in a way which benefited society as a whole rather than just the individual landowner. Secondly, it was intended to try to reduce the growing imbalance between various regions of the country, through such measures as controlling the location of industry and encouraging the development of new industrial and urban areas.

The main responsibility for physical planning—particularly the more detailed control over the use of individual plots of land—in countries such as the United Kingdom has always rested with local government bodies. This can be explained partly by the nature of many of its activities, which require detailed control and design at the local level, and partly by the lack of any systematic national planning machinery during the post-war period. Various attempts to establish machinery at the national level to control such things as the location of industry achieved relatively little success, due to a large extent to the fact, mentioned earlier, that there is no systematic national economic development planning in the country.

The absence of any systematic development planning also helps to explain the importance attached to physical planning in the United Kingdom and the

increasingly wide range of activities which it covers. Although physical planning machinery was originally established to serve fairly limited purposes, its scope has gradually increased to include a wide range of activities related to the implementation of socioeconomic policies, which in developing countries would normally be the responsibility of the development planning machinery.

The methodology of physical planning, as practised until the early 1970s, bore some resemblance to the early approaches to development planning in the Third World. There was, in particular, a preoccupation with blueprint plans, normally known in physical planning as 'master plans'. The procedure for the preparation of master plans was highly influenced by the work of Patrick Geddes, a British pioneer of physical planning in the early decades of this century. Geddes proposed a sequence of planning activities which was aptly expressed in three words: 'survey-analysis-plan'. This simple approach dominated physical planning from the 1920s to the 1960s. Its essential ingredient was the preparation of a detailed statement of land-use patterns representing some desired future end-state—a blueprint for the future. Geddes' sequence of activities summarized the plan-making operation. First, the existing situation in the area to be planned would be surveyed. The survey data would then be analyzed to establish whether any remedial actions were required. Finally, required actions would be embodied in a fixed plan to be realized over a certain number of years (Hall, 1974).

Much has been written and said about the contribution of the 'survey-analysis-plan' cycle to the method of physical planning and a good deal of it has been rather critical. There is no doubt that the approach overemphasized the rôle of the plan. Planning was about preparing plans and little else. Information was often collected for its own sake and was used unselectively and uncritically. The relationship between plans and the information on which they were supposedly based was often tenuous to say the least. Collecting information seemed to have achieved the status of some kind of 'ritual behaviour' and just how that information was turned into a plan was, according to McLoughlin (1969) '... a mystery too deep to be plumbed'. Some writers do, however, accept that Geddes' approach served to draw attention to the need for a synoptic view of people, place and work (it is also sometimes called 'comprehensive planning'). It also emphasized the need to study carefully the object of planning activity, to diagnose before treating and to gain understanding before taking action (McLoughlin, 1969).

A master plan approach is still widely used in physical planning in the Third World, especially for the planning of major new urban centres, such as national or state capitals. It is also used in those situations where physical planning is itself a recent innovation and there is an acute need to establish an overall framework for the physical development of particular urban areas or even for an entire region. It is important to stress that a master plan approach in these situations is by no means an inferior or inappropriate way of tackling land-use planning problems. Planning must start somewhere with some guiding principles, and a master plan can fulfil a valuable role in setting out these general principles for managing growth and change. The important point to remember is the need for

flexibility in implementing such plans, so that it is possible to take account of changing circumstances or additional information which becomes available in the course of plan implementation. Planners must therefore continuously monitor both the implementation of their plans and the factors which will influence the extent to which desired objectives are achieved. Above all, they must be willing and able to respond to changing situations.

The limitations of the traditional master plan approach were first critically evaluated in various developed countries such as the United Kingdom at about the same time as development planning approaches were being reappraised. It is important to stress that the pressures which led to the emergence of a new approach in physical planning were rather different from those in the development planning field. Physical planning in developed countries had not really reached a 'crisis' stage, or at least the crisis certainly did not match that associated with development planning in the Third World. Physical planning was, however, experiencing a number of important changes. The traditional structure of the profession was beginning to break down. Since its emergence in the early part of the present century physical planning had been dominated by architects and surveyors, and to a lesser extent, civil engineers. As a professional activity it had been primarily concerned with 'design' issues, such as the housing layouts and the demarcation of areas of different land-use. In the 1960s this professional emphasis started to break down as more and more social scientists—particularly geographers but also economists, sociologists and political scientists—entered the physical planning profession, bringing with them new perspectives on the nature of planning problems and new ideas about how these problems should be tackled. The academic planning field underwent a similar change, a trend that intensified as planning education expanded in the United Kingdom and elsewhere in the late 1960s and early 1970s. An increasing number of planning academics and practitioners explored the potential of concepts and techniques drawn from various social science disciplines and these have greatly enriched the theory and method of physical planning.

This broadening in scope occurred rather earlier than the comparable broadening of the scope of economic development planning in the Third World. Consequently, the interdisciplinary nature of physical planning is much more obvious, not only in the professional backgrounds of planners but also in the literature on planning in Western Europe and North America and the structure of training programmes. Physical planning has emerged as a discipline in its own right, with its own methodology and professional qualifications, while economic development planning has been seen, at least until very recently, as merely an offshoot of economics.

The scope of physical planning activity also changed from the mid-1960s. It was no longer exclusively concerned with land-use and design issues but was increasingly expected to contribute to the integrated planning of economic, social and environmental forces at both local and strategic levels. Physical planners thus had to turn their attention to coordinated policies for housing, employment, transport, and various other components of urban and regional systems. Indeed,

it was to be the concept of the system that underpinned the new approach to physical planning that emerged in the late 1960s. We should emphasize that other approaches have emerged in physical planning in recent years and the systems approach, particularly in its early and highly technocratic form, has been widely criticized. We cannot elaborate on the arguments involved, but the reader will find ample coverage of this topic in the guide to further reading at the end of the chapter. Nonetheless many of the principles embodied in the approach are still to be found in contemporary physical planning as taught and practised in many countries.

The systems approach in physical planning places great emphasis on the idea of interaction between two parallel systems: a managing and controlling system on the one hand and the system being planned on the other (Chadwick, 1971). The approach has its origins in various developments which occurred in management science from the late 1940s onwards. Management scientists were steadily developing a greater interest in interdisciplinary approaches to the analysis of decision-making, especially decisions made in complex situations. One key development to which Hall (1974) attributes great importance was the birth of the science of cybernetics. With its emphasis on the control of complex systems, cybernetics played a vital role in providing a framework which in Hall's view (1974, p. 12):

has profoundly affected the way planners think about their job and the way they produce plans. In essence it has led to a swing away from the old idea of planning as production of blueprints for the future desired state of the area and towards the new idea of planning as a continuous series of controls over the development of the area.

The systems approach is based on a view of planning as a continuous, cyclical process (McLoughlin, 1969). It places emphasis on the actual process of planning and its effects (Eddison, 1975) which contrasts with the tendency in 'master planning' to treat the transition from analysis to plan as a 'black box'. This latter term is used by systems analysts to describe a situation where the inputs of a particular process are known but not the actual process itself. In other words we do not know exactly how the inputs are modified and organized to produce the resulting outputs; hence the concept of the black box.

Physical planning in developing countries.

We have looked in some depth at the nature and role of physical planning in the developed world because this is necessary in order to understand its role in the Third World and its relationship with economic development planning. Physical planning was introduced into most Third World countries towards the end of the colonial era. It was seen by the colonial powers as a separate activity from development planning and since independence most Third World governments have continued to regard it as such. This is why physical planning is generally located in a separate ministry or department. Furthermore, its staff generally

come from different disciplinary backgrounds (particularly geography, architecture and surveying) to those engaged in economic development planning and they usually undergo an entirely different professional training, often involving a period of study in a developed country in a training institution specializing in physical planning.

Although the organizational structures responsible for economic development planning and physical planning in most Third World countries are thus easily distinguishable, it is often more difficult clearly to distinguish the activities in which they are actually engaged. There are some planning activities which are undoubtedly the responsibility of physical planners and do not infringe upon the work of development planners. The most obvious of these is the detailed design and control of land-use, particularly in urban areas but also in certain rural areas, such as planned settlement schemes or special agricultural development projects. The role of the physical planner as far as these activities are concerned is in many ways similar to that in developed nations such as the United Kingdom, although allowance has to be made for differences of detail, such as the relative importance of different types of land-use and the choice of appropriate technology and standards of design and construction. Thus, for example, the urban planner in the Third World will, like his counterpart in the United Kingdom, be concerned with such issues as the allocation of land between industrial, commercial, residential, and service functions, the design of transport systems and the control of private development on individual plots of land. However, he has to take into account the different types of industrial and commercial activity which prevail in the Third World, differences in the relative importance of alternative forms of transport, the much greater problems of controlling private development—especially in unplanned settlements—and so on.

However, when one considers some of the other activities in which physical planners become involved, it is more difficult to distinguish them from those of development planners. For example, if physical planners become involved in the formulation of housing policies, the location of rural services, or the distribution of development activities within a region or between different regions of the country—as they inevitably do in the 'western' world—they find themselves encroaching upon the work of the development planners. Consequently, physical planners in the Third World tend either to restrict their activities to those where there is little or no overlap, such as the control of urban land-use, or to attempt to agree upon some relatively arbitrary division of labour between themselves and the development planners. In view of the short supply of both development planners and physical planners in most Third World countries, the latter is generally possible without resulting in any great duplication of activity, although it does not necessarily result in the most logical or efficient division of labour.

It should also be noted that most of the activities in which physical planners become involved in the Third World are concerned directly or indirectly with 'development'. If one adopts the broad definition of development which we advocated in Chapter 2. They are concerned both with the detailed implementation of major socioeconomic development policies (such as urban

development, housing or agricultural settlement policies) and with tackling much smaller, more localized development problems. This raises the question of the inappropriateness of distinguishing 'physical planning' from 'development planning', something to which we shall return in the last section of the chapter.

Why is there this potential overlap between physical planning and economic development planning in the Third World? There are two main reasons. Firstly, the demand for those planning activities which are strictly the responsibility of physical planners is more limited than it is in developed countries. This in turn is due to the fact that there is less urbanization, while in the rural areas control over the use of individual plots of land is seldom either necessary or possible, except in such cases as planned agricultural or settlement schemes. Even in urban areas, control over land-use is often more difficult because of the temporary nature of many buildings, the high mobility of the urban population and the frequent occurrence of unplanned settlements, especially on the fringes of larger towns.

The other reason is the important role and broad scope of development planning in most Third World countries. In countries such as the United Kingdom physical planning has been able to extend itself over a wide range of activities because there is no systematic national development planning. In other words, most development planning activity which does occur is carried out under the guise of physical planning. In the Third World, however, development planning plays a very important role and, especially since its scope has gradually broadened to include more than just macroeconomic planning, it includes a wide range of activities which, in countries such as the United Kingdom, would be undertaken by so-called physical planners or not at all. This does not mean that there is no need for physical planners in the Third World; on the contrary, they have a very important role to play. But it does make it more difficult to define the limits of their area of responsibility.

An integrated approach to development planning

Having reviewed the origins and evolution of planning in the Third World, we attempt in this section to draw some conclusions about the current state of planning and to consider the implications of this for the role and scope of this book.

We have seen that in most countries of the Third World there are two streams of planning activity, each with its own organizational structure and cadre of professional staff. The most important of these, in terms of the number of staff and scope of activity, is what we have referred to as economic development planning. This was originally concerned with macro-economic planning with the main objective of achieving national economic growth, its staff were almost entirely economists and its methodology evolved out of economics. Gradually, however, its scope has extended beyond the macro-level and it has become increasingly concerned with the planning of individual sectors, areas and projects, partly in order to improve the implementation of macroeconomic policies and partly because of the realization that development is concerned with

distribution as well as growth. Moreover, as the concept of development has broadened, development planning has become increasingly interdisciplinary in nature and, although the majority of development planners are still economists, it is generally accepted that other disciplines—including sociology and related subjects, political science and the natural sciences—have a very important role to play.

The other stream of planning activity, which we have called physical planning, plays a much smaller role. It is generally staffed by non-economists and it has its own methodology, which is based on that of physical planning in the developed nations of Western Europe and North America, where it has become an important profession in its own right. Its main concern is with detailed land-use planning and design, particularly in urban areas. However, it has, at least in some countries, also extended into other fields, although to a lesser extent than in the developed world, and it sometimes overlaps with the activities of development planning, particularly in the fields of regional and rural planning.

We have also seen that although the two streams of planning activity have different historical and disciplinary roots, it is possible to identify some similarities in the approaches to planning and the choice of planning techniques. In particular we noted how in both cases planning is seen increasingly as a continuous attempt to guide and monitor an ongoing process of change, rather than as the preparation of plans which are no more than idealistic representations of some future state.

This overview of the nature of planning in the Third World suggests the need for a rather different concept of development planning to that conventionally adopted. It suggests that development planning should be regarded as a very wide-ranging activity, encompassing all efforts to control, direct, or influence and to monitor the process of development, taking into account that development is now defined very broadly and that each country can—and should—define its model of development.

The activities included in this broad definition of development planning range from the more conventional macroeconomic planning, through to the planning of socioeconomic development programmes for particular sectors or geographical regions and the detailed planning or design of specific projects. For example, concern with a country's adverse balance of payments position, expressed by macroeconomic planners, may result in (among other things) a national policy decision to increase domestic food production. This in turn will have implications for planners in the ministry of agriculture and in other ministries concerned with the provision of agricultural services or infrastructure and for regional planners in areas where there is potential for increasing food production. Eventually there will be a demand for the detailed planning and design of specific agricultural projects, such as the location and layout of a state farm or smallholder scheme or the construction of a dam to provide water for irrigation.

These activities require the expertise of many different disciplines—including economics, sociology and related fields of study, political science, geography,

natural sciences, architecture, surveying and even engineering. Experts in each of these fields have a particular role to play and have to utilize their particular skills. However, their activities should be interrelated in the sense that they are all part of a concerted effort to achieve a common development objective and they should share a common understanding of the general nature and role of planning in the process of development.

This concept of planning is not entirely new. We saw earlier that, within the field of development planning, an integrated interdisciplinary approach is gaining increasing support, particularly at the regional level, as in the case of integrated rural development programmes in specific areas. Moreover, it is also at the regional level that the interaction between development planning and physical planning is more obvious, and this is reflected in regional planning methodology. Thus in a paper on the education of regional planners, presented at a conference in The Hague in 1970, Kuklinski pointed out that planning within a region, which he calls 'interlocal' planning:

has been in the past and will be in the future the type of regional planning which will absorb the greatest number of specialists. ... There are three streams of this tradition which seem to converge now. The first is the old tradition of physical planning, which tried to interpret interlocal planning as an extension of the problems involved and the methods applied in classical land-use planning. The second is the tradition of community development, which is oriented towards solving social problems, in most cases at the micro-level. The third is the tradition of national economic planning, which tries to impose its methods and approaches on interlocal planning. (Kuklinski, 1971, p. 34)

We shall examine the role and organization of integrated area development planning in much more detail in Part Three. Our concern here is merely to show that the concept of integrated development planning—which adopts an interdisciplinary approach and bridges the gap between economic development planning and physical planning—is not entirely new, at least at the regional or area level, and to suggest that it can be extended further to provide a framework for all forms of development planning. This book is particularly concerned with an integrated approach to development planning and its main purpose is to provide the common core of knowledge about the role, techniques and organization of planning which is required by all planners, whatever their specialized professional background.

Guide to further reading

The aim here is not to provide a comprehensive list of works on planning in the Third World but to select a few items which either provide a useful account of the history of planning (or some forms of planning) or illustrate significant changes in thinking about development planning. The majority refer specifically to planning in the Third World but a few items on planning in developed countries have been included in order to demonstrate the inter-relationships between the

experiences of developed and developing areas. Readers are also encouraged to seek additional material on the history of planning in their own countries in order to relate the information in this chapter to their own experiences. It should be noted that there is some overlap between the material listed here and that in the guide to further reading at the end of Chapter 1; this is because many books (including this one) combine material on the nature and history of planning.

The following are particularly recommended:

- Waterston, A., *Development Planning: Lessons of Experience* (Baltimore, Johns Hopkins Press, 1965) (paperback edition, 1979).
- Faber, M., and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus, 1972).
- Griffin, K. B., and J. L. Enos, *Planning Development* (London, Addison-Wesley, 1970).
- Mehmet, O., *Economic Planning and Social Justice in Developing Countries* (London, Croom Helm, 1978).
- Tinbergen, J., *Development Planning* (London, Weidenfeld & Nicolson, 1967).
- Todaro, M., *Economic Development in the Third World* (London, Longman, 2nd edition, 1981), chapter 15.
- Helleiner, J., 'Beyond growth rates and plan volumes—planning for Africa in the 1970s', *Journal of Modern African Studies*, vol. 10 (1972), pp. 333–55.
- Caiden, N., and A. Wildavsky, *Planning and Budgeting in Poor Countries* (Chichester, Wiley, 1974).
- Apthorpe, R. (ed.), *People Planning and Development Studies* (London, Frank Cass, 1970).
- Conyers, D., *An Introduction to Social Planning in the Third World* (Chichester, Wiley, 1982).
- Hall, P., *Urban and Regional Planning* (Harmondsworth, Penguin Books, 1974).
- Friedmann, J., and C. Weaver, *Territory and Function: The Evolution of Regional Planning* (London, Edward Arnold, 1979).

Chapter 4

Summary and Conclusions

We have attempted in Part One of the book to provide an introduction to the process of planning development in the Third World today, in order to give the reader some indication of the nature and scope of the subject-matter of the book. In this chapter we summarize briefly the main findings so far, before going on to examine the planning process in more depth in Parts Two and Three.

In order to examine the process of planning development it has been necessary to look in some detail at the nature of both 'planning' and 'development'. Planning has been described as a continuous process which involves making decisions about alternative ways of using available resources to achieve particular goals at some time in the future. Development planning is a particular type of planning activity, in which the goal is the attainment of a 'developed' society and which involves trying to control or influence the process of 'development' designed to achieve this goal.

Development planning is essentially a post-war phenomenon. However, during the post-war period there have been fundamental changes in the nature and scope of development planning, largely as a result of changes in the concept of development. Development was initially seen primarily in economic terms, involving growth and structural change in the national economy with the aim of achieving a type of society similar to that of the so-called developed nations. However, gradually the concept of development has broadened to include non-economic objectives, much more emphasis has been placed on the distribution of the benefits of development, and it has been accepted that the type of society found in the countries of Europe or North America is not the only, nor necessarily the most desirable, model of development to which the Third World should aspire.

Consequently, development planning, which began as an offshoot of economics concerned primarily with trying to influence the rate of growth and structure of the national economy, has now become a much wider-ranging activity, concerned with all aspects of social, economic, political and environmental change and overlapping into what is generally known as physical planning, an activity which, because of its different historical origins, has tended to be regarded as an entirely separate form of planning.

There have also been significant changes in the approach to planning. It has been recognized that the process of planning development must be seen as part of a wider process of ongoing change. Thus planning should not be regarded as the preparation of ambitious or idealistic plan documents for fixed periods of time but as a continuous process, closely related to the formulation of policy and the

implementation of plan proposals. Planners should therefore work closely with politicians and administrators—and with the general public; their work should include not only the preparation of plans but also the monitoring and evaluation of progress during implementation, and plans should be continuously reviewed and, if necessary, revised and extended.

This broadly defined concept of development planning has many different components. It includes comprehensive planning for the nation as a whole and more detailed planning of individual sectors, areas and projects. Furthermore, at any of these spatial or operational levels it can require the expertise of planners with many different professional or disciplinary skills, including economists and other social scientists, natural scientists and those trained in physical planning or design. However, these components should be seen not as separate activities but as part of an integrated process of planning development, and the various professional planners involved should all have a common understanding of the goals they are trying to achieve and the general role of planning in achieving those goals.

The rest of the book examines this integrated approach to development planning in more detail. Part Two is concerned with planning techniques. It focuses in particular on those techniques which are common to most forms of planning and thus form the basis of an integrated approach. Consequently, it does not attempt to cover the more specialized techniques used only in certain fields of planning—such as, for example, detailed macroeconomic planning or physical design techniques—although brief reference is made to these where appropriate. Part Three then considers the organization of planning at different spatial and operational levels, emphasizing the need for coordination between planners with different professional skills and for coordination between the planning machinery and the rest of the structure of government—and the general public.

We have talked a great deal in this part of the book about what *should* happen—what planning *should* involve, what sort of development goals Third World governments *should* adopt, what planners *should* do, and so on. It is inevitable that in the rest of the book we shall continue to do this, since the book is intended to provide guidelines for those involved in planning. However, as we pointed out in the Introduction, the book is also intended to be realistic. This means that we must recognize that there are many practical constraints—including the lack of basic requirements such as money, skilled manpower and accurate data, pressures of the international economy, adverse weather conditions, internal political conflict, and the apparently inherent selfishness of human nature—which make the attainment of any 'ideal' system of planning or government very difficult. This is particularly apparent at the time of writing, when many Third World governments are having to devote all their efforts merely to the maintenance of basic activities and services, in the face of a world-wide economic recession. Moreover, we must also remember that the scope and nature of planning, and the role of the individual planner, depend to a large extent on environmental conditions which vary enormously from one country to

PERPUSTAKAANS-2 JURUSAN PWR-ITB

another and, as we emphasized in Chapter 1, the nature of the political environment is a particularly important factor. Our aim, therefore, is to present not an 'ideal', standardized approach to planning but one which can be practised in the everyday conditions which prevail in most parts of the Third World and which can be adapted to suit the specific environmental conditions of individual countries. This is reflected in our discussions of planning techniques and the organization of planning in subsequent chapters.

Part Two

TECHNIQUES FOR PLANNING

Chapter 5

The Planning Process

Introduction

Part One of this book dealt with the nature and scope of planning, concepts of development and the history of planning in the Third World. We described how concepts of development have evolved over time and how approaches to planning have been changing in response to the recognized shortcomings of conventional, medium-term, blueprint plans and as a result of the emergence of new perspectives on the nature and meaning of the development process. Planning development, we have argued, should be based on a concerted, interdisciplinary approach which links the two important, but traditionally distinct, fields of economic development planning and physical, or land-use, planning.

Effective and successful planning depends not only on the integration of various professional inputs and the overall approach that is adopted, but also the techniques that planners use. In this part of the book we shall be discussing various aspects of the methodology of planning: the activities that are involved in the process of planning development and some of the techniques most frequently used by planners to carry out specific tasks at various stages in this process.

In the present chapter we shall be focusing on the planning process and its constituent elements. We shall be interpreting the activity of planning as a continuous, cyclical process of decision-making, which should involve working through a series of linked stages in a systematic and orderly fashion in order to achieve better, and especially more rational, decisions.

Rationality in planning

The concept of rationality is central to the notion of a cyclical planning process and, indeed, is of fundamental importance in the overall context of the theory of planning and decision-making. To refer to an approach as rational basically means that it is founded on principles of reasoning rather than simply on emotions or inspired guesswork. As a concept rationality can be applied both to the goals of behaviour and to the ways in which people should ideally behave in reaching a particular decision. Where the goals of behaviour are concerned, rationality is generally taken to mean that one seeks to obtain the maximum output for a certain input or, alternatively, to minimize the inputs required to obtain a certain output. This view of rationality is closely associated with welfare economics and its concern with efficiency in the allocation of resources (Carley, 1980).

Systems analysts and decision theorists are interested in not only the nature of decisions but also how those decisions are reached. They tend to be more concerned with how people behave, or should ideally behave, in reaching a particular decision. The rational approach to decision-making has been described in some detail by Carley (1980). It involves proceeding in an orderly and systematic manner through the following sequence of activities:

1. problem identification and definition;
2. classification and organization of goals, values and objectives relating to the problem;
3. identification of alternative courses of action by which the problem may be solved or the objectives achieved;
4. prediction of the consequences of each alternative course of action and the likelihood of these occurring;
5. comparison of the predicted consequences in relation to specified goals and objectives;
6. selection of a course of action, '... in which consequences most closely match goals and objectives, or the problem is most nearly solved, or most benefit is got from equal cost, or equal benefit at least cost' (Carley, 1980, p. 11).

The rational approach, it should be emphasized, is an ideal approach. The pursuit of rationality in planning has often been referred to as a 'counsel of perfection' (Self, 1981). Nonetheless, there are many who regard it as an approach to which planners and policy-makers should attempt to work (Barrett and Fudge, 1981). There are, of course, many factors which limit the ability of planners and decision-makers to pursue a purely rational approach. It is, for example, often extremely difficult to assemble sufficient reliable data to identify the nature and extent of prevailing problems, to formulate possible solutions and to reduce the many uncertainties that can influence planning activity. Similarly, it is not always easy to frame planning objectives or to cost different courses of action. In addition, it is often difficult to find out what people want and what their preferences might be regarding possible policy options (Smith, 1976).

The 'model' of decision-making outlined above certainly has many adherents, but it also has many critics. One of the major criticisms levelled at the rational approach centres on the idea that to be rational it is necessary to be comprehensive in the sense that all the information relevant to a particular problem is collected and analyzed, all goals and objectives are ranked in order of preference and all the consequences of all possible courses of action are predicted before a decision is made. In the real world this, of course, is quite impossible. Planners and decision-makers simply would not be capable of dealing with the amount of information involved. In any case, the costs of collecting and processing the required data would be enormous. Advocates of the rational approach generally acknowledge these problems and accept that rationality must inevitably be limited. Limited rationality means that only some selected alternatives and their most important consequences relating to key goals and

objectives, are actually considered in the decision-making process. Goals, objectives, alternative courses of action and their consequences are therefore filtered out. This can be done in various ways, as Carley (1980, p. 15) explains, including:

- (i) ... ignoring consequences which are of no interest; (ii) decision-makers 'learning' from past decisions and thus adjusting the scope of their concern accordingly; and (iii) 'satisficing'.

Satisficing is a particularly important concept as it underlies a great deal of individual and organizational behaviour. It means essentially being prepared to accept an outcome (e.g. a problem solution or goal) which is satisfactory or sufficient and not the optimum. For most of us this is a daily fact of life. In most decision-making situations it is necessary to reach compromises on the extent to which different goals and objectives are pursued. Decision-makers frequently have to make trade-offs between different objectives because it is simply not possible to achieve all objectives to the same degree. It should be emphasized that satisficing is not necessarily irrational. A decision to satisfice can be reached by following the stages of the rational approach outlined earlier, but the outcome will represent limited rationality (Carley, 1980).

As we have suggested, the rational approach is by no means the only model, or representation, of the decision-making process. A detailed review of alternative models lies outside the scope of this book but reference should be made to the concept of 'incrementalism', which is often presented as the alternative to the rational approach. Incrementalism is based in part on the idea that policy changes should be gradual and marginal. Unlike the rational approach, which places emphasis on expert technical assessment of policy and planning, incrementalism places an emphasis on the role of political pressure groups, who will contest policies if they feel they are adversely affected by them. If pressure groups do respond against a policy, and assuming that the policy change is marginal, then incrementalism suggests that the policy can be reversed and things can return to the way they were before the policy was introduced (Gershuny, 1981; Lindblom, 1959).

The discussion above has identified the main features of the rational approach to decision-making and some of the difficulties associated with the ideal form of the model. What, then, is the contribution that a rational approach can make in the context of planning development in the Third World? Clearly, to begin with we have to accept that planners everywhere, but especially in the Third World, can only be expected to pursue an approach based on limited rationality. It is quite unrealistic to expect that a totally comprehensive approach to the identification of objectives, formulation of alternatives and assessment of those alternatives can be followed. In many Third World countries data problems are extremely acute and this factor, coupled with shortages of skilled manpower and resources, make it even more necessary to adopt a pragmatic approach to planning, although there is no reason why this cannot be based on the general

principles of the rational approach. Thus, the idea of processing through a series of linked stages in an orderly and systematic way remains of crucial importance and relevance. In advocating a rational approach to decision-making it is often all too easy to create the impression that both planning and decision-making should be viewed as objective, technical processes. This is a dangerous fallacy as it ignores the fundamentally political nature of the decision-making process. As we have suggested, political factors can, and often do, exert an extremely strong influence on the range of alternatives considered and the way in which assessment is carried out. Ultimately, decision-making itself involves applying political values and judgements to the range of feasible alternatives identified through the process of planning. Clearly, professional planners play a major role in the identification and formulation of alternative courses of action and are expected to present decision-makers with information about the relative merits of different alternatives, but in the final analysis decision-making is a political rather than a technical or professional activity.

Uncertainty in planning

It is impossible to discuss any type of planning activity without having to refer to the problem of uncertainty. In practical terms planning is itself an attempt to reduce uncertainty about what will happen in the future by managing and controlling change to achieve desired objectives. Nonetheless, planning itself cannot escape the impact of uncertainty and planners can only really reduce, but never totally eliminate, all the uncertainties to which the activity is vulnerable.

A number of writers have considered the theoretical and practical dimensions of uncertainty in the planning process and it is beyond the scope of this chapter to examine this topic in great detail. We shall, however, briefly discuss one particular analysis of the uncertainty problem which we feel has a general applicability in the areas of planning activity with which this book is concerned. Friend and Jessop (1969) present a strategic choice approach to planning, which deals explicitly with the uncertainty problem. Their approach is based on the view that planners cannot easily forecast or control the future and that they also have to work with only a limited amount of information about the prevailing situation. This clearly affects the viability of future plans. The problem can be tackled in two basic ways: firstly, by looking at the sources of uncertainty and trying to get a better understanding and control over them; and secondly, by adopting a flexible approach so that planning can adapt and respond to uncertainties as and when these become apparent. In this approach it is especially important to identify and analyse the types of uncertainties that make it difficult for the planner to select a particular plan with confidence. It stresses the need to move forward with the planning task while at the same time keeping open as many future options as possible. These options can then be exploited as and when more information becomes available and uncertainties are resolved (Wedgewood-Oppenheim, *et al.*, 1975).

Friend and Jessop identify three widely accepted areas of uncertainty that

affect the planning process. Firstly, there are many uncertainties about the general environment within which planning takes place—the world that is outside of the specific decision-making systems actually involved in planning. Planners usually do not know how this external world will change in the future (for example, what changes will occur in the international economic situation) and how it will be affected by planning and decision-making activities. Secondly, a major source of uncertainties is represented by intentions or policies in what are termed 'related fields of choice'. In other words, there may be 'knock-on' effects from other areas of decision-making that are outside the scope of the planning exercise currently being undertaken but which are related to it. For example, settlement policies will have an impact on transport planning. Finally, there are uncertainties about the appropriate value judgements to be applied in making policy or plan decisions and assessing their consequences, such as the preferences which politicians and the general public have with regard to different policy options.

How can these different types of uncertainty be reduced or resolved? The first type are best tackled by further research and information collection, although in many Third World countries this may well present serious difficulties in view of resource constraints. The second type can be reduced by adopting a more comprehensive planning approach which tries to integrate other current and possible future areas of policy and decision-making. This certainly implies more effective coordination in planning and also raises questions about the most appropriate forms of management and administrative structures—issues that we return to in Part Three. The third type can be reduced by obtaining what is sometimes termed 'policy guidance' from politicians. This basically means that politicians provide planners with more information about how they perceive the relative merits of different alternatives and their consequences. This may also be supplemented by trying to find out more about public attitudes to planning problems through exercises which seek to obtain information directly from the people through public participation in the planning process.

Perspectives on the nature of the planning process

In Chapter 3 we discussed the ways in which approaches to economic development planning and physical or land-use planning have changed over the past 20 years. The emphasis has, we suggested, increasingly shifted away from the plan to the actual process of planning itself. Clearly, it would be inaccurate to suggest that every economic development planner and physical planner, and the ministries or departments they work for, have completely broken away from the blueprint plan approach and enthusiastically adopted a process-oriented view of planning. This is not the case and, indeed, as we pointed out in Chapter 3, there may be situations in which the master plan has a relevant and important role to play.

There are numerous models or representations of the planning process in the literature. Some are very elaborate and formal, others less so. Griffin and Enos

(1970, p. 6) identify some of the key characteristics of the process when they state that the term 'planning' should be:

... restricted to the construction of economic, social and political programmes in the underdeveloped countries. The construction consists of a determination of the goals or aims of the programme, an enumeration of all the resources which are available for their attainment, a consideration of alternative policies governing the ways in which the resources may be used, perhaps a check for consistency to make sure that the goals can be achieved with the resources available, and, finally, periodic revisions to allow for unexpected events.

More recently, Beenhakker (1980) describes a comprehensive system for development planning and budgeting, which involves a continuous, cyclical process based on the following ten stages:

1. appraisal of the current state of affairs;
2. assessment of future directions for progress and preliminary priorities among directions;
3. preliminary formulation of objectives and estimation of available funds;
4. consideration of alternative courses of action;
5. specification of objectives and sub-objectives;
6. identification of alternative programmes, projects, policies and strategies;
7. search for the best solution;
8. derivation of evaluation criteria;
9. application of evaluation criteria;
10. determination of action plan and budget.

Other writers in the development planning field tend not to formulate the planning process in terms of discrete stages but instead focus on the desired characteristics of a 'well-prepared' economic development plan. Killick (1981) adopts this approach, and in so doing he does give quite a clear indication of what is actually involved in the process of planning. In Killick's view a well-prepared plan will:

1. be comprehensive (and include the private sector, parastatal organizations and central government);
2. include a review of past economic performance and identify the most serious current problems;
3. specify economic objectives and priorities between them;
4. translate objectives into targets and then present a strategy to achieve these;
5. translate the strategy into specific policies;
6. set out programmes of government capital spending for the planning period and break these down to the project level;
7. provide a range of forecasts about economic performance over the plan period, usually by means of macroeconomic models, to supplement specific policy targets;

8. focus on the medium term but may incorporate both a 'perspective plan', setting medium-term policies in the context of long-term goals and objectives, and annual plans.

Physical, or land-use, planning has also provided a number of models of the planning process. These reflect the fact that, as Hall (1974, p. 273) observes:

During the 1960s interest developed in systematizing the process of planning, with a new stress on modelling and evaluating alternative designs or courses of action. These formulations drew heavily from the new sciences of cybernetics and systems analysis.

Three of the most frequently quoted models are those of McLoughlin (1969), Chadwick (1978) and Wilson (1972). McLoughlin's is the most straightforward of these models and is based on a cyclical sequence of activities that is initiated after the decision to adopt planning has been taken. These activities are:

1. goal formulation and the identification of objectives;
2. the study of possible courses of action (often with the aid of models);
3. evaluation of alternatives by reference to values and costs and benefits;
4. action through public investment or control over private investment;
5. review (monitoring) of the state of the system.

Although the various perspectives on the nature of the planning process presented above differ in their degree of complexity and detail, certain common elements are in evidence. In the following section we shall draw these together and outline the types of activity associated with the various stages in the planning process.

A view of the planning process

In this part of the chapter we outline the particular interpretation, or model, of the planning process which underlies the discussion in the remainder of the book. As the reader will discern, this model draws on the common features of many of the models described above, and it also reflects the fundamental characteristics of planning emphasized in Chapter 1.

In this model planning is seen as a cyclical process, involving a sequence of stages which are designed to link the formulation of basic policy goals with the design of specific projects or programmes and to ensure that lessons learned from the implementation of these projects and programmes are fed back into subsequent planning cycles. The main stages in this cyclical process are represented diagrammatically in Figure 2 and each is described briefly below. However, before looking at individual stages a few general comments about the process as a whole are required.

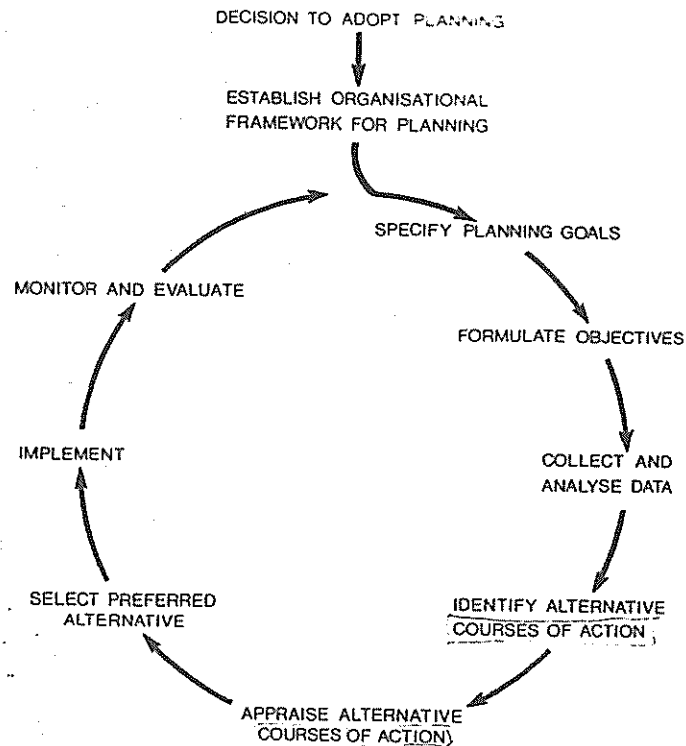


Figure 2. The planning process

Firstly, it should be noted that the various stages are interrelated and so no one stage can be considered in isolation from the others. This has implications not only for the sequence in which the various stages should be undertaken but also for the techniques used in each stage and the organizational structure within which the whole process takes place. It is, in particular, important that the different people involved in each stage are in communication with each other. We shall examine the organizational implications in detail in Part Three of the book.

Secondly, the process is in reality far more complex than Figure 2 suggests. Many planning exercises, especially more complex ones such as the preparation of a national or regional plan, involve a series of interrelated cycles, with progress in one cycle perhaps taking place much faster than progress in another. Thus, for example, in the case of national planning, detailed design of individual projects may be under way in one sector while basic policy objectives are still being formulated in another. Moreover, it is not necessary to go through all the stages in the cycle in each planning exercise. For example, basic policy goals and objectives, once formulated, may provide a framework for several 'rounds' of

more detailed planning activity, provided that the goals are reviewed periodically to ensure that they are still relevant. The relationship between five-year plans and annual plans reflects this fact. Similarly, detailed work in one stage may reveal the need to go back and reconsider earlier stages in the cycle. For instance, in the course of appraising a number of alternative courses of action it may become apparent that there is a need to reconsider basic policy objectives or to collect more data. Finally, the information obtained during the monitoring or evaluation of implementation progress may be fed back into several different stages of the cycle; thus some information may require a fundamental review of policy objectives while other information may merely demand minor changes in the 'implementation plan' for that specific project.

Thirdly, it should be emphasized that the process described here and illustrated in Figure 2 is an idealized representation of the planning process. In practice, it is seldom possible to progress in a logical manner through all the stages of the cycle, even when such progression would be desirable, because of all sorts of practical obstacles. The related problems of inadequate time, data and manpower are common reasons for the gap which frequently exists between 'theory' and 'practice'. Equally important in many cases are problems resulting from inadequate communication between planners, politicians and administrators and, on some occasions, confusion over the respective roles of these three types of people. Planners often complain that they were not able to plan in a 'logical' or 'rational' manner because of what they regard as 'political interference' or the 'short-sightedness' or 'obstinacy' of functional administrative or technical personnel. While there are no easy answers to any of these problems, we shall in subsequent chapters consider some ways of minimizing them. Thus in the rest of this part of the book we shall consider planning techniques in the light of the realities of limited time, data and manpower—a point to which we return at the end of this chapter—and in Part Three we look at ways of improving communication and understanding between politicians, planners and administrators.

The decision to adopt planning

A crucial part of the overall planning process is the initial decision to adopt planning as a means of tackling development problems and achieving desired goals and objectives, a topic we discussed in Chapter 3. Once this basic political decision has been made it is necessary to establish an organizational framework for planning. This may be done by establishing specialist departments of government and related agencies. It will be necessary to make available manpower and financial resources to ensure that this structure for management and control can function properly. The way in which planning is organized at both the national and local levels should be regularly reviewed to ensure that it is able to meet the demands imposed upon it in the most effective and efficient way possible. Effective planning means not only having 'good' plans but also an appropriate and efficient organization for planning and implementation.

Planning goals, objectives, and targets

The organizational framework for planning that is actually established strongly influences the way in which planning is tackled and its likely successes and failures. The overall performance of the development planning system in any country will, however, generally be measured in terms of its ability to achieve the goals and objectives that are set for it by politicians. Goals and objectives are an expression of the priorities of planning and their formulation represents the first main stage in the cycle of the planning process. In many cases plans will also include targets, which represent more precise, quantitative statements about selected objectives and usually relate to relatively short time-periods.

Some writers suggest that societal aspirations should also be included among the concepts relevant to this stage of the process. Aspirations may be regarded as 'the ultimate aims of the society' (Griffin and Enos, 1970, p. 32) and are very high-level, abstract concepts which relate to what is desired in the very long term. Goals are also abstract. They usually take the form of statements about what planning should ideally achieve in the medium to long term. Objectives are more precise, operational statements that represent specific steps on the way to attaining selected goals. They usually relate to a shorter time-period, often the lifespan of a particular plan. Progress towards the achievement of particular objectives can actually be measured and evaluated. This may be made easier when targets are set in relation to objectives. Targets are the least abstract of the concepts mentioned and are clear statements about what should be achieved over a given time-period. Goals, objectives, and targets represent a hierarchy of concepts ranging from the very abstract to the very precise and related to timespans varying from perhaps many decades to just one year or even less.

Defining societal aspirations and goal-setting are important dimensions of the political process. As Griffin and Enos (1970, p. 31) comment:

The choice of goals is made, like any other public choice, through the political system. ... What form of government prevails is not of direct concern to the planner. What is of concern to him is the extent to which goals are articulated, the extent to which they represent the desires of the rulers of the country, and the extent to which they command the support of the rest of the population. If the goals are not explicit, there will be no criteria by which alternative policies can be evaluated. ... With goals, one can plan; but if these goals are not of the policy-makers, the plan is worthless.

So politicians must set explicit goals for planning. They must also play a major role in formulating objectives and setting targets as they will be ultimately responsible for establishing priorities at all levels and for making the necessary resources available to pursue these. As we pointed out earlier in this chapter, trade-offs have to be made and even at this early stage in the planning process politicians have to make fundamental decisions about the priorities they assign to different goals and objectives for planning.

Despite the importance of goals, objectives and, where appropriate, targets as prerequisites for most planning activity, there is a risk, especially in conditions of

high uncertainty, that time will be wasted formulating detailed and unrealistic goals, objectives or targets which are very unlikely to be achieved. This point has been emphasized by Bendavid-Val (1975), whose 'themes-strategy-projects' approach to regional planning will be discussed in more detail in Chapter 12. He advocates the identification of broad development 'themes' rather than the declaration of explicit goals and objectives, arguing (1975, p. 10) that: '... such declarations usually advance the art of polemics more than the development of regions'. He is particularly opposed to target-setting, about which he has this to say (1975, p. 11):

It might appear that if targets have not been specified, there is no relevant standard against which to measure progress. But the fact is we are almost never satisfied with the progress we make towards predetermined targets. If targets have been achieved or surpassed, we tend to conclude that they were too modest; if they are not achieved, we tend to conclude that they were too ambitious. In no case will the fact that we have specified quantified targets influence the degree to which we strain to achieve progress as measured by the chosen indicators.

The main conclusion which can probably be reached from this debate is the need for a flexible approach to the form which goals and objectives take, in order to allow for different planning situations. Thus in some situations specific targets may be required, while in others broad development themes may be more appropriate.

We have identified the key concepts associated with the first main stage of the planning process and emphasized the importance of political inputs to the formulation of goals, objectives and targets. It should be remembered that we are dealing with a dynamic process in a dynamic setting: goals and objectives will change, almost certainly in the medium to long term and often in the short term. The continuous cyclical approach to planning should encourage the development of a 'learning process' on the part of both politicians and planners. As lessons are learned then it is almost inevitable that the direction of planning, as expressed through goals, objectives and targets, will change. This is both desirable and necessary.

Data collection

Having established goals and objectives for planning, the next major stage in the process involves the collection and analysis of data. It will be necessary to analyse the existing situation to determine the nature and extent of particular planning problems. Basically, we need to know where we are starting from. This type of work is sometimes termed a 'baseline study'. It represents an essential bridge between the goals and objectives of planning and the formulation of alternative courses of action designed to achieve those goals and objectives.

Availability of data is one of the most serious problems facing planners in Third World countries. Data collection and analysis can require considerable financial resources, skilled manpower and access to various kinds of facilities—

for example, for data processing. Such resources are very often in short supply. In many Third World countries there is no long history of data collection and even national censuses may be infrequent and unreliable. It has become increasingly apparent in recent years that there exists a need for appropriate methods of data collection better suited to prevailing conditions in much of the Third World. Although survey approaches used in developed countries do have a role to play there has recently been an upsurge of interest in what are termed 'rapid appraisal' (or 'rapid assessment') techniques for analyzing planning problems in Third World countries. These techniques have been most extensively used in the field of rural development planning and there now exists a rapidly growing literature on rapid rural appraisal. Similar techniques have also been developed for the study of nutrition problems and for environmental pollution problems. These approaches are discussed in the following chapter.

The actual collection of data is just one part of the problem identification and definition stage of the process. Once collected, data must be processed and then stored in a readily usable form. Computerized information systems are being developed in a number of Third World countries but access to computing facilities is generally limited, especially away from major centres, and resources may not always be available to exploit fully the potential that computers have in some areas of development planning. In consequence, it is very often necessary for large amounts of data to be stored on file cards or sheets of paper, a situation that can create numerous problems.

As well as techniques designed specifically to aid in the process of collecting data, planners will often, at this stage, make use of forecasting and modelling techniques to examine the implications of trends in the data they already have available. They may start to carry out preliminary formulation of possible courses of action. In fact, the data collection stage in the process really is continuous and merges into the identification of alternatives stage. As analysis proceeds, gaps in the available data often become apparent and decisions have to be taken about whether it is feasible and appropriate to attempt to fill them by collecting new data. Furthermore, even at this early stage in the process it may be necessary to reconsider some objectives and reformulate priorities if new problems come to light.

Identifying alternative courses of action

As we suggested above, it is not always easy to differentiate between the stages in the planning process concerned with data collection and analysis, and the identification of alternative courses of action. The two are closely interlinked. This latter stage is, however, primarily directed to specifying possible courses of action to solve problems and achieve desired planning goals and objectives; in other words, with spelling out the means, or mechanisms, by which we can move from where we are at present to where we wish to be at some point in the future. The plan may take the form of a written document describing various courses of action to be pursued. Such a document might outline, for example, public

expenditure proposals. In physical planning it might take the form of a map indicating the land allocated to different uses at future points in time. At a different level it might take the form of a series of proposals for specific development projects or even alternative formulations of the same general project. During this stage of the process planners can make use of a very wide variety of approaches and techniques, ranging from professional judgement and intuitive thinking to highly formal, systematic, mathematical methods (Bracken, 1981).

Recent developments in approaches to planning have tended to place greater emphasis on plan preparation or project design and there now tends to be rather less mysticism surrounding this aspect of planning, although the underlying assumptions and methodology of many planning exercises still remain somewhat obscure. One important point to emphasize is that a rational approach to decision-making involves identifying a number of alternatives rather than simply accepting the first potential solution that comes to hand. It is generally preferable to have a rich mix of alternatives to assess and to present to decision-makers, although in practical terms there may be powerful constraints that limit the planner's ability to generate a wide range of options. Specifying too many options may create more difficulties than identifying too few, in view of the problems that decision-makers (and indeed planners) face when confronted with large amounts of information.

Plan and project appraisal

After alternatives have been identified they must be appraised or assessed. Physical planners frequently refer to this stage in the planning process as evaluation, but this can be confusing as that term is now increasingly applied to analyses of the effectiveness of plans, policies, programmes or projects after they have been implemented. In this book we shall use the term 'appraisal' when referring to procedures used to help in the process of selecting courses and action.

Appraisal basically means identifying the advantages and disadvantages of different courses of action. Economists have long been interested in this particular topic and have taken a leading role in the development of project appraisal techniques. Not surprisingly, these techniques have been in the forefront of the methodology of economic development planning. Economic techniques of project appraisal are directed to calculating the financial costs and benefits of different options. The technique that is most widely used is known as cost-benefit analysis (CBA). These techniques have been developed and refined over a fairly long period and are capable of providing a considerable amount of information about the relative merits of different options. They are not, however, without their weaknesses and since the late 1960s new areas of appraisal methodology have developed in response to the limitations of CBA in particular. Environmental impact assessment (EIA) may be regarded as a kind of cost-benefit exercise but without the emphasis on the measurement of effects in monetary terms and the discounting procedures used in CBA (O'Riordan and

Sewell, 1981). While EIA has been increasingly used in both developed and Third World countries to assess the impact of new development projects on the physical environment, a parallel field known as social impact assessment (SIA) has also emerged to provide a methodology for examining the social consequences of such projects. The general trend in project appraisal over the past ten years has therefore been towards greater diversity in terms of both the methods and measures used, a theme to which we shall return in Chapter 8.

Physical planners have a strong interest in both project planning and spatial planning on a broader scale. The appraisal methods mentioned above are certainly of relevance in physical planning and, indeed, are frequently used. Other techniques developed specifically in the context of this field of planning activity are also available and we shall also consider these in Chapter 8.

The overall purpose of plan or project appraisal is to derive information which can then be presented to decision-makers to help them in the process of deciding which course of action to select, from those on offer. The appraisal activities in planning are essentially technical in nature but planning moves back explicitly into the political arena when politicians have to exercise their choice. They must decide on the acceptability of the trade-offs which are involved in choosing between different alternatives and the extent to which a particular plan or project will achieve desired goals and objectives that have been determined through the political process.

Implementation

Implementation is often regarded as something which is beyond the scope of planning or planners. This attitude can be explained by the fact that the actual implementation of specific projects or programmes (for example, building a road, introducing an agricultural extension programme, revising a school curriculum) is the responsibility of technical and administrative personnel, rather than planners. However, this does not mean that planners can ignore the implementation stage. On the contrary, as we pointed out in Chapter 3, implementation problems are widely recognized as one of the major weaknesses of planning in many parts of the Third World.

One reason why planners must be concerned about the implementation stage is that, because of the cyclical nature of the planning process, implementation cannot be seen in isolation from other stages. Thus constraints affecting the implementation of projects and programmes must be taken into consideration during the earlier stages of identifying and appraising alternative courses of action and, during and after the actual implementation, the planner has an important role to play in monitoring and evaluation—a role which we shall examine in the next section.

However, more significantly, it is also very important that the planner consider how plans will actually be implemented. In other words, it is necessary to consider how to 'operationalize' plans or to 'plan the implementation process'. This involves, among other things, identifying the various activities associated

with a plan or project, preparing a time schedule which indicates when they will be undertaken and mobilizing the resources (finance, staff, materials, and equipment) required for implementation. This is a very important stage in the planning process and one which is frequently neglected because it is not seen as the responsibility of either the planners or the implementers. It may often be necessary to set up special implementation management structures to ensure that plans are properly implemented. Chapter 9 examines the factors which determine successful plan implementation and considers the various techniques and management approaches which can be utilized in this stage of the planning process.

Monitoring and evaluation

We have already suggested that, while a plan or project is being implemented, it is necessary to monitor progress in order to ensure that activities are being undertaken according to plan and to identify any problems which may be occurring; in other words, it is necessary to find out what is actually happening during the implementation process. Monitoring should ideally be a continuous process which is built into the implementation of a plan or project and it is therefore necessary to consider what sort of monitoring is required and how it will be performed during the earlier stage of planning the implementation process.

In addition to monitoring progress during implementation it is often necessary to undertake a detailed evaluation of a plan or project, either after it has been completed or at appropriate points during the implementation process. Evaluation is designed to reveal the extent to which plan objectives have been achieved, any unanticipated effects it may have had and, so that lessons can be learned for future planning, the reasons for its successes and failures. It requires the collection of additional data, some specifically related to the particular plan or project and some of a more general nature, and these data may also help the planner to identify new problems or issues which should become the focus of planning activity in the future.

The process model of planning adopted here places considerable emphasis on the role of monitoring and evaluation as a means of measuring past successes and failures and providing information needed to improve future planning activity. Methods of monitoring and evaluation are discussed in Chapter 9.

Techniques in planning

Planners in Third World countries now have at their disposal a wide variety of techniques. Economic development planners have generally relied on three main categories of planning techniques: macroeconomic models, input-output analysis and economic methods of project appraisal, essentially cost-benefit analysis (Todaro, 1981). In physical planning the traditional 'design' emphasis has now given way to a more broadly based perspective reflecting the increasingly

interdisciplinary nature of this stream of planning activity. Thus, physical planners now use a variety of techniques drawn not only from the traditional design fields but also from geography, sociology, psychology, economics and environmental sciences. Clearly, this pattern tends to be more marked in developed countries but, as we pointed out in Chapter 3, it is beginning to have a significant impact in the Third World. Clearly, a major distinguishing feature between economic and physical planning techniques is the geographical scale at which they are used. Physical planning tends to be concerned with issues and problems at the sub-national scale, usually from the regional down to the local level of the individual project. Although economic planning has become increasingly concerned with both regional and project level planning, its techniques have nonetheless tended to remain closely associated with economy-wide, or national, planning issues for which they were originally developed. The process of planning development involves tackling problems at all these levels and must therefore draw upon the techniques used in both streams of planning activity.

As planners have become more concerned about, and critical of, different approaches to planning they have also shown far greater interest in the techniques they use. The emergence of the process approach to planning has been closely associated with a variety of developments in planning methodology—especially, though not exclusively, in developed countries like the United States and the United Kingdom. As interest in a more 'rational' approach to planning developed, so too did an interest in 'rational techniques', or, as they are sometimes termed, 'systematic techniques'.

This close link between a particular approach to planning and methodology has not been without its problems. Some physical planners developed a rather distorted view of the nature of planning and the role of methods and techniques in that process. Batey and Breheny (1979, p. 503) describe the problem in the following way:

In the early days of the systems approach, many planners believed that strategic planning could ultimately become entirely 'techniques-based' and that, once this had been achieved, planning would be a purely rational process. However, in their application of new methods, planners revealed their naiveté and lack of experience. The choice of method was often far from rational and sometimes suggested that planners thought first of a method and only later considered the problem to which it was to be applied.

The last sentence of the quotation above contains a vitally important cautionary message, which is all too easily forgotten even today. A technique is a tool. It should be used selectively and appropriately as a means to an end, not as an end in itself. This should be regarded as the most important guiding principle in the use of techniques in planning.

As well as ensuring that they proceed from the identification of the particular task to be undertaken, or the problem to be solved, to the selection of an appropriate technique, planners should also make quite explicit the underlying

assumptions on which the use of a particular technique is based. They should also acknowledge any weaknesses or limitations of techniques they use. Clearly, when competition for resources is intense, as it usually is, there is often considerable pressure on planners not to raise any doubts about the validity of the results derived from the use of a particular technique (Batey and Breheny, 1979) as this might weaken the case for supporting a specific plan, project or programme.

Above all, planners should always try to explain as clearly as possible why they selected a particular approach to a problem, why particular techniques were used, how they were used and any difficulties encountered, the results that were obtained and the conclusions that were drawn from the results. It is very important to avoid unnecessary complexity in planning. It is also desirable to avoid creating the impression that planning is the sole preserve of a specialist, professional elite operating almost in isolation from those for whom they are, in reality, providing advice and planning.

Choosing planning techniques in the Third World

Many planning techniques were introduced and have been most extensively used in developed countries. There are some significant differences in the nature of the planning problems and working conditions encountered in developed and Third World countries and these differences strongly influence the kinds of planning technique that are required and their appropriateness in these contrasting planning environments. Just as planning models and concepts have been imported into the Third World (Gilbert, 1976), so too have an increasing number of planning techniques. Overseas consultants and expatriate contract staff have played a major role in this context because of their important position in the development of planning in most Third World countries. Another major factor has been the increasing number of Third World planners who have received all or part of their professional training in developed countries. Although exposed to potentialities of a wide range of techniques, student planners from the Third World are not always fully appraised of their relevance and appropriateness in their own working environments. Unfortunately, it is all too often the case that technical sophistication assumes too important a role in planning, and that the development and application of particular techniques become ends in themselves. This problem can be intensified when it is felt that a planning exercise lacks credibility simply because it is not making use of a complex and sophisticated technique.

We have referred to the appropriateness of techniques at several points in the discussion above. One important factor that determines the appropriateness of planning techniques is the availability of certain basic resources for planning. The use of many analytical techniques depends on the availability of relatively large amounts of data. Furthermore, these data have to be reliable or there is little point in using quantitative techniques. In most Third World countries there are acute data shortages, and this is especially so in the case of statistical data. Data are often unreliable and may only be available for relatively short time-

periods. Analysing historical trends, for example, can be extremely difficult. Technical equipment, even very basic facilities and materials, may be in short supply. Equipment may also be more costly to purchase and maintain than in developed countries and in some cases may be adversely affected by local climatic conditions. Skilled manpower in the form of professionals and support staff may be very difficult to obtain. This latter factor means that there is often a tendency to place a premium on versatility rather than specialist expertise on the part of professional staff.

Another consideration to be taken into account when assessing the utility or value of specific techniques is the extent to which the results obtained by using them can be readily presented to politicians and the public. Third World planners do not always have a wide range of presentation methods available to them. This is especially so in the case of visual aids. In addition, it is often necessary to recognize that 'users' of the results (politicians and public) have a more limited educational background and may therefore find it difficult to understand complicated methods of presentation.

Techniques used in planning should also be capable of providing results within an acceptable time period. In the Third World the application of some types of technique may take longer. It may, for example, be necessary to collect data specially for a particular purpose. Data collection may itself be a time-consuming activity. Furthermore, equipment often works less efficiently, goes wrong more often and takes longer to repair than in developed countries. Despite these problems, it is often the case that results are required more rapidly in the Third World than in developed countries. This is because the pace of 'development' tends to be faster and problems more acute. Decisions may indeed be required 'yesterday'!

The cost-effectiveness of different techniques should also be considered. By cost-effectiveness we mean the balance between what we may obtain from the application of a particular technique and what it actually costs to use it. These costs may take a variety of forms. One of the most important will again be the availability of skilled manpower, and especially the alternative uses to which skilled labour, which is expensive, may be put. The costs of technical equipment for data collection and processing also have to be taken into account. Data collection can be very costly and, as we shall see in the next chapter, careful consideration should always be given to the relationship between the costs and benefits of acquiring new data.

Many planning techniques used in the developed world are applicable in the Third World, although they may sometimes have to be slightly modified to cope with data limitations. Many are not, however, widely applicable and other more appropriate techniques may have to be developed specifically in the Third World context. We have already referred to some recent developments in rapid appraisal techniques and these are a good example of the methodological response to this problem. It is important to emphasize that techniques designed specially for use in the Third World should not be regarded as either inferior or unprofessional. They are different in many cases, but as long as they meet the

criterion of appropriateness, defined in terms of the factors mentioned above, they may be regarded as 'good' techniques for those particular circumstances. Nonetheless, it is still necessary to accept that the results obtained by using these techniques are sometimes less reliable. This may to some extent represent limitations in the techniques themselves but more commonly it reflects the conditions in which they have to be used—for example, the fact that data are often inadequate or unreliable. In conditions such as these it certainly does not follow that more sophisticated techniques would yield more reliable results—on the contrary, they could be less reliable. In view of these difficulties it is necessary to accept that decisions may often have to be made on the basis of less reliable data but, in so doing, it is essential to ensure that decision-makers are made aware of any deficiencies in the data they are using.

Conclusions

This chapter has dealt with the nature of the planning process and the role of planning techniques. We have emphasized that a rational approach to planning and decision-making is a desirable model to pursue, although we have also drawn attention to the difficulties associated with such an approach. We have outlined the main stages in the planning process, based on the rational model. We have also emphasized that planning techniques are tools which the planner uses to carry out various tasks in the planning process and we have examined some of the factors which influence the use of techniques in the Third World.

A rational planning approach has many advantages and it can provide a firm foundation for planning activity in Third World countries. It does not, however, represent a means for overcoming all the problems which confront planners in those countries. It should be viewed as a possible framework for tackling problems through a logical sequence of activities. Ultimately, planning will be judged on the basis of what it actually achieves. The approach we have described may help to strengthen planning but it cannot guarantee its success.

Guide to further reading

There is a very large amount of literature concerned with some of the issues raised in this chapter, although few individual textbooks present a comprehensive review of the material that we have attempted to cover. Furthermore, much of the available literature relates to developed countries rather than the Third World.

Rationality in planning

Probably the most comprehensive and useful review of this topic in terms of both theory and methodology is provided by M. Carley in his book *Rational Techniques in Policy Analysis* (London, Heinemann, 1980), although the reader should note that Carley tends to emphasize the advantages of the rational

approach and to play down criticisms of it. *Policy Analysis and Policy Innovation*, edited by P. Baehr and B. Wittrock (London, Sage, 1981), also provides some useful insights into the theory and practice of decision-making, although primarily from a developed countries viewpoint. The topic of rationality in planning is also dealt with in some detail in *Planning Theory*, by A. Faludi (Oxford, Pergamon Press, 1973).

Uncertainty in planning

Of the most useful planning texts, one which examines the uncertainty problem in some detail is *Local Government and Strategic Choice* by J. Friend and W. Jessop (London, Tavistock Press, 1969). Although dealing with planning experiences in the United Kingdom, Friend and Jessop's analysis has far broader implications for planning elsewhere. Some of the concepts developed by Friend and Jessop are applied by P. Hall in his stimulating book entitled *Great Planning Disasters* (Harmondsworth, Penguin Books, 1981), which draws its examples from developed countries.

The planning process

As we noted in the chapter, development planners and physical planners, although working increasingly towards a similar approach to planning, have tended not to formulate and set out the actual process of planning in quite the same way.

There are a number of development planning textbooks which suggest what planning should be, and how it should be carried out. *Development Planning: Lessons of Experience*, by A. Waterston (Baltimore, Johns Hopkins Press, 1965) remains an extremely useful book. *The Crisis in Planning*, edited by M. Faber and D. Seers (London, Chatto & Windus, 1972) should also be consulted. Other useful books include: *Planning Development*, by K. Griffin and J. Enos (London, Addison Wesley, 1970); *A System for Development Planning and Budgeting*, by A. Beenhakker (Westmead, Gower, 1980); and *Policy Economics: A Textbook of Applied Economics in Developing Countries*, by T. Killick (London, Heinemann, 1981).

Probably the most useful and succinct account of approaches in physical (or urban and regional) planning is to be found in *Urban and Regional Planning*, by P. Hall (Harmondsworth, Penguin Books, 1974). A more detailed discussion of the systems approach may be found in *Urban and Regional Planning: A Systems Approach*, by J. B. McLoughlin, which still remains the classic textbook on this topic. A rather more formal and complex presentation of the systems approach may be found in G. Chadwick's book entitled *A Systems View of Planning* (Oxford, Pergamon Press, 1978, 2nd edition).

Techniques in planning

Despite their crucial significance in planning, discussions of the role of methods and techniques are surprisingly limited. There is a large, if somewhat disparate, literature which deals with particular methods and techniques and illustrates their application, but few writers seem to have examined in greater detail the factors which determine when particular methods can and should be used and the more general factors which influence the appropriateness of planning methodology, especially in the Third World.

Systematic Methods in British Planning Practice, edited by P. Batey and M. Breheny (University of Liverpool, Department of Civic Design, 1979) addresses some of these issues, although in the context of the United Kingdom. Issues concerning the appropriateness of planning models and methods in the Third World are raised by A. Gilbert in the introductory chapter of his edited book entitled *Development Planning and Spatial Structure* (Chichester, Wiley, 1976). Some of the important methodological dilemmas of Third World planners are considered by I. Carruthers and R. Chambers in 'Rapid appraisal for rural development' (*Agricultural Administration*, vol. 8, no. 6, November 1981), in *Social Science Research Methods: An African Handbook*, by M. Peil, P. Mitchell, and D. Rimmer, and in a useful article by H. W. Richardson entitled 'The relevance and applicability of regional economics to developing countries' (*Regional Development Dialogue* (Nagoya, Japan), vol. 1, 1980, pp. 57-77).

Chapter 6

The Collection, Analysis and Presentation of Data

Introduction

The collection and analysis of data play a very important role in planning because, as we have already seen, planning is a process of decision-making and decisions cannot be made without at least a certain amount of information. This chapter begins by examining the role of data in planning and the types of data required. It then looks at various methods of collecting, analyzing, presenting and storing data and concludes with a brief review of the machinery for data collection and analysis. As with all the chapters in this part of the book, it will not be possible to consider any of these issues in great depth; however, an increasing number of useful texts on data collection and analysis in developing countries are now available and these are indicated in the guide to further reading at the end of the chapter.

The role of data in planning

It is useful at this point to recognize a subtle distinction between *data* and *information*. Although these two terms are often used interchangeably, *data* really refers to any sort of factual material which may be available, while *information* refers more specifically to data which are of a particular nature and in a particular form which makes them useful for whatever decision-making purpose is under consideration. In other words, the nature and form of data determine their value as information for a particular decision-making purpose (Bracken, 1981). The implications of this for identifying data needs, and for its collection and processing, will be considered later.

Information is required for three main purposes in relation to planning or decision-making. It is required in order to identify the existing development needs and problems which form the basis for formulating policies and plans for future development; it is required in order to identify and evaluate alternative policies and courses of action; and it is required to provide feedback about the impact of these courses of action during or after their implementation. Information is thus needed at various stages in the planning process and the collection and analysis of data is therefore a multipurpose and ongoing activity. However, because some sort of data are required before any significant planning activity commences, data collection is often one of the first steps in planning and, therefore, an appropriate point at which to begin detailed discussion of the various stages in the planning process.

The types of information required for planning—and thus the types of data which must be collected and analysed—can also be divided into three types (Bracken, 1981). Firstly, there is a need for data which provide information about *distributions*. These may be statistical distributions, where the planner is interested in finding out how a group of values relate to the mean, or average, value. For example, the planner might be interested in finding out how the size of agricultural holdings varies over a particular district. Alternatively, they may be spatial distributions, such as the distribution of different types of soils and their agricultural potential. Development planners in Third World countries will often also be interested in what are termed 'aspatial' distributions. An example of these would be the way in which resources, such as capital investment, are distributed among the different sectors of the economy or income is distributed between different social groups. Distributions provide important and valuable descriptive information, which can then be used to compare different groups, activities or geographical areas, particularly in the context of identifying development problems and potential.

The second type of information required is information concerning *relationships*, which again may be spatial or aspatial. In many planning exercises it is extremely important to be able to describe and, if possible, account for the pattern and form of the relationships which exist between different factors. Clearly the essence of planning activity involves formulating proposals which are intended to result in certain desired changes and, when introducing such changes, it is essential to know how they can most effectively be achieved and what their effects will be. This requires information about relationships in the systems which are being planned.

Thirdly, there is a need for what are generally known as development *indicators*—that is, information which indicates the degree or level of development attained in a particular area or among a particular group of people. The compilation of development indicators (or, as they are often known, *social indicators* or *socioeconomic indicators*) has been the focus of considerable attention in development studies in recent years (Baster, 1972; Drenowski, 1974; UNESCO, 1974, 1976; UNRISD, 1978-79). They are used, on the one hand, for purely descriptive or analytical purposes and, on the other hand, as aids to policy formulation and planning (Baster, 1976). In the latter case, which is obviously of greater interest here, they are important both as a means of identifying areas or social groups with particular needs or problems and as a means of evaluating the impact of specific policies or programmes over time. Table 1 presents an example of international development indicators compiled by the World Bank and Table 2 illustrates the compilation of indicators of regional variations in development within one country—in this case, Papua New Guinea. We shall discuss the details of selecting and compiling indicators later.

Identifying data needs

One of the most important aspects of data collection and analysis is identifying

Table 1. Basic indicators of development used by the World Bank

	GNP per capita					Adult literacy (percent) 1977 ^d	Life expectancy at birth (years) 1980	Average index of food production per capita (1969-71 = 100) 1978-80
	Popula- tion (millions) Mid-1980	Area (thou- sands of square kilometres)	Dollars 1980	Average annual growth (percent)				
				1960-1980 ^a	1960-70 ^b 1970-80 ^c			
Low-income economies	2 160.9 t	30 714 t	260 w	1.2 w	3.2 m	11.2 m	50 w	106 w
China and India	1 649.9 t	12 819 t	270 w	..	..	..	54 w	110 w
Other low-income	511.0 t	17 895 t	230 w	1.0 w	3.1 m	11.2 m	34 w	95 w
1 Kampuchea, Dem.	6.9	181	..	..	3.8	..	..	41
2 Lao PDR	3.4	237	..	..	..	..	43	100
3 Bhutan	1.3	47	80	-0.1	..	..	44	105
4 Chad	4.5	1 284	120	-1.8	4.6	7.8	15	91
5 Bangladesh	88.5	144	130	()	3.7	16.9	26	94
6 Ethiopia	31.1	1 222	140	1.4	2.1	4.2	15	83
7 Nepal	14.6	141	140	0.2	7.7	8.6	19	44
8 Somalia	3.9	638	..	..	4.5	12.4	60	44
9 Burma	34.8	677	170	1.2	2.7	11.2	70	54
10 Afghanistan	15.9	648	..	..	11.9	..	12	37
11 Viet Nam	54.2	330	..	..	..	..	87	63
12 Mali	7.0	1 240	190	1.4	5.0	10.1	9	43
13 Burundi	4.1	28	200	2.5	2.8	11.8	23	42
14 Rwanda	5.2	26	200	1.5	13.1	14.2	50	45
15 Upper Volta	6.1	274	210	0.1	1.3	10.1	5	39
16 Zaire	28.3	2 345	220	0.2	29.9	32.2	58	47
17 Malawi	6.1	118	230	2.9	2.4	9.8	25	44

18 Mozambique	12.1	802	230	-0.1	2.8	11.2	28	47	75
19 India	673.2	3 288	240	1.4	7.1	8.5	36	52	101
20 Haiti	5.0	28	270	0.5	4.0	9.4	23	53	92
21 Sri Lanka	14.7	66	270	2.4	1.8	12.6	85	66	121
22 Sierra Leone	3.5	72	280	(.)	2.7	11.6	..	47	86
23 Tanzania	18.7	945	280	1.9	1.8	11.9	66	52	92
24 China	976.7	9 561	290	..	..	..	66	64	116
25 Guinea	5.4	246	290	0.3	1.5	4.4	20	45	86
26 Central African Rep.	2.3	623	300	0.9	4.1	9.7	39	44	101
27 Pakistan	82.2	804	300	2.8	3.3	13.5	24	50	101
28 Uganda	12.6	236	300	-0.7	3.0	30.4	48	54	89
29 Benin	3.4	113	310	0.4	1.9	9.1	25	47	99
30 Niger	5.3	1 267	330	-1.6	2.1	12.2	5	43	93
31 Madagascar	8.7	587	350	-0.5	3.2	10.3	50	47	95
32 Sudan	18.7	2 506	410	-0.2	3.7	15.8	20	46	102
33 Togo	2.5	56	410	3.0	1.3	9.8	18	47	81
Middle-income economies	1 138.8 t	41 614 t	1 400 w	3.8 w	2.7 m	13.2 m	65 w	60 w	108 w
Oil exporters	496.8 t	16 135 t	1 160 w	3.3 w	2.6 m	14.4 m	57 w	56 w	101 w
Oil importers	642.0 t	25 479 t	1 580 w	4.1 w	2.9 m	12.5 m	73 w	63 w	113 w
34 Ghana	11.7	239	420	-1.0	7.6	34.8	..	49	82
35 Kenya	15.9	583	420	2.7	1.5	11.0	..	55	86
36 Lesotho	1.3	30	420	6.1	2.7	11.6	52	51	91
37 Yemen, PDR	1.9	333	420	12.1	..	..	40	45	103
38 Indonesia	146.6	1 919	430	4.0	..	20.5	62	53	110
39 Yemen Arab Rep.	7.0	195	430	4.5	..	16.1	21	42	94
40 Mauritania	1.5	1 031	440	1.6	1.6	9.6	17	43	76
41 Senegal	5.7	196	450	-0.3	1.7	7.6	10	43	89
42 Angola	7.1	1 247	470	-2.3	3.3	21.0	..	42	82
43 Liberia	1.9	111	530	1.5	1.9	9.6	25	54	98

Table 1. Basic indicators of development used by the World Bank (continued)

	GNP per capita				Area (thou- sands of square kilometres)	Popula- tion (millions) Mid-1980	Average annual growth (percent) 1960-1980 ^a	Average annual rate of inflation (percent)		Adult literacy (percent) 1977 ^d	Life expectancy at birth (years) 1980	Average index of food production per capita (1969-71 = 100) 1978-80
	Dollars 1980	1960-70 ^b	1970-80 ^c									
44 Honduras		560	1.1	2.9	8.9	60	58	82				
45 Zambia		560	0.2	7.6	8.1	44	49	95				
46 Bolivia		570	2.1	3.5	22.3	63	50	106				
47 Egypt		580	3.4	2.6	11.5	44	57	93				
48 Zimbabwe		630	0.7	1.3	8.8	74	55	97				
49 El Salvador		660	1.6	0.5	11.3	62	63	119				
50 Cameroon		670	2.6	4.2	10.2	..	47	109				
51 Thailand		670	4.7	1.8	9.9	84	63	128				
52 Philippines		690	2.8	5.8	13.2	75	64	114				
53 Nicaragua		740	0.9	1.8	13.1	90	56	95				
54 Papua New Guinea		780	2.8	3.6	8.8	32	51	106				
55 Congo, People's Rep.		900	0.8	5.4	10.9	..	59	79				
56 Morocco		900	2.5	2.0	8.1	28	56	87				
57 Mongolia		..	..	..	..	..	64	97				
58 Albania		..	..	..	..	..	70	104				
59 Peru		930	1.1	10.4	30.7	80	58	83				
60 Nigeria		1 010	4.1	2.6	18.2	30	49	87				
61 Jamaica		1 040	0.6	4.0	17.0	90	71	96				
62 Guatemala		1 080	2.8	0.3	10.4	..	59	112				
63 Ivory Coast		1 150	2.5	2.8	13.2	41	47	107				

64 Dominican Rep.	5.4	49	1 160	3.4	2.1	9.0	67	94
65 Colombia	26.7	1 139	1 180	3.0	11.9	22.0	..	122
66 Ecuador	8.0	284	1 270	4.5	..	14.4	81	95
67 Paraguay	3.2	407	1 300	3.2	3.1	12.4	84	111
68 Tunisia	6.4	164	1 310	4.8	3.6	7.7	62	120
69 Korea, Dem. Rep.	18.3	121	..	..	..	..	..	133
70 Syrian Arab Rep.	9.0	185	1 340	3.7	2.6	11.4	58	157
71 Jordan	3.2	98	1 420	5.7	..	..	70	89
72 Lebanon	2.7	10	..	..	1.4	..	..	83
73 Turkey	44.9	781	1 470	3.6	5.6	29.7	60	111
74 Cuba	9.7	115	..	..	..	..	96	105
75 Korea, Rep. of	38.2	98	1 520	7.0	17.4	19.8	93	130
76 Malaysia	13.9	330	1 620	4.3	-0.3	7.5	..	116
77 Costa Rica	2.2	51	1 730	3.2	1.9	15.2	90	112
78 Panama	1.8	77	1 730	3.3	1.6	7.4	..	102
79 Algeria	18.9	2 382	1 870	3.2	2.7	13.3	35	80
80 Brazil	118.7	8 512	2 050	5.1	46.1	36.7	76	117
81 Mexico	69.8	1 973	2 090	2.6	3.6	19.3	81	103
82 Chile	11.1	757	2 150	1.6	33.2	185.6	..	93
83 South Africa	29.3	1 221	2 300	2.3	..	12.5	..	102
84 Romania	22.2	238	2 340	8.6	-0.2	..	98	145
85 Portugal	9.8	92	2 370	5.0	3.0	16.6	..	78
86 Argentina	27.7	2 767	2 390	2.2	21.7	130.8	93	122
87 Yugoslavia	22.3	256	2 620	5.4	12.6	17.7	85	115
88 Uruguay	2.9	176	2 810	1.4	51.1	62.3	94	97
89 Iran	38.8	1 648	..	..	-0.5	20.1	50	112
90 Iraq	13.1	435	3 020	5.3	1.7	14.1	..	90
91 Venezuela	14.9	912	3 630	2.6	1.3	12.1	82	102

Table 1. Basic indicators of development used by the World Bank (*continued*)

	GNP per capita				Area (thou- sands of square kilometres)	Popula- tion (millions) Mid-1980	Average annual growth (percent) 1960-1980 ^a	Average annual rate of inflation (percent)		Adult literacy (percent) 1977 ^d	Life expectancy at birth (years) 1980	Average index of food production per capita (1969-71 = 100) 1978-80
	Dollars 1980	1960-70 ^b	1970-80 ^c									
92 Hong Kong	5.1	1	4 240	6.8	2.4	8.2	90	74	53			
93 Trinidad and Tobago	1.2	5	4 370	3.0	3.2	18.5	95	72	85			
94 Greece	9.6	132	4 380	5.8	3.2	14.4	..	74	122			
95 Singapore	2.4	1	4 430	7.5	1.1	5.1	..	72	147			
96 Israel	3.9	21	4 500	3.8	6.2	39.7	..	72	106			
High-income	14.4 <i>t</i>	4 012 <i>t</i>	12 630 <i>w</i>	6.3 <i>w</i>	..	18.4 <i>m</i>	25 <i>w</i>	57 <i>w</i>	..			
oil exporters	3.0	1 760	8 640	5.2	5.2	18.4	..	56	139			
97 Libya	9.0	2 150	11 260	8.1	..	24.3	16	54	69			
98 Saudi Arabia	1.4	18	19 830	-1.1	..	18.4	60	70	..			
99 Kuwait	1.0	84	26 850	4.3	..	..	56	63	..			
100 United Arab Emirates	714.4 <i>t</i>	30 935 <i>t</i>	10 320 <i>w</i>	3.6 <i>w</i>	4.3 <i>m</i>	9.7 <i>m</i>	99 <i>w</i>	74 <i>w</i>	111 <i>w</i>			
Industrial market	3.3	70	4 880	3.1	5.2	14.5	98	73	124			
economies	37.4	505	5 400	4.5	8.2	15.9	..	73	127			
101 Ireland	56.9	301	6 480	3.6	4.4	15.3	98	73	111			
102 Spain	3.3	269	7 090	1.8	3.3	14.4	99	73	105			
103 Italy	55.9	245	7 920	2.2	4.1	14.4	99	73	118			
104 New Zealand												
105 United Kingdom												

106 Finland	4.9	337	9 720	4.0	5.6	12.3	100	73	105
107 Australia	14.5	7 687	9 820	2.7	3.1	11.5	100	74	123
108 Japan	116.8	372	9 890	7.1	4.9	7.5	99	76	93
109 Canada	23.9	9 976	10 130	3.3	3.1	9.3	99	74	109
110 Austria	7.5	84	10 230	4.1	3.7	6.3	99	72	110
111 United States	227.7	9 363	11 360	2.3	2.8	7.1	99	74	115
112 Netherlands	14.1	41	11 470	3.2	5.4	8.4	99	75	127
113 France	53.5	547	11 730	3.9	4.2	9.7	99	74	115
114 Belgium	9.8	31	12 180	3.8	3.6	7.6	99	73	107
115 Norway	4.1	324	12 650	3.5	4.3	8.4	99	75	114
116 Denmark	5.1	43	12 950	3.3	5.5	9.7	99	75	110
117 Sweden	8.3	450	13 520	2.3	4.4	10.2	99	75	116
118 Germany, Fed. Rep.	60.9	249	13 590	3.3	3.2	5.1	99	73	110
119 Switzerland	6.5	41	16 440	1.9	4.4	5.0	99	75	115
Nonmarket industrial									
economies	353.3 <i>t</i>	23 155 <i>t</i>	4 640 <i>w</i>	4.2 <i>w</i>	..	..	100 <i>w</i>	71 <i>w</i>	109 <i>w</i>
120 Poland	35.8	313	3 900	5.3	..	..	98	72	102
121 Bulgaria	9.0	111	4 150	5.6	..	..	..	73	114
122 Hungary	10.8	93	4 180	4.5	..	..	..	71	130
123 USSR	265.5	22 402	4 550	4.0	..	..	100	71	108
124 Czechoslovakia	15.3	128	5 820	4.0	..	..	..	71	115
125 German Dem. Rep.	16.9	108	7 180	4.7	..	..	..	72	126

Source: World Bank, 1982, Table 1, pp. 110-111.

Note: The technical notes which accompany this table have not been reproduced.

Because data for the early 1960s are not available, figures in italics are for periods other than that specified. ^b Figures in italics are for 1961-70, not 1960-70. ^c Figures in italics are for 1970-79, not 1970-80. ^d Figures in italics are for years other than that specified. See the technical notes.Total. ^w weighted average. ^m median.

Table 2. Papua New Guinea: Socioeconomic Indicators by Province

Region ²	Province	Population (1971 Census)	Index of health status ³	Index of health services ⁴	Index of educa- tion ⁵	Index of land trans- port ⁶	Index of small- holder cash income ⁷	Exten- sion- staff per 1000 popula- tion ⁸	Govern- ment expend- iture (Kina per capita) ⁹
South Coast	Western	82 930	48.7	57.3	22.9	5.6	4.5	10.4	41.2
	Gulf	65 240	43.0	52.7	30.2	4.2	8.7	10.5	52.9
	Central	122 111	61.9	74.6 ¹⁰	53.7	20.2	3.9	18.5	52.7
	Milne Bay	124 300	51.9	66.5	42.0	2.9	13.0	11.2	38.4
Highlands	Northern	77 430	61.9	53.6	38.9	12.3	15.7	12.2	54.6
	Southern Highlands	210 430	2.1	14.5	6.5	18.6	10.6	6.3	40.5
	Enga	162 683	23.6	30.5	6.7	14.6	18.2	5.1	34.4
	Western Highlands	230 069	13.1	36.0	8.1	28.4	41.7	8.2	41.0
North Coast	Chimbu	166 420	8.2	21.3	8.7	24.1	42.4	7.6	36.6
	Eastern Highlands	269 170	19.2	38.3	6.6	31.2	31.0	6.6	32.6
	Morobe	284 280	34.6	53.6	35.1	20.6	18.2	10.8	42.1
	Madang	191 570	36.7	53.0	30.4	11.8	16.5	10.1	42.6
Islands	East Sepik	198 370	16.6	20.0	23.9	17.5	17.4	9.3	40.4
	West Sepik	101 760	1.0	11.1	20.0	5.7	10.1	7.8	37.9
	Manus	30 160	60.1	70.5	55.7	15.1	12.8	14.7	67.0
	New Ireland	67 260	91.3	91.0	65.0	100.0	29.9	13.1	63.5
	East New Britain	118 276	100.0	98.5	83.7	30.5	60.7	18.9	64.7
	West New Britain	80 180	62.1	72.5	41.1	16.8	35.4	12.3	70.1
	North Solomons	111 580	75.8	83.4	49.0	55.3	70.2	14.5	70.9

Notes

¹ The data in this table are provisional and subject to considerable error. However, they are sufficiently accurate to indicate the relative status of each province. Most of the data were compiled in 1977 and, unless otherwise stated, are based on the most up-to-date figures available at that time.

² Regions are not official administrative units, but they provide a useful basis for comparative analysis.

³ The index of health status is based on the average of the following indicators, each of which has been weighted from 0 to 100: rural life expectancy; rural child mortality; child malnutrition (based on weight measurements).

⁴ The index of health services is based on the average of the following indicators: health extension officers per 1000 population; population per aid post; travelling time to aid post.

⁵ The index of education is based on the average of the following indicators: adult literacy; percentage of 7-year-olds in Grade 1; percentage of 13-year-olds in Grade 7.

⁶ The index of land transport is based on the capital value of roads and bridges per square kilometre and per capita.

⁷ The index of smallholder cash income is based on per capita income from ten cash crops and from livestock.

⁸ Extension staff include staff involved in health, education, agriculture, general administration, and works.

⁹ Expenditure includes expenditure on health, education, agriculture, general administration, and capital works.

¹⁰ The index of health services for Central Province underestimates the level of services available because many people use health services in the National Capital District.

Source: Conyers, 1981, pp. 214-15.

what sort of data are needed in order to provide the information required for particular planning purposes. It is important because, as we indicated earlier, data can only be used as information from which decisions can be made if they are the right sort of data. Nevertheless, it is a topic which often receives inadequate attention both in practical planning situations and in literature on the role of data in planning. There is a tendency, except in the case of literature on development indicators, to give rather more attention to other aspects, such as methods of collecting and analysing the data.

There are a number of issues in relation to the identification of data needs which require particular attention, notably the quantity of data required, the subject-matter of the data, their quality and form, and the frequency with which they are collected. We shall examine each of these issues in turn.

How much data is needed?

Determining the quantity of data required for any particular planning purpose presents considerable problems. On the one hand, many planning decisions, particularly in developing countries, are made without adequate information—often with disastrous results. This is due partly to the paucity of existing data (a topic to which we return later) and partly to the speed with which decisions often have to be made, thus preventing the collection of any additional data.

On the other hand, in some planning exercises—especially those undertaken by consultants or academics, rather than full-time civil servants—there is a tendency to collect too much data. This is because there is a temptation, in planning, to collect data for their own sake without giving adequate attention to the reasons why they are being collected and the purposes for which they are going to be used. This results in the production of enormous plan documents, composed largely of basic data, which are merely filed away in libraries or offices and very soon serve no more useful purpose than the provision of data for historical academic pursuits. The implications of this are particularly serious in the Third World, where data collection costs are high, resources for planning are in any case limited and there is a high opportunity cost attached to the use of materials, money and skilled manpower for this particular task. It is therefore essential that planners establish what they need to know and the various ways in which this information might be obtained before embarking on expensive data collection exercises. It is also important that resources are available to analyse and present data in such a way that they may be transformed into usable information. We shall examine this aspect in detail later but it warrants brief mention here because there is no point in going to the expense of collecting large quantities of primary data if they cannot be processed and, therefore, put to effective use.

As a result of all these constraints, increasing emphasis is now placed on calculating the costs and benefits of any sort of data collection exercise and searching for types of data which are themselves limited in scope but provide good indicators of a wider range of factors or issues. This is reflected in the

attention given to 'core' or 'key' indicators of development (UNRISD, 1970), such as those used by the World Bank in Table 1, which are considered to be good indicators of a wide range of socioeconomic conditions. Per capita income remains one of the most widely used core indicators, although its shortcomings, particularly as a measurement of social well-being, are now generally recognized. Concern to avoid unnecessary data collection has also resulted in a variety of methods of obtaining information known generally as 'rapid rural appraisal', a topic to which we return later.

What sort of data are needed?

The next question is what sort of data are needed in order to provide the information required. The simple answer, of course, is that the data should provide as accurate information as possible about whatever is the object of concern. Thus, for example, if one is concerned about the agricultural potential of an area, one requires data on the various physical, social and economic factors which are likely to influence the type of agricultural development which can be encouraged in the area.

This may seem so obvious that it is hardly worth stating. However, it warrants attention because it is a case of 'easier said than done'. It is often very difficult to obtain the kind of data really required, either because such data are impossible to obtain (one cannot, for instance, find out the average rainfall in an area over the last 30 years if no rainfall records were kept for that period) or because the costs (in terms of money, manpower and time) of obtaining it are formidable. In such cases it is very tempting just to use the first available data which appear to be more or less relevant. For example, in the case of the rainfall data one could use the records from the nearest available station without attempting to ascertain whether or not the rainfall patterns in the two places are likely to be sufficiently similar to warrant the interchange of data. In such cases one would run the risk of obtaining inaccurate and misleading information. Sometimes such data may be better than none at all. However, checks are needed before this can be ascertained (as in the example of the rainfall data) and, even when this is so, it is still important to recognize their limitations and to ensure that those who use the data—and those who have to make decisions on the basis of analyses of the data—are aware of these limitations.

What form should the data take?

Data may take many different forms and it is important to consider what form is required before beginning the data collection process. One of the most common distinctions is between *quantitative* and *qualitative* data. Quantitative data are data that can be expressed in numerical form, thus facilitating computation and accurate comparison. Examples include population data, rainfall records, agricultural production statistics and so on. Qualitative data are more varied in

form, ranging from descriptions of soil characteristics and agricultural systems to records of social customs and attitudes towards particular issues or development proposals. Moreover, because they are so varied and not available in quantitative form, they are more difficult to use, especially where comparisons or computations are required. We shall see in Chapter 8, for example, the problems which this creates in the case of project appraisal. There are, however, ways of dealing with these problems during the data analysis stage and we shall consider some of these later in the chapter. At this point it is merely necessary to emphasize that, when considering the form of data to collect, it is important to think ahead to the analysis stage in order to know to what extent the data need to be quantifiable.

The distinction between quantitative and qualitative data is often related to questions of *subjectivity* and *objectivity* in dealing with data. There is a tendency to assume that quantitative data are more objective because they consist of 'hard facts', while qualitative data are more likely to be subject to the individual bias of the person collecting them. Moreover, since there is also a tendency to regard subjective data as less accurate or reliable than objective data, this in turn leads on to the whole question of data accuracy. While there is some validity in this chain of assumptions, the relationship between quantifiability, objectivity and accuracy is really far more complex. In the first place, there is plenty of room for subjectivity or bias in both the collection and analysis of quantitative data because those responsible for these activities have to make decisions about what data to collect (and what not to collect), how to collect them and how to process or analyse them. Secondly, quantitative data may also be subject to a wide range of other inaccuracies, due to problems of data collection and analysis which we shall consider later, and these inaccuracies may result in serious misinterpretations of data, especially if the users are unaware of them. Thirdly, there are ways in which the subjectivity of qualitative data can be reduced by, for example, standardizing interviewing or observation procedures as much as possible (Casley and Lury, 1981, chapters 5 and 7; Peil *et al.*, 1982, chapter 7).

Finally, it is necessary to consider the detailed format of the required data, including the level of detail required, the degree of standardization necessary, the spatial units for which information must be obtained, and so on. One of the problems frequently faced by planners is that published statistical series usually present data only in aggregate form, while for most planning purposes, apart from macro-planning at the national level, a much more detailed and specific breakdown is required. Let us take the example of an agricultural planning project which requires information on the amount of coffee marketed in the country. In such a case one must decide whether to measure production in terms of weight or monetary value, whether the statistics must be broken down by geographical areas (and which geographical areas), and whether it is necessary to distinguish between different types of coffee or between different types of farmers or coffee-buyers. Similarly, if one is trying to find out about people's attitudes to a proposed development programme, it is necessary to decide whether the data should be broken down by geographical area or type of people, whether people's

responses should be standardized so that some form of comparison can be made, and so on. In all cases such decisions can only be made by considering, on the one hand, the type of data which are likely to be available and, on the other hand, the purposes for which they are required and the sort of analysis envisaged.

How often should the data be collected?

The other aspect of the identification of data needs which has to be considered is the question of how frequently the data should be collected. There are two related issues here. Firstly, there is the question of whether the data have to be kept up to date and, if so, at what intervals. Some data, such as geological data, seldom—if ever—require updating; but most data have to be either collected at regular intervals or updated periodically if they are to be of any value. Secondly, it is necessary to distinguish between data which should always be collected and kept up to date as part of a general information or data service and data which should only be collected for particular purposes as and when required.

The two issues are related in that data which have to be collected at regular intervals to be of any value (such as rainfall data and historical data on population growth) obviously have to be included in a general data service, rather than collected as and when required. However, when determining what data should be included in such a service, it is also necessary to take into account other factors, particularly the frequency with which the data are likely to be used and the costs of their collection. Once again this calls for some sort of appraisal of the costs and benefits of data collection.

Data collection

We have already touched upon various issues related to data collection because it is not realistic to consider what data are needed without taking into account the practicality of actually collecting them. This section looks at the methods and problems of collecting data in more detail.

In the first place, it is useful to distinguish between *primary* and *secondary* data. Primary data are those facts which are collected through surveys, such as a soil survey, a population census or a sample survey of households or agricultural holdings. To collect primary data it is necessary to have some form of direct contact with the particular phenomenon in which the planner is interested. This very often involves some sort of fieldwork, although primary data may be collected by other means. Primary data are original, raw facts and before they can be fully utilized they must be analysed and presented in an appropriate manner. Secondary data consist of existing information collected by others and available from 'secondary sources', such as published books, articles or statistical series, maps, and unpublished reports and files. Although secondary sources may yield some raw data, it is often the case that some classification or analysis of the data will already have been made. In this section we look first at the use of secondary data and then in more depth at primary data collection.

The use of secondary data

There is a tendency for planners to underutilize secondary data, preferring instead to collect their own primary data. There are some legitimate reasons for this. Thus, much secondary data is buried in government files or other obscure places and therefore difficult to find, and there is also the problem that, when the data are found, they are often not in a form suitable for the particular purpose for which they are required. Moreover, the relatively limited stocks of existing data in most developing countries also tend to discourage planners from seeking secondary material.

However, in some cases the planners simply prefer to collect their own data, perhaps because collecting primary data tends to be a more interesting task than ploughing one's way through old files and reports. Consequently, considerable time and money is often spent on unnecessary primary data collection exercises, while existing data remain unutilized.

Two main lessons emerge from this. Firstly, it is necessary to make some effort to assess the availability and value of secondary data before embarking on the collection of primary data. Secondly, there is a need to improve the storage of existing data, so that they are more easily accessible. We shall return to the second point later in the chapter.

Primary data collection

There are many different methods of collecting data and it is not possible to discuss any in great detail here. We shall merely consider the various factors which should be taken into account when determining what methods to use and then look briefly at a variety of different methods. There is an increasing number of books and articles on methods of data collection in developing countries to which the reader can turn for further information and these are indicated in the guide to further reading.

Two main factors determine the most appropriate methods of data collection to use: the type of data required and the resources available to collect them. We have already examined the different types of data which may be required and obviously it is not possible to collect them all in the same way. Thus, for example, methods of collecting data about household incomes must differ from those of collecting data about rainfall, soils, crop production or attitudes to a particular development project. Moreover, they will also depend on the particular type of income data which is required, including the types of household with which one is concerned, the geographical areas for which the data are needed, the degree of detail and accuracy required and the frequency with which the information should be updated.

The resources for collecting the data require rather more consideration since this is a topic which has only been touched upon so far. The main resources which must be considered are money, manpower and time. Money is obviously a fundamental constraint, since it is needed in order to meet the manpower costs as well as to cover various other expenses, such as transport, stationery, postage, or

whatever else is required. Manpower requirements may include both skilled manpower to plan and supervise the data collection and in many cases also unskilled or less skilled manpower to undertake the more routine tasks. Time is a constraint because, as we have already suggested, there is usually a need to provide the data as quickly as possible, either because they are data for which there is a frequent demand for a variety of purposes or because they are required in order to help make a particular decision which has to be made urgently.

Because money, manpower and time are often in short supply and in heavy demand, those responsible for data collection are often under considerable pressure to find quick and cheap methods of collection. However, this can create problems because the use of such methods often results in a reduction in the accuracy and detail of the data. For example, a sample survey of population will not provide the same degree of detail and accuracy as a full census, the use of existing aerial photographs will provide less detailed information about existing and potential land-use than a thorough ground survey, and so on. The weaknesses of these 'short-cut' methods are reflected in the fact that they have in the past often been referred to as 'quick and dirty' methods (Casley and Lury, 1981, pp. 28-9).

The dilemma which thus faces the planner who has to choose whether to use long, expensive and accurate or quick, cheap and 'dirty' methods of data collection is closely related to the point raised earlier about the volume of data which should be collected. Increasing concern with both these issues has in the last few years resulted in efforts to develop approaches to data collection which provide an adequate amount of reasonably accurate data for a moderate input of resources—in other words, to devise 'quick and reasonably clean' methods of data collection. Many of these efforts have been associated with the collection of data for planning rural development programmes and this has resulted in the emergence of an approach to rural surveys known as *rapid rural appraisal* (Chambers, 1981; Longhurst, 1981), to which we have already made brief references. It should be noted that the term rapid rural appraisal does not refer to a set of specific data collection techniques but to a general approach to data collection. We shall consider some of the specific techniques which may be included in this general approach in the discussion which follows.

It should also be noted that, although it is possible to find techniques which do provide reasonable information at a reasonable cost, it is not possible to resolve the dilemma between quality of data and cost of collection completely. Advocates of rapid rural appraisal have been quick to point out the risks involved in terms of the accuracy and, in particular, the bias of the data collected by rapid appraisal methods, which can become no more than 'rural development tourism' (Chambers, 1981; Moore, 1981). The significance of the development of such methods lies rather in the fact that it acknowledges the need to take a broader and more critical look at the range of data collection methods available and to consider the relative costs and benefits of any data collection exercise. The practical implications of this will become clearer when we look at specific methods of data collection.

There is no one way of classifying different approaches to data collection. The two main criteria which may be used for classification are the type of data and the sort of methods used to collect them. Using a combination of these two criteria, we distinguish here between the following four general approaches:

1. natural resource surveys;
2. collection of national statistics;
3. social surveys for specific purposes;
4. participant observation.

Because of the combination of criteria used there is some overlap between these four categories. For example, the collection of annual rainfall statistics could be included in categories 1 and 2, while some 'case study' approaches (compare Casley and Lury, 1981, chapter 5) have elements of categories 3 and 4. However, this classification is adequate for the relatively general discussion to which we are confined here. Let us then look briefly at each of the four approaches.

1. Natural resource surveys. Data about natural resources—including relief, minerals, soils, climate and vegetation—play an important part in many forms of planning. Such data are needed in order to provide information about the potential for, and limitations of, various types of development activity—including not only agriculture but also the development of mineral and water resources, road construction and urban development—and information about natural hazards which may disrupt development and possible long-term environmental damage which may result from development activity. The importance of obtaining such data is sometimes forgotten by planners, especially those with a social science background, and communication between planners and those involved in natural resource surveys is often inadequate (Doornkamp, 1982).

It is not possible here to discuss in any detail the full range of data required and the various methods available for collecting them, since this is a major field of study in itself. We attempt only to make a few general points about the nature and scope of natural resource surveys.

A wide range of data is included under the general heading of natural resource data and it is perhaps useful to distinguish between data on individual resources—such as rainfall, soils, river flows or specific minerals—and data which are designed to provide an integrated picture of the whole natural environment. An example of the latter is the *land systems* approach, in which an area is divided into natural resource regions—known as land systems—on the basis of a combination of geology, landforms, soils and vegetation. This provides a particularly useful approach for regional planning purposes. Data on individual resources are usually required, sometimes in addition to a land systems approach, for more specific or detailed planning purposes.

The methods of collecting natural resource data can be divided into two broad categories: ground surveys and 'indirect' survey methods. Ground surveys,

which include recording rainfall and stream flows, taking samples of soil and vegetation, and drilling to test for oil or other minerals, provide the most detailed and accurate data but normally require a great deal of time, money and manpower. Indirect survey methods, such as the use of aerial or satellite photography, are more economical in terms of resource inputs and the information thus provided is adequate for many purposes. Consequently, they have become increasingly important means of data collection, particularly where the need is for general information about the environment as a whole, as in the land systems approach. Nevertheless, despite their obvious value, their limitations in terms of the detail and accuracy of the data provided must be recognized and it is sometimes necessary to undertake some ground surveys, often on a sample basis, as a means of checking their accuracy and providing any additional detail required.

Some natural resource data collection is best undertaken as part of a long-term general data collection programme. This may be because little or no updating is necessary (as with geological data), because the data can be used for a variety of different purposes (as with land system and rainfall data) or because the data are only of value if they are collected regularly over a long period of time (as in the case of rainfall and stream flow records). Other forms of data collection, however, are best undertaken only for specific purposes as and when required. One such example is detailed soil surveys, which are expensive and time-consuming to undertake and require different types of analysis, depending on the purpose for which they are required.

2. National statistical collection. An essential requirement for planning in any country is a basic collection of national statistics—in other words, basic statistical data are collected regularly and made available to all potential users. The type of data involved varies enormously, from rainfall records to population statistics and economic data on such things as production, employment and overseas trade. Once again detailed discussion of the type of data and methods of collection is beyond the scope of this book and we merely raise a few major issues here. Perhaps the most important point to note is that the collection of national statistics requires the establishment of regular collection services or facilities for each set of statistics. A few examples will illustrate this. Thus, the collection of rainfall statistics requires a network of rainfall stations at strategic points throughout the country and the employment of people to keep daily records at each station. Similarly, the collection of, say, coffee-marketing statistics requires records to be kept at all coffee-buying points, while the collection of statistics on school attendance requires local education officers to complete records for all the schools within their jurisdiction and to forward these to the national level.

There are relatively few short cuts which can be taken in this form of data collection since, as we have already emphasized, it is essential that statistical data be collected regularly and be as accurate as possible. However, it is sometimes possible to make savings by using volunteers or part-time staff instead of full-time professionals to collect some data. For example, rainfall stations are

sometimes manned by volunteers, such as school teachers, or located at institutions like agricultural research stations, where records are maintained by staff who also perform other duties in the institution. Moreover, it should also be remembered that economies can be made by giving careful consideration to data needs prior to collection, so that unnecessary data collection is as far as possible avoided and priority is given to the most urgent needs.

3. *Social surveys for specific purposes.* While national statistics provide basic data for a range of planning purposes, the planning of a specific project or programme frequently requires more detailed information about specific social and economic activities and issues. This requires the collection of much more detailed and specific data designed to meet that particular information need. This type of data collection exercise is usually referred to as a *social survey*, although it frequently includes the collection of 'economic' (and perhaps also 'political') as well as 'social' data; the word 'social' in this case is used to differentiate this type of survey from natural resource surveys.

There is a great deal of literature on methods of undertaking social surveys to which the reader can refer for further information and in this section we shall attempt to do no more than distinguish between the main types of social surveys and point out some of the problems which tend to arise.

One of the most useful ways of classifying different types of social survey is according to the proportion of the total 'population' which is surveyed or studied. The word 'population' is used here in its statistical sense to mean the total number of 'individuals' (people, households, villages, farms, industrial enterprises, or whatever) about which one requires information. The planner has to decide whether to collect data about each one of these individuals, in which case the survey is known as a *census*, or only about some of them, in which case it is usually known as a *sample survey*. A census obviously provides more detailed and accurate data but in the majority of planning situations there is not the time, money or manpower required for a full census and so the planner has to be satisfied with a sample survey.

Much of the literature on social surveys is concerned with the methods of determining the size and composition of the sample of the population to be studied in a sample survey. Basically this involves weighing up the degree of detail and accuracy required against the resources available for conducting the survey. An important distinction is that between *random* and *non-random* samples. In a random sample the individuals to be surveyed are selected by random means; for example, one might select every tenth household in a village or every fifth industrial enterprise on an alphabetical list of registered industries. In a non-random sample the individuals are not selected randomly but on the basis of some specific characteristics they possess; thus one might select, say, all those households in the village which grow a particular crop in which one is interested, or the three largest and the three smallest industrial enterprises in order to compare the characteristics of large and small industries—depending on the particular purpose of the survey. It is also possible to select a *stratified random*

sample, in which the population is divided into sub-groups according to specific criteria (for example, those households which grow the crop and those which do not, or large and small industrial enterprises) and then a random sample is selected from each sub-group.

There are two other forms of survey which can be used as alternatives to a normal sample survey, especially if the main aim is to minimize costs of data collection. One is to focus the survey on 'key' individuals, who are able to provide data not only about themselves but also about other individuals in the population or the population as a whole. For instance, one might interview local leaders (chiefs, headmen, councillors, party leaders, priests or teachers) in a village community or the manager of an agricultural cooperative or an industrial enterprise. The other is to hold group meetings or interviews, which all individuals are invited (or even required) to attend and express their views. Thus one might hold a village meeting or a meeting of all the members of an agricultural cooperative or all the workers in an industrial enterprise. Both forms of survey can provide very useful information, particularly in certain sorts of planning situation, for a relatively small outlay of resources. However, it must be remembered that, like all short-cut or rapid appraisal methods, the data tend to be less accurate (except at a very general level of detail) than those obtained from a proper sample survey.

Another important way of classifying social surveys is according to the method by which the data about the individuals selected for surveys are obtained. There are various ways in which such data may be obtained, including consultation of records, structured observation of events or people's behaviour and questioning the people involved. The last is probably the most common method but there are several different ways in which the questions can be asked. Thus the information may be obtained by personal interview or by a postal questionnaire and personal interviews may take several forms, including the completion of formal questionnaires, structured interviews (in which the main topics of discussion but not the full details of each question are defined by the interviewer) and unstructured interviews.

The choice between these methods must again depend both on the type of information required (including the quantity, subject-matter and reliability) and on the resources available for collection and, once again, it may be necessary to make some sort of choice between detail and accuracy on the one hand and costs of data collection on the other. For example, a postal survey is usually much cheaper than personal interviews but the response rate and the accuracy of the data obtained tend to be much lower. Moreover, it is also necessary to consider the environment in which the survey is being conducted. Thus postal surveys often present particular problems in developing countries, especially in rural areas, because many areas are not properly served by postal services and many people are illiterate. There are also a number of other more detailed issues which must be considered when planning a social survey, such as questionnaire design and interviewing procedures, which cannot be discussed in the space available here; but once again the same basic criteria—the type of data required, the

resources available for collection and the environment in which the survey is to be undertaken—apply.

Finally, it should be noted that although the various methods of social survey described here are most often used in order to collect data for specific purposes, they may also be used to collect general national statistics. For example, population statistics are normally collected through a combination of censuses and sample surveys. There is, therefore, an overlap between these two categories of data collection, in the same way as there is (as in the case of rainfall statistics) an overlap between natural resource surveys and statistical collection.

4. Participant observation. Participant observation is used here to refer to a variety of data gathering procedures in which the planner or data collector obtains information not by conducting a formal survey but by participating in the activities of the community or organization concerned and gaining information by more indirect means. Two main types of participant observation may be distinguished, although there is not always a clear dividing line between them.

In one type the participant observer's main role is to participate and the collection of data is, for him (or her), of secondary importance. For example, agricultural extension staff or community development officers might be asked to collect information on people's attitudes to a particular development project in the course of their normal work. This form of data collection has the double advantage that it is relatively cheap and that the data collectors tend to have a better knowledge of the area and the people than 'outsiders' who make brief visits solely to collect information. However, it has the disadvantage that the data collectors frequently do not have sufficient time or skills to devote to data collection.

The other form of participant observation is that in which the data collector's main concern is to obtain information and his participation is primarily a means of gaining the confidence of the people in whom his interest lies and, therefore, gaining more accurate and detailed information. The most obvious example of this is the anthropological approach, in which the data collector—the professional anthropologist—lives in a community in order to obtain information about its structure and organization and the activities of its members. The main disadvantage of this approach is the cost involved, particularly in terms of time, which limits the possibilities of its extensive use in planning. However, in some countries there is scope for making better use of existing anthropological research by, for example, asking anthropologists to obtain specific information which is required for planning purposes in addition to whatever information they are themselves interested in obtaining, and insisting that research results are made available within the country.

Of the four main types of data collection considered, participant observation (in either form) offers the greatest potential for achieving an in-depth understanding of the structure and functions of individual communities or organizations and of their needs and problems and it is thus particularly suitable

for planning projects or programmes where such understanding is an essential requirement for successful implementation. Moreover, it is also possible for this approach to become one in which the people concerned really participate in the planning process, not only by providing information but also by contributing their own ideas and actually influencing the decision-making process. There is a growing interest in the potential and methodology of this type of research, which is often referred to as *participatory action research* (Hall, 1982). However, it should not be assumed that participatory observation always involves such participation, since in many instances it is merely another form of information gathering. Furthermore, it should be noted that, unless it is combined with more formal survey procedures, it does not usually provide data which are easily quantified or standardized and so has limitations for other sorts of planning purpose. We shall consider other aspects of the whole question of people's participation in decision-making in Chapter 13.

Analysing, presenting and storing data

At the beginning of the chapter we suggested that the transformation of data into useful information for planning depends, firstly, on the nature of the data and, secondly, on what happens to the data after they have been collected. This section of the chapter focuses on the second of these requirements—that is, the analysis, presentation and storage of data. Raw data generally have to undergo some form of analysis in order to reveal the information needed for a particular planning purpose and then they have to be presented in a way which facilitates their understanding and use and be stored in a place and form which makes them accessible when needed.

At this stage in our discussion of the role of data in planning, the distinction between data which are collected for specific planning purposes as and when required and data which are collected as part of a regular information service and thus constitute a general data store is particularly valid, since different forms of analysis, presentation and storage apply. This section therefore begins by considering a few general points which apply to all forms of data and then looks in more detail at the procedures required for each of the two types.

Some general principles

There are four basic principles which should determine the procedures used to analyse, present and store data. Firstly, it is necessary to consider the nature of the data, including their subject-matter, quantity, accuracy and form, since different procedures are appropriate for different types of data. Secondly, it is necessary to take into account the purpose for which the data are required, particularly when determining the degree and form of analysis needed to transform the data into useful information. Thirdly, the people who will be using the data must also be taken into consideration, since the data must be analysed

and made available in a form which they can understand and use. Finally, the resources (including time, money and manpower) and technology available for analysis, presentation and storage must be taken into account, since they limit the choice of procedures.

One important implication of this is that different procedures are appropriate in different situations. There are two dimensions to this point. On the one hand, the same data may have to be treated in several different ways, depending on the circumstances. For example, basic data such as population statistics may be analysed in one way for, say, calculating future educational needs and in another for tackling problems of rural-urban migration. Similarly, the results of a survey of a particular area in order to ascertain its development potential may have to be presented in one way for local political leaders, in another way for national civil servants and in a third way for prospective foreign aid donors who have been asked to fund a development project in the area.

On the other hand, as already indicated, different kinds of data require different forms of treatment. It is, in particular, necessary to recognize the implications of this for data analysis, since it is very easy to provide inaccurate or misleading information because inappropriate procedures have been used to analyse the raw data. Special attention should be given to the quantity and accuracy of the data, in order to avoid drawing unwarranted conclusions from inadequate and unreliable data, and to the differences between quantitative and qualitative data. It should, however, be noted that, as we suggested in the section on identifying data needs, there are ways in which qualitative data can be analysed in a manner not unlike quantitative data. For example, it is often possible to allocate scores or weights to different categories of qualitative data (such as descriptions of soil types or people's attitudes), so that some form of statistical analysis is possible. We shall consider one application of this approach in Chapter 8, when we discuss the problems of handling qualitative data on costs and benefits in project appraisal. Nevertheless, it should be observed that the process of allocating scores or weights requires some sort of subjective decision about the relative importance of various aspects or issues reflected in the data and this subjectivity or bias must be taken into account when interpreting the results of any analysis which is made.

Another major implication which arises from the application of the four basic principles mentioned above is that in many Third World countries the limited resources and technology available for handling the data, together with the fact that many users of the data (especially political leaders and local community groups) are unused to dealing with complex analytical material, should encourage the use of relatively simple methods of analysing, presenting and storing data. Thus, straightforward tabulations of quantitative data, followed perhaps by very simple statistical calculations, are often more useful than complex mathematical analyses, particularly if the quantity or accuracy of the data is somewhat limited. Similarly, simple methods of presentation, such as short reports supported when appropriate by clear visual aids and simple, manual forms of data storage are frequently of more value than very long,

detailed reports and computerized data storage systems. This does not mean that more sophisticated forms of analysis, presentation and storage are never required or that modern information technology, such as the use of computers and microelectronic processors, has no role to play in developing countries. It merely means that the methods used should be *appropriate* and that this often calls for simplicity rather than complexity. Moreover, as we have already pointed out and will repeat in subsequent chapters, simple techniques should not be regarded as inferior techniques.

Data for specific purposes

Data which are required for specific planning purposes—the construction of a road, the launching of a new primary health care programme, the introduction of a new cash crop, and so on—generally require more detailed and specific analysis than data which are collected for general purposes. In many cases this involves utilizing some of the analytical techniques described in the following chapters, since there is often no clear dividing line between the basic analysis of raw data required to transform them into useful information and the subsequent analysis which is undertaken in order to make decisions about alternative courses of action on the basis of this information. Complete coverage of all aspects of data analysis is, therefore, not attempted here. Instead, attention is focused on basic statistical techniques which are most likely to be used in the initial analysis of raw data.

The aim of statistical analysis is to demonstrate the significant aspects of a particular set of data and the interrelationships between different sets of data. Discussion of the range of statistical techniques available and their uses is not possible here; nor is it necessary since appropriate texts on statistical methods are readily available. It should, however, be noted that the most useful techniques are probably the most basic ones, such as the calculation of percentages, averages and simple measures of correlation, since they have a wide range of uses and are relatively easy not only to use but also to explain to those who have to make decisions based on the calculations made. It should also be emphasized that, as with any other form of analysis, the results of a statistical analysis are only as reliable as the data on which the analysis is based and, therefore, all results should be treated cautiously and when data are inadequate or unreliable, statistical analysis should normally be avoided and the data presented (if they are used at all) in their raw state.

The presentation and storage of data for specific purposes present fewer problems than in the case of general data. The main requirement is to ensure that they are presented and stored in a manner which facilitates their use for that particular purpose. Since the chances of using them again for a different purpose are usually fairly limited, long-term storage is not a major consideration, although they should if possible be kept in a place and form where they can be utilized again if required.

PERPUSTAKAANS-2 JURUSAN PWK-ITE

General data

General data which are collected and kept up to date as part of a general data collection service designed to serve a variety of purposes over a long period of time, normally require less analysis than data collected for a particular purpose. They should generally be stored in a form which includes as much as possible of the raw data, provided that they are comprehensible, so that individual users can carry out their own analysis to meet their own particular requirements.

The presentation and storage of general data are, however, very important issues. The data must be presented and stored in a way which ensures that as many potential users as possible are aware of their existence and can get access to them as and when required. The two main ways of achieving this are the publication of basic sets of data (such as map series showing natural resource information and regular bulletins of national statistics) and the establishment of data stores at national and, where appropriate, regional or local level.

The establishment of data stores presents particular problems, mainly because it involves collecting—and keeping up to date—a wide range of information collected from a variety of different sources. This in turn requires considerable time, manpower and organizational capacity. It is also often difficult to find suitable locations for such data stores and to devise appropriate methods of presenting and storing the data. Because of these problems, data storage is a neglected area in many countries and many attempts to establish data stores have had very limited success.

One of the better-known and more successful attempts at storage has been in Malaysia, where the function of data storage has been combined with that of the planning and management of development projects in what are known as 'operations rooms'. The operations room approach is described in detail in Chapter 9, as part of a discussion on managing the implementation of development plans. It should, however, be mentioned here that even in Malaysia the approach has encountered considerable problems and attempts to reproduce it in other countries have so far not been very successful. Perhaps the most important lesson which emerges from these experiences in terms of data storage is that the first step needed in order to improve data storage in most countries is merely to recognize its importance and allocate the resources needed to begin tackling it. Only then will approaches such as the operations room stand any chance of success.

The organizational machinery for handling data

In this final section we consider the organizational machinery required for dealing with data. As with any other planning task, it is necessary to allocate responsibility for collecting, analysing, presenting, and storing data to appropriate organizations and individuals and to ensure that these operate

effectively. We shall, however, only touch upon this topic briefly here, since the organization of planning is the subject of Part Three of the book.

Most countries establish a special office or agency at the national level with specific responsibility for national statistical data. The location of this office varies, but it is most commonly found in either the planning ministry or the ministry responsible for finance. However, the national statistical office is not the only organization which deals with data matters. All national ministries, departments or agencies organize the collection, analysis and storage of data related to their own specific fields and in many countries there are also statistical offices or data stores at the regional or local level. Furthermore, in the case of data required for specific planning projects, the usual practice is for those actually responsible for the particular project to undertake their own data collection exercise.

Perhaps the main problem, therefore, is how to divide responsibility between the various organizations and individuals who have some interest in the collection and use of data in a way which, on the one hand, ensures that those who need the data have access to them at the time and in the form required and, on the other hand, avoids unnecessary duplication of effort. There are no easy solutions to this problem and this is one reason for the difficulties which arise when efforts are made to establish national and regional data stores. We shall encounter similar kinds of organizational problem in relation to other aspects of planning in Part Three.

Conclusion

This chapter has looked very briefly at a wide range of issues related to the identification of data needs and methods of collecting, analysing, presenting and storing the data. There is, however, one important theme which has recurred throughout the discussion and thus warrants a final mention here. That is the need when making any sort of decision about methods of selecting or handling data to take into consideration the purposes for which the data are required, on the one hand, and the resources available for collecting and processing them, on the other. We have also seen that there is often some conflict between these two basic considerations and it may thus be appropriate to conclude by quoting the advice given by Casley and Lury (1981, p. 29) to those faced with a dilemma about the use of, what they call, 'quick and dirty' methods:

The extension of statistical work and the growing acceptance of the need to involve the surveyor more regularly and immediately in policy issues can be set back if the surveyor behaves as if he can operate only in ideal conditions and cannot adapt to the stresses and strains of helping decision takers effectively. General experience, an assessment of the user's ability to appreciate and accept data uncertainty, the nature of the topic, the extent of related information, and the relevance of the data to the policy issues will all help the surveyor to judge how far he can go.

Guide to further reading

General

There is very little material which covers the whole field of data collection, analysis, presentation and storage dealt with in this chapter. Most books focus on particular parts of the field, particularly data collection and usually with the main emphasis on social surveys. Natural resource data are seldom considered together with other forms of data. The most recent and useful general work is *Data Collection in Developing Countries*, by D. J. Casley and D. A. Lury (Oxford, Clarendon Press, 1981). Also of general interest but with the main emphasis on social surveys are the following: Peil, M. *et al.*, *Social Science Research Methods: An Africa Handbook* (London, Hodder & Stoughton, 1982); O'Barr, W. *et al.* (eds), *Survey Research in Africa: its Applications and Limits* (Evanston, Illinois, Northwestern University Press, 1973); Pausewang, S., *Methods and Concepts of Social Research in a Rural Developing Society* (Munich, Veltforum-Verlag, Afrika-Studien No. 80, 1973) (based on a case study in Ethiopia); and Bulmer, M., and D. P. Warwick (eds), *Social Research Methods in Developing Countries* (Chichester, Wiley, 1983). Another useful book, which adopts a broader approach but focuses on 'environmental' planning and is intended primarily for use in developed countries, is *Environmental Science Methods*, edited by R. Haynes (London, Chapman and Hall, 1982).

Development indicators

The subject of development indicators (or social indicators) has a literature of its own. The most useful works applicable to the Third World are the following:

- Baster, N. (ed.), *Measuring Development* (London, Frank Cass, 1972).
 Drenowski, J., *On Measuring and Planning the Quality of Life* (The Hague, Mouton, 1974).
 UNESCO, *Social Indicators: Problems of Definition and Selection* (Paris, The UNESCO Press, 1974); and *The Use of Socio-Economic Indicators in Development Planning* (Paris, The UNESCO Press, 1976).
 UNRISD (United Nations Research Institute for Social Development), *Measurement and Analysis of Progress at the Local Level* (Geneva, series of three reports including studies of individual countries, 1978-79).

The third of these reports includes a study of 'Social indicators and social reporting in Papua New Guinea' by R. Apthorpe, which also provides a useful analysis of the properties of social indicators; this study has also been published by the School of Development Studies at the University of East Anglia as Discussion Paper No. 26 (1978).

Natural resource surveys

For social scientists or practical administrators and planners with no previous knowledge of natural resource survey methods, a useful series of introductory

articles entitled 'The physical basis for planning in the Third World', were published in the *Third World Planning Review*, volume 4 (1982); they are written by J. C. Doornkamp and can be found on pages 11-30, 111-28 and 213-46.

The above articles also include full references to other relevant reading material. However, for readers not able to locate these articles or requiring more detailed information, the following may be useful:

- Cooke, R. U., and J. C. Doornkamp, *Geomorphology in Environmental Management* (Oxford, Clarendon Press, 1974).
 Food and Agriculture Organization, *A Framework for Land Classification* (Rome, 1976).
 Mitchell, C., *Terrain Evaluation* (London, Longman, 1973).
 Townshend, J. R. G., *Terrain Analysis and Remote Sensing* (London, George Allen & Unwin, 1981).

National statistics

A number of useful publications on national statistics have been produced by the UN. They include: *Towards a System of Social and Demographic Statistics* (1974), *The Organization of National Statistical Services* (1977), and *Social Indicators: Preliminary Guidelines and Illustrative Series* (1978).

Social surveys

All the books mentioned in the *General* section include considerable amounts of information on the organization of social surveys. In addition, the following may also be useful:

- Gardner, G., *Social Surveys for Social Planners* (Milton Keynes, Open University Press, 1976) and Nachmias, C. and D., *Research Methods in The Social Sciences* (London, Edward Arnold, 1976), both of which are intended primarily for use in developed rather than developing countries.
 Cochrane, G., *The Cultural Appraisal of Development Projects* (New York, Praeger, 1979).
 UN, *A Short Manual on Sampling* (New York; vol. 1, 1972; vol. 2, 1973), and other publications in Series F, *Studies in Methods*.

Rapid rural appraisal

There are a number of useful works on rapid rural appraisal, including:

- Chambers, R., 'Rapid rural appraisal: rationale and repertoire', *Public Administration and Development*, vol. 1 (1981), pp. 95-106.
 Honadle, G., 'Rapid reconnaissance for development administration: mapping and moulding organizational landscapes', *World Development*, vol. 10 (1982) pp. 633-49.

- Longhurst, R. (ed), 'Rapid rural appraisal', *Bulletin of the Institute of Development Studies* (University of Sussex), vol. 12, no. 4, October 1981 (whole issue).
- 'Symposium on rapid rural appraisal', *Agricultural Administration*, vol. 8, no. 6, November 1981 (whole issue).

Analysis, presentation and storage

Most of the books mentioned in the *General* section include some information on the analysis, presentation and storage of data. For a general discussion of the analysis of social science data, the reader may also like to refer to Silvey, J., *Deciphering Data* (London, Longman, 1975).

There are many basic textbooks on introductory statistics. Examples include:

- Connolly, T. G., and W. Sluckin, *An Introduction to Statistics for the Social Sciences* (London, Macmillan, 3rd edition, 1971).
- Hoel, P. G., *Elementary Statistics* (New York, Wiley, 3rd edition, 1971).
- Moroney, M. J., *Facts From Figures* (Harmondsworth, Penguin Books, 1953).
- Yeomans, K. A., *Statistics for the Social Scientist* (Harmondsworth, Penguin Books, 1968).

There is very little material specifically on data storage. Further reading on the operations room approach is given at the end of Chapter 9.

Chapter 7

Modelling and Forecasting

Introduction

Modelling and forecasting occupy an important place in the planning process. Many planners would probably not distinguish between these two activities as most forecasting exercises are based on the use of formal models of one type or another. However, not all models are of the forecasting type. Some have been developed to describe or simulate particular systems in order to improve the planner's knowledge about the way in which these systems work.

Models may be used not only to forecast what will happen in the future but also to test the implications of different policies, programmes, or projects. They are extensively used in both economic development planning and physical planning, although, of course, the types of models involved differ quite markedly. The basic point, however, is that the idea of working with models and applying them in planning situations is a theme common to the methodology of both streams of professional planning activity.

In this chapter we shall briefly discuss the nature of models and their potential applications and then consider some examples drawn from economic and physical planning. We shall then turn our attention to the application of models in forecasting studies, looking particularly at some economic and population forecasting techniques. In the final section of the chapter we briefly discuss some other types of forecasting techniques.

The nature of models

Models are idealized representations of real-world situations. The situation concerned may, for example, be a national economy, a sector of that economy, a city or even an individual household. By idealized, we mean that a model is simpler than the reality that it is intended to represent. This simplification involves representing only certain relevant and important aspects of the situation that the model relates to. The aspects that are incorporated into a particular model will, of course, depend on its intended purpose. In some cases models can be based on specific theories concerning the nature of relationships between parts of the real world. Alternatively, models may themselves be used to test hypotheses as part of the process of constructing theories.

Models have a great many uses. Basically, they can help us to gain an understanding of the way in which man-made or natural systems operate and thereby help us to explain why things are the way they are. If we can gain such an

understanding and ability to explain relationships then we are in a position to start using models to predict the future (Reif, 1973). Models can help us do this because they allow us to make some sense of extremely complicated phenomena. They can also help us to decide on the data that should be collected to analyse particular problems and how those data should be used.

There are various general categories of models. One of the most frequently quoted classifications is that of Ackoff (1968), who distinguishes between:

1. analogue models;
2. iconic models;
3. symbolic models.

In the case of analogue models the relevant properties of the real-world situation are retained but with a scale transformation. An example of this is a plan of a house. Iconic models, however, involve a change in the properties used to represent the real situation and usually a transformation of scale also. This means that we need a legend to explain the properties that are being used—as on a map, where the legend explains the use of, for example, contour lines or shading to indicate elevation. Finally symbolic models, as their name suggests, represent the real world in terms of symbols, most commonly through the use of mathematical formulae. This latter type of model will be familiar to many planners and in the following section we focus on potential applications of these models and their limitations.

Mathematical models in planning

As we have suggested, models are used primarily to describe and predict the behaviour of the various systems with which planners deal. There are four basic elements in the structure of mathematical models (Reif, 1973). These are:

1. variables—which can assume different values over space and time and which are of two types: dependent and independent;
2. parameters—which are values (or constants) which serve to adjust the general model structure to the real-world situation;
3. structural relations—which are mathematical statements (formulae) expressing the relationships between variables and parameters;
4. an algorithm—which indicates the various steps that have to be followed to actually calculate the model and derive a solution.

When discussing the applications of models in planning it is probably easiest to differentiate between economic and non-economic types of models. However, some types of model incorporate not only economic variables but also other factors of interest to the development planner. The distinction between the two types may therefore not always be clear-cut. The scale at which models are applied can also be used as a way of classifying them. Some models have been

used to explore the implications of global development patterns. Others have been developed to explore the interactions which occur in just a limited number of sectors of a national economy. At the micro-level, models have been developed to explore patterns of household and individual behaviour. There is no simple and universally accepted way of classifying modelling applications, and so the categories that we refer to below are purely our own descriptive framework to take into account both the distinction between economic and non-economic models and the spatial scale at which they are applied.

Global models

These are models that generally deal with the implications of patterns of development at the world level or with reference to particular regions of the world. They are generally multidimensional in the sense that they focus not only on economic issues but also on social and environmental concerns. In fact, they could be called 'mega-models' because they usually involve linking together a number of sub-models dealing with particular areas of concern. They are therefore large-scale, complex models. Most planners are unlikely to be involved in the development and use of this particular type of model as they tend to be developed by specialist research groups, usually in academic institutions. They may, however, provide planners with valuable information on future possible trends in particular areas of planning concern, and help identify future planning problems.

There are a number of well-known models in this category. Probably the best-known examples are the World Models developed at the Massachusetts Institute of Technology (MIT) in the United States in the late 1960s and early 1970s. These models represented an attempt to integrate population growth forecasts, resource depletion rates, food supply, capital investment and pollution problems into a general model of the world's future (Freeman, 1973). They attracted a great deal of attention, not least because they presented a very gloomy picture of the future of the world. They were, however, a considerable modelling achievement. The World Models developed at MIT are presented and discussed in Forrester (1971) and Meadows *et al.* (1972). A comprehensive critique of their assumptions, design and the conclusions drawn from them is presented in Cole *et al.* (1973).

Another prominent global model of special relevance in the Third World context is the Latin American world model, or Bariloche Model, which was developed at a research institute in Argentina in the mid-1970s. This model is presented in Herrera *et al.* (1976). Unlike the MIT World Models, which produced forecasts based on what is termed 'trend extrapolation' (i.e. assuming that present trends will continue into the future), the Bariloche Model 'tries to indicate a way of reaching a final goal, the goal of a world liberated from underdevelopment and misery' (Herrera *et al.*, 1976, p. 7). In this context the term 'model' is used to refer not only to a mathematical model but also to the concept of an 'ideal' society. The Bariloche Model team questions the

assumptions underlying the then prevailing view of development problems and possible solutions to them, arguing that this view 'accepts, in a totally uncritical manner, the central values of society as it now is' (Herrera *et al.*, 1976, p. 7). The team argue that:

... the major problems facing society are not physical but socio-political. These problems are based on the uneven distribution of power, both between nations and within nations. The result is oppression and alienation, largely founded on exploitation. ... Our conceptual model of the 'ideal' society is based on the premise that it is only through radical changes in the world's social and international organization that man can be finally freed from underdevelopment and oppression. What is proposed is a shift toward a society that is essentially socialist, based on equality and full participation of all its members in the decisions affecting them; consumption and economic growth are regulated in such a way as to attain a society that is intrinsically compatible with its environment. (Herrera *et al.*, 1976, p. 8)

The model, which—like the World Models—consists of a number of sub-models relating to particular sectors, is centred around the satisfaction of 'basic needs'. A useful discussion and critique of the Bariloche Model and global modelling in general may be found in Cole and Lucas (1978).

Interest in global modelling remains quite strong, with various centres of activity in the United States, Japan, and Switzerland. The principal models involved are usefully summarized by Richardson (1982).

Economic models

There are many different types of economic models and a wide variety have been used in economic development planning since the 1940s. A basic distinction may be made between aggregate and disaggregated (or sectoral) economic planning models. Aggregate models represent an attempt to take into account the entire economy. These models deal with the behaviour of certain key variables, particularly output, income, saving, and capital. In Third World countries, where relevant data for the economy as a whole may not be available, disaggregated or sector models have been extensively used, as for example, in Kenya and Nigeria during the 1960s (Ghatak, 1978).

One of the most widely used aggregate economic models is the Harrod-Domar model and its various derivatives. This model represents relationships between various macroeconomic factors, particularly savings, investment, capital stock and income, and can be used to help economic planners determine the levels of domestic saving and foreign resources required to reach predetermined economic growth rates. This model was, for example, used in the development of India's First Five-Year Plan at the beginning of the 1950s (Ghatak, 1978). Accounts of the assumptions and principles embodied in this type of economic model are widely available in the literature (see, for example, Griffin and Enos, 1970 and Todaro, 1971).

Disaggregated models focus on particular sectors in the economy, usually distinguishing between those which produce consumer goods and those

producing capital goods. This type of division of sectors is used, for example, in the Feldman-Mahalanobis sectoral planning model, which was also used in India to help in the formulation of the Second Five-Year Plan (see Ghatak, 1978).

Sectoral planning models tend to reflect the shortcomings of the sectoral planning approach as a whole, the most significant of which is its frequent inability to deal effectively with interrelationships and interdependencies between different sectors in the economy. Input-output analysis, which we shall refer to in a later section of this chapter, represents an attempt to overcome this problem. Input-output, in effect, models linkages between different industries or sectors. It may also be used to investigate interactions between different regions of a country.

Economic modelling remains an important part of development planning but the shortcomings and limitations of models are now much more widely appreciated. The effectiveness of economic models depends to a great extent on a reasonable degree of stability both in the national economy under consideration and, perhaps more significantly, the international economy. Various events during the 1970s and early 1980s have shown just how volatile the international scene can be, and how disruptive exogenous shocks and uncertainties can be in the context of economic planning in the Third World.

Urban and regional models

Models which describe and predict changes in the structural and functional characteristics of cities and regions have been extensively used in the field of physical planning since the mid-1960s. As we noted in Chapters 3 and 5, the use of models has become closely associated with the systems approach that emerged as a response to the limitations of master planning.

A wide variety of spatial interaction and allocation models has been developed and used in physical planning over the past 20 years. Comprehensive reviews are provided by Ayeni (1979), Bracken (1981) and Oppenheim (1980). The potential application of these models in Third World countries has been reviewed by Mohan (1979).

We cannot mention all the various types of models involved but we should draw the reader's attention to one particular type that underlies a great many of the modelling applications in this particular field of planning. The model concerned is the so-called 'gravity model'. This model is based on an analogy with the concept of gravity in physics, and is used to predict levels of interaction between different towns and cities or between different locations or areas within a particular city. It has a number of potential applications. For example, it has been widely used as an aid in the process of planning shopping provision in urban areas in developed countries. The model can be used to predict the level of demand for retail services in different zones of a city and the shopping centres at which residents will shop. The Lowry Model is a rather more sophisticated version of the basic gravity model and can be used to examine the implications of

different growth policies for cities and sub-regions and for simulating patterns of urban growth. Examples of the application of gravity-type models in Nigerian cities are provided by Ayeni (1979). It should also be noted that gravity models are used extensively in transportation planning both in developed countries and in an increasing number of Third World countries.

These types of models do have a role to play in planning in the Third World, but it should also be recognized that there are fundamental problems associated with their application (Mohan, 1978). These problems reflect in part the fact that the models were developed initially in countries like the USA and the UK and so do not adequately represent the characteristics of the Third World.

Mohan suggests that marked differences exist between cities in developed and Third World countries. The major differences are as follows:

1. the explosive population growth experienced in Third World cities as compared to the stagnation or even decline in the size of many cities in developed countries;
2. the economic structure of Third World cities and the 'coexistence' of different levels of technology as represented by the formal and informal sectors;
3. the decline in the relative cost of transport and communication which has meant that in some Third World contexts (for example, Latin America) less centralized cities have developed, although this pattern, as Mohan acknowledges, is not evident throughout the Third World.

Mohan (1979, p. 13) concludes that:

These major differences combine to produce effects that suggest the idea that such cities have a different spatial structure from those for which models and plans have been developed.

Nonetheless, he identifies a number of 'fruitful approaches' to urban modelling in the Third World and the reader is referred to his paper for details of these.

Reference should be made to one other specific model concerned with urban growth processes in the Third World. The Todaro Model (Todaro, 1981) is essentially an economic theory of rural-urban migration. The model seeks to explain the apparent paradox associated with accelerating rural-urban migration in the context of rising urban unemployment and underemployment. For a detailed explanation and review of this model the reader is referred to Todaro (1981, Chapter 9).

The major practical problem associated with the development and use of many of these models, as with economic models, is the availability of relevant data. This is an issue to which we shall return at the end of the chapter.

These are thus some of the areas of modelling activity relevant to contemporary development planning in the Third World. We have not been able to refer to any models in detail, but other relevant works are cited in the guide to further reading at the end of the chapter.

Forecasting techniques

As we noted in the introduction to this chapter, many models are used to forecast or predict future conditions in areas that are of concern to planners. Some of the models already mentioned perform this forecasting role. There are many other such forecasting models to which we have not been able to refer. In this section of the chapter we shall focus on two specific areas of forecasting activity of particular importance in development planning. The first is in the economic field and relates to the analysis of the interactions between different industries within the economy. It is known as input-output analysis and, together with the use of macroeconomic models and cost-benefit analysis, represents one of the key elements in the methodology of conventional economic development planning. The second area of forecasting activity that we shall refer to relates to the preparation of forecasts of population change. In the final part of this section we shall refer to various other forecasting techniques which may be of use to development planners.

Input-output analysis

Input-output analysis is extensively used as a tool for economic forecasting in both developed and Third World countries. As its name suggests, this form of analysis focuses on the inputs to different industries, or sectors, and their outputs. More particularly, it examines the level of inputs from relevant industries that are required to produce a unit of output from some other industry and how the outputs of each industry or sector are distributed among the other industries or sectors in the economy, either at a national or regional level. The relationships between different industries or sectors are expressed in terms of coefficients that are presented in the form of a matrix (see Figure 3). In this matrix the columns usually represent outputs and the rows the inputs. The values in the cells of the matrix will show the proportion of the input required from each industry or sector to generate a unit of output in each industry or sector. Once this initial matrix has been prepared a forecast of demand can be introduced into the analysis. By studying the matrix it will then be possible to determine the scale of the inputs from other industries or sectors that are required to achieve the demand forecast for the specified industry or sector. However, these inputs are also outputs from the relevant contributory sectors and so the process has to be repeated on an industry-by-industry or sector-by-sector basis to identify these second-round effects. What in fact happens is that the analysis generally has to be repeated quite a few times until eventually the series converges and no further extra output is required (McLoughlin, 1969).

Input-output analysis makes a number of important assumptions about the nature of inputs and the way that industries operate. It assumes, for example, that input coefficients (i.e. the proportions of the output from relevant industries contributing to the output of a specified industry) are constant and that no substitution between inputs occurs. It also assumes that each industry only

TABLE A¹ ACTUAL TRANSACTIONS (e.g. \$'000s)

INPUTS	OUTPUTS		
	SECTOR A	SECTOR B	SECTOR C
SECTOR A	40	55	25
SECTOR B	70	45	95
SECTOR C	90	30	60

TABLE B² INPUT-OUTPUT COEFFICIENTS

INPUTS	OUTPUTS		
	SECTOR A	SECTOR B	SECTOR C
SECTOR A	20	42	14
SECTOR B	35	35	53
SECTOR C	45	23	33

Notes:

¹ Figures in the cells of the matrix represent actual transactions between various sectors.

² Figures in the cells of the matrix represent coefficients derived by calculating each row figure in Table A as a percentage value of the relevant column total. Thus, it is possible to determine that \$1000 of output in Sector A requires \$200 of input from Sector A, \$350 from Sector B and \$450 from Sector C. If, for example, output from Sector A were to be expanded by \$5 million in the context of a development plan, the coefficients can be used to determine the volume of increased output required from each input sector. Thus, \$1 million of output would be required from Sector A itself, \$1.75 million from Sector B and \$2.25 million from Sector C.

Figure 3. Simplified input-output tables

produces one commodity and that each commodity is only produced by one industry. It also assumes that there are no external economies and that there are constant returns to scale in production (Ghatak, 1978).

Input-output analysis is a very useful tool for examining the implications of a planned expansion in a certain industry or sector of the economy. The technique allows the planner to forecast the amount of additional output from relevant industries or sectors which will be required to meet that planned expansion. Despite its value, there are a number of problems associated with the use of input-output analysis. Input coefficients may not actually remain constant, due, for example, to the impact of improved technology. Similarly, the make-up of demand may change over time. There may also be more than just one way of producing the same product (Ghatak, 1978).

We have provided only a very brief description of what is a relatively complex and sophisticated technique. There is, however, a large literature on the topic of input-output analysis, much of which relates specifically to applications in the Third World. It is a topic that appears in most, if not all, general texts on economic development planning (see, for example, Griffin and Enos, 1970 and Todaro, 1981). Todaro (1971) also provides a useful review of the technique.

Population forecasting

Forecasting changes in population levels over time is an important aspect of planning. Population factors influence many areas of planning concern including housing, employment, transport, education and health. Population change reflects complex interactions between various factors, the most important of which are fertility rates, mortality rates and migration. Other factors, such as marriage patterns and the beliefs and practices of different ethnic or cultural groups, can also affect the way in which populations change over time. Planners in Third World countries frequently face special problems when trying to produce population forecasts. Population data are often very limited and those that do exist may not be very accurate. National censuses may be erratic in their timing and poorly organized. As a consequence, planners often have few sound data to work on as the starting point for their analysis. The problem is often made even more difficult where population growth rates are very high and where there are significant changes in the geographical distribution of population. The rapid growth experienced in many Third World cities often involves large-scale migration from rural to urban areas.

Planners may need to derive various types of information from forecasting studies. For many purposes an estimate of total or aggregate population growth or decline will be sufficient. Sometimes the planner will want to know how long it will take a population growing at a particular rate from a certain starting size to reach a given target. In other situations more detailed information may be required. For example, in planning education provision it is desirable to have information concerning the size of the potential school age population and the way this is likely to change in the future.

There are a variety of population forecasting techniques; some very simple, others relatively complex. They can be divided into four main groups:

1. mathematical methods;
2. external determinant methods;
3. ratio methods;
4. cohort-survival and matrix methods.

1. Mathematical methods. The simplest of these is the 'linear' (or 'constant increment') method which is a straightforward example of trend extrapolation. It is based on the assumption that historically observed regularities in the increments (or amounts) of growth in an area or a city will be repeated in the future. Thus, if a city has been growing at a rate of 10,000 people per year in the recent past it is assumed that it will grow by 10,000 next year and the year after, up to the date for which the forecast is being prepared—say five years in the future.

'Exponential' methods are slightly more sophisticated in the sense that they take into account the fact that increases in the population at any one time will contribute to increases in the increase at future points in time. The same principle

applies to money invested in a bank account at a certain rate of compound interest. The main problem with this approach is that if it is assumed that growth will be exponential for even a relatively short period, then it may suggest very high population levels will be reached. It should therefore be used with caution. The 'modified exponential' method can be used to represent situations in which there is a declining rate of population growth as some upper capacity limit is reached. Finally, the 'Gumpertz Growth Curve' takes on an S-shaped form and is based on the assumption that population growth commences relatively slowly, accelerates, and then slows down again towards the end of the time sequence for which the forecast is being prepared.

2. *External determinant methods.* In some situations it is possible for the planner to make population forecasts using data concerning non-population factors. In other words, the planner can use what are termed 'external determinants' of population. In many developed countries employment data are sometimes used for this purpose, but a more appropriate approach in many Third World countries may be to use housing data. It is a simple approach and requires only population data and data relating to the external factor for the same point in time in the past and an estimate of the external factor for a date in the future for which a population forecast is required. Thus, if the planner knows how many people lived in the houses in an area at a point in the past he may calculate a measure of average household size. Then, if he has data relating to the number of houses that will be in the same area at some point in the future all that he needs to do to forecast the area's population is to multiply the expected number of houses by the measure of average household size. When using this approach it is possible to take into account changes in average household size that may be revealed by surveys or other studies.

3. *Ratio methods.* These methods operate on the assumption that it is possible to identify regularities in the pattern of population change between two different areas such that the population of one area can be projected as a ratio of the population of the other area. This approach is often used to obtain regional population estimates from national data. At its simplest all that is required is to calculate the ratio on the basis of data already available and then apply this ratio to national data relating to the present. This is another form of linear forecasting technique. Clearly, regions within a country may gain or lose population at different rates over time and the ratio between study areas and the country as a whole will often not remain constant. Ratio methods may also be used to forecast the size of particular groups within the population as a whole. For example, the planner may be interested in finding out how the size of the school-age population will change. Once he has calculated the ratio between school-aged children and total population from historical data he can then project this forward to see how the number of children in that age group will change as total population changes. He will, however, have to assume that this ratio remains the same over the forecast period.

4. *Cohort-survival and matrix methods.* These are far more complex approaches than those described above, primarily because they attempt to actually take into account the factors that cause population change: fertility, mortality and migration. We shall not comment on them in any detail other than to note that their use is increasing in Third World countries but also that they require quite detailed and accurate data with which to start the analysis and that they involve a great many more calculations than the methods mentioned earlier. They are, however, far more realistic in terms of the way they treat population change.

We have only been able to describe population forecasting techniques in a very limited way. Far more detailed descriptions of these techniques are, however, widely available. Useful reviews may be found in Bracken (1981), Krueckeberg and Silvers (1974) and Oppenheim (1980). A valuable review of the state of knowledge concerning population growth factors in the Third World may be found in Miro and Potter (1980).

Other forecasting techniques

An enormous range of forecasting techniques have been developed since the 1940s (see Jantsch, 1967 and Porter *et al.*, 1980, for wide-ranging reviews of the field). Many of these techniques are probably inappropriate to the requirements of Third World planners.

One forecasting technique which may be appropriate in some planning situations involves constructing what are termed 'scenarios' of the future. Scenarios are hypothetical pictures of the future which can be used to help the planner identify what might happen if certain events occurred or certain plans or policies were introduced. They might be used, for example, to consider what might happen if significant changes in agricultural production techniques were to be introduced in a certain area and what public reactions to particular development projects might be. Although subjective and qualitative in nature, scenarios can help in the identification of future planning problems and possible courses of action.

Constraints on the use of mathematical models

Although mathematical models can, and do, play an important role in certain areas of planning activity in the Third World there are various problems associated with their use. The most important problem, and one that we have referred to at several points in this chapter, relates to the availability of accurate quantitative data. This problem is being slowly overcome in some Third World countries but in many others the limitations of currently available data preclude the widespread use of mathematical models, particularly those of a large-scale, complex nature. In many situations it may be debatable whether it is actually worthwhile allocating scarce resources to the collection of data specifically needed to utilize mathematical models.

The use of these models also depends on the availability of skilled manpower,

which may often be in short supply. It should also be remembered that there is little point in setting up elaborate modelling exercises if the staff who initiate them are unlikely to be available throughout the study. In many cases the use of particular methods reflects the skills, interests and motivation of individual staff members. It is often the case that when these staff move on to different posts the work they have done is neglected and forgotten.

By their very nature these models will generally require access to special equipment, most notably computing facilities. Again, these facilities may not be readily available and those that are may be under great pressure from a variety of competing uses.

Conclusions

We shall not reiterate all the points raised in this chapter. We have drawn attention to the role that models and forecasting techniques may play in planning and have referred to a number of specific examples. There is considerable potential for additional work on the development of models which relate specifically to Third World situations as models originating from developed countries often do not fit easily into the Third World context. This, however, will require time and resources and is unlikely to be a major preoccupation of Third World planners for some considerable time to come.

Guide to further reading

Modelling and models

There is an extremely large literature on this topic area but much of it is highly technical and requires a specialist working knowledge of the field. A very good introduction to the nature and functions of models is to be found in *Models in Geography*, edited by R. Chorley and P. Haggett (London, Edward Arnold, 1967).

The specific global models referred to in the chapter are described in the references which we have cited. For a useful review of the contribution of such models in development planning the reader is referred to *Models, Planning and Basic Needs*, edited by S. Cole and H. Lucas (University of Sussex, Institute of Development Studies Research Report, 1978). A useful book dealing with another specific global modelling exercise carried out in the USA is *The Global 2000 Report to the President*, edited by G. Barney (Harmondsworth, Penguin Books, 1982).

There is no shortage of material dealing with economic models although much of it assumes fairly detailed, specialist knowledge. Introductory textbooks on development economics and development planning generally provide a useful and not too demanding review of the basic principles of economic modelling and some of the more widely used models. *Development Economics* by S. Ghatak (London, Longman Group, 1978) is a useful textbook. The reader will also find

the following to be useful sources on this topic: *Planning Development*, by K. Griffin and J. Enos (London, Addison Wesley, 1970); *Policy Economics: A Textbook of Applied Economics in Developing Countries*, by T. Killick (London, Heinemann, 1981); *Economic Development in the Third World*, by M. Todaro (Harlow, Longman, 2nd edition, 1981); Chenery, H. *et al.*, *Redistribution with Growth* (Oxford, Oxford University Press, 1974), Part 2 (concerned with distributional models); and *Development Planning: Models and Methods*, by M. Todaro (Nairobi, Oxford University Press, 1971).

For the reader interested in urban and regional planning models plenty of material is also available, although much of it is scattered among specialist planning journals or in unpublished papers and reports. A number of useful textbooks are, however, available and the reader is referred to the following for general reviews of the field: *Applied Models in Urban and Regional Analysis*, by N. Oppenheim (Englewood Cliffs, N. J., Prentice Hall, 1980) and *Urban Planning Methods: Research and Policy Analysis*, by I. Bracken (London, Methuen, 1981). Material on the application of these models in the Third World is rather limited but the reader will find some useful examples based on Nigeria in *Concepts and Techniques in Urban Analysis*, by B. Ayeni (London, Croom Helm, 1979). *Urban Economic and Planning Models*, by R. Mohan (Baltimore, Johns Hopkins Press, 1979) discusses the potential application of these models in the Third World and provides details of a very wide range of different urban models.

Forecasting techniques

There is a large literature on input-output analysis in Third World countries. Useful introductory reviews are provided in the previously mentioned textbooks by Ghatak (1978), Griffin and Enos (1970), Killick (1981) and Todaro (1981, 1971).

A useful discussion of population forecasting techniques may be found in Oppenheim's (1980) book mentioned above. Although dated in some respects *Methods of Regional Analysis*, by W. Isard (Cambridge, Mass., MIT Press, 1960) remains one of the best sourcebooks on planning methodology and it covers both economic and population forecasting techniques in some detail.

A wide variety of other forecasting techniques are covered in *Technological Forecasting in Perspective*, by E. Jantsch (Paris, OECD, 1967). *A Guidebook for Technology Assessment and Impact Analysis*, by A. Porter *et al.* (New York, Elsevier-North Holland, 1980) is a valuable reference book on forecasting and various other methods. *Rational Techniques in Policy Analysis*, by M. Carley (London, Heinemann, 1980) also includes a chapter dealing with forecasting techniques. The reader interested in the theory of forecasting, and some of the philosophical issues associated with it, may find it useful to consult the following: *The Art of Anticipation: Values and Methods in Forecasting*, by S. Encel *et al.* (London, Martin Robertson, 1975); and *The Poverty of Prediction*, by I. Miles (Westmead, Saxon House, 1975).

... a process of analysing a number of plans or projects with a view to searching out their comparative advantages and disadvantages and the act of setting down the findings of such analysis in a logical framework.

This definition actually relates to the role of 'evaluation' in urban and regional planning. As noted, in the present context we are using the term 'appraisal' to embrace all such *ex ante* analyses (i.e. those carried out before a plan, programme, or project is selected and implemented).

Appraisal should therefore be viewed as an analytical exercise which focuses on the relative merits of different courses of action. The idea of comparing a number of different alternatives is central to the concept of appraisal even though this principle is not always followed in many planning exercises. Planners often use what is called the 'do-nothing' option as one of the alternatives considered. As its name suggests, the do-nothing option means taking no action at all. If it is the only other option considered then the appraisal will simply indicate the advantages and disadvantages of either leaving things as they are or taking up the one option for action that has been identified. Such an appraisal clearly does not provide any data on the merits of other possible actions as these do not figure in the analysis at all. Comparison with the do-nothing case is often implied rather than made explicit in many planning studies where only a single plan, programme or project proposal is appraised. It should also be noted that the idea of generating a number of alternative ways of tackling the same issue or problem is a major feature of the process approach to planning, as we pointed out in Chapter 5.

It is useful to distinguish, as a number of writers do, between appraisal and testing of plans, programmes or projects. Testing should be carried out during the option preparation and design stage and prior to the application of specific appraisal techniques. Testing is essentially a technical activity on the part of planners and should lead to the identification of options which, to quote Lichfield (1970, p. 153), are 'technically competent and acceptable, and also generally practicable and feasible'. According to Lichfield, there are a number of criteria which should be used in this testing process. These include:

1. Internal consistency: checking that the quantitative elements in the plan relate to each other statistically, e.g. that the planned road system of an area can cope with the anticipated transport demand generated by the land-uses.
2. Locational suitability: checking that the planned spatial distribution of land-uses is compatible with the requirements of the associated activities (e.g. location of industry) and the users (e.g. location of housing projects).
3. Conformity to standards and principles: checking that the plan conforms to accepted standards and principles of similar types of plans, e.g. in relation to its anticipated performance.
4. Problem-solving: checking whether the solutions embodied in the plan appear likely to solve current and future problems identified in the earlier stages of the planning process.

Chapter 8

Appraisal Techniques

Introduction

When possible courses of action have been identified and formulated into specific proposals for action, the planner's next main task is to undertake a detailed comparison of the relative advantages and disadvantages of the various options that might be pursued. The basic purpose of this activity is to provide information for decision-makers to help them choose a course of action. Various types of information will be required and this may be collected, analysed and presented in different ways. In this chapter we shall discuss the nature and role of appraisal in the planning process, some of the main problems that may be encountered when appraising plans, programmes and projects, and a range of appraisal techniques which are used in contemporary development planning.

At the outset it would be useful to clarify some of the terms that are most frequently used to describe the activities carried out at this stage in the planning process. Comparing different possible courses of action, particularly in the context of project planning, is generally termed 'appraisal'. Physical planners, however, often use the term 'evaluation' to describe the process of comparing the advantages and disadvantages of different land-use plans. In addition, the term 'assessment' is also increasingly used in some areas of planning, especially to describe detailed studies of the possible social and environmental consequences of different courses of action. In this chapter we shall use the term 'appraisal' as the general label to describe the activities involved in the process of comparing alternatives, although we shall also be referring to techniques of social and environmental impact assessment. We shall restrict the use of the term 'evaluation' to mean studies of plan, programme or project effectiveness undertaken either during or after the implementation stage. We discuss this latter topic in the following chapter.

What is appraisal?

Appraisal, as we noted above, really means comparing alternative courses of action formulated in the earlier stages of the planning process, prior to exercising a choice among them. At its simplest, this could mean just describing the range of proposals under consideration and stating their respective merits. However, this is rather a limited interpretation of appraisal. A more effective and meaningful definition is provided by Lichfield *et al.* (1975, p. 4), who view it as:

5. Feasibility: checking the feasibility or practicability of the planning proposals in relation to constraints, e.g. economic, organizational and political feasibility.
6. Design: checking that the level of design, or creativity, reflected in the plan is acceptable.
7. Flexibility and open-endedness: checking that the plan is sufficiently flexible to be capable of modification or adjustment to respond to uncertainties about future conditions.

In Lichfield's view, 'plan evaluation' (or in our terminology, appraisal) is a distinctive kind of plan testing which is carried out after it has been established whether or not the criteria above have been met. Experience from many Third World countries indicates that improvements are required in both plan testing and appraisal procedures and techniques, but especially the former, as there is little doubt that many plans, programmes and projects are inconsistent, inappropriate, inflexible and poorly designed (see, for example, Rondinelli, 1979). Clearly there is little point in undertaking detailed, costly and time-consuming appraisals if the options under consideration are technically deficient and unworkable in practice.

Appraisal seeks to provide information on a number of important implications of planning activity. In essence it is concerned with the following factors:

1. the nature and scale of the resources deployed;
2. the nature and scale of the effects produced, both beneficial and adverse;
3. the incidence of these effects—where they occur and who is affected by them;
4. the time-period over which they occur;
5. the relationship between resources deployed and effects produced and the extent to which goals and objectives of planning are achieved.

In other words, an appraisal should seek to establish *what* will happen if a particular option is taken up, *where* anticipated effects will occur, *who* will gain and lose, *when* those effects will occur, and the *efficiency* of the investment in relation to the resources used and the benefits derived.

The relationship between appraisal and decision-making often appears to be a rather 'fuzzy' area. In our view, appraisal is essentially part of the technical process of planning. That is to say, it is an activity that requires the specialist, professional expertise of planners. Appraisal is not the same as decision-making. Decision-makers can use the information presented in appraisals to help them make what are, essentially, political decisions. It does not necessarily follow, however, that they will make their choice solely on the basis of that appraisal. They may wish to, and frequently do, take into account other unquantifiable factors that lie outside the scope of the appraisal and which are explicitly political in nature. The option or options that may appear most attractive in a technical,

planning appraisal may not always be the most politically attractive or expedient. Deciding between alternatives inevitably involves making trade-offs, since it is unlikely that different options will achieve the same objectives to exactly the same degree. Similarly, different options will usually reveal varying patterns in the balance between costs and benefits. Planners can and should draw the attention of decision-makers to these variations in the 'pay-offs' generated by different courses of action, but the politician will apply his own value judgements to the results of the appraisal and will make his final choice accordingly.

Appraisal problems

Appraisal raises a great number of operational and theoretical issues and problems, some of which we shall touch upon in the following sections, but many of which lie outside the scope of the chapter and book.

The kinds of appraisals required in planning—and the way in which they are carried out, presented and used—are influenced by many factors. One important set of considerations will relate to the characteristics of the organization or agency involved in making planning decisions and the types of decisions it has to take. Centralized agencies may create different demands on appraisal procedures compared with decentralized organizations. Much will depend on the nature and complexity of the decisions that have to be taken. In some situations it may be sufficient to know, for example, that project *x* is 'better' than project *y*, but not necessarily by how much. In other words, an ordinal method of evaluation may be appropriate. In other situations it may be necessary to have far more precise information about the relative performance of different projects to obtain the best return on the resources invested. This may be the case, for example, where there is a certain budget available for a particular type of project. Decision-makers will generally seek to allocate resources in the most effective and efficient way and so in this situation they would need to know far more about the ratio of costs and benefits associated with different options. As decisions become more complex, and especially as larger amounts of money are involved, it is generally the case that more information is required from those undertaking appraisals.

Many of the most difficult problems in appraisal are associated with the definition, measurement and valuation of costs and benefits. Although some of these problems will be mentioned in relation to specific appraisal techniques we cannot consider them in any detail. However, we direct the reader to some relevant literature in the guide to further reading at the end of the chapter.

Before we move on to look at some appraisal techniques there is one final point that should be made. It is important to recognize that appraisal is very often not concerned with finding the 'best' choice, simply because in planning it is usually very difficult, if not impossible, to identify and formulate an optimum course of action. As we suggested in Chapter 5, it is generally the case that we have to make a satisfactory choice (or 'satisfice'), but even this may be difficult (Chadwick, 1978).

Appraisal techniques

A variety of appraisal techniques are now available to the development planner. As the following sections will show, these techniques differ with regard to the effects that are measured, how they are measured, how comparisons are made between different effects and alternatives and how the results of the appraisal are presented.

The most widely used technique is cost-benefit analysis (CBA), which has been one of the most prominent methodological components of conventional economic development planning for several decades. CBA was, and indeed still is, regarded by many planners as a comprehensive appraisal technique even though it only really deals with the economic dimension of investment decisions. As we have already seen, until relatively recently the development process in the Third World was viewed primarily in economic terms, and within the general framework CBA seemed an entirely appropriate and sufficient technique for considering the merits of resource allocation decisions. Within that perspective on the nature and meaning of development little or no attention was given to the social and environmental impacts of planning decisions. Although many would argue that CBA can be extended to take such factors into account—with some loss of precision, it should be noted—this was not usually done, either because such factors were not deemed to be relevant or because of the methodological problems involved.

As we have suggested elsewhere in this book, far greater importance is now attached to the social and environmental dimensions of development. The field of 'social planning' has emerged strongly in the Third World in recent years (Conyers, 1982). Similarly, there is now far greater appreciation of the environmental dimension of development. Limitations in traditional CBA procedures, and the growing importance of social and environmental factors in planning in the Third World, have led to the emergence of techniques of social impact assessment (SIA) and environmental impact assessment (EIA). These are partial appraisal techniques which can be used to provide decision-makers with information about the social and environmental consequences of planning proposals. They should be viewed as supplementary forms of analysis which can be linked with CBA to ensure that decision-makers are as well informed as possible about the consequences of their decisions.

CBA is extensively used in many forms of planning activity. As we have noted, it has been strongly associated with economic planning. Physical planners have also made use of CBA and other forms of economic appraisal for quite some time, but they have also developed their own particular approaches to appraisal which reflect their particular perspectives and information requirements. Physical planners have generally tended to adopt a more flexible approach to appraisal, recognizing that it is not always possible to specify all relevant costs and benefits in monetary terms.

For the purpose of the present chapter we shall divide appraisal techniques into four main groups:

1. economic approaches;
2. physical planning approaches;
3. social impact assessment;
4. environmental impact assessment.

In the following sections we shall describe the basic features of these different types of appraisal techniques.

Economic techniques

1. *Cost-Benefit Analysis (CBA)*. There is an enormous literature on the theory, methodology and application of CBA. Useful general texts include those of Irvin (1978), Mishan (1976), and Roemer and Stern (1975). The United Nations, and various other international organizations, have produced a number of manuals on the topic (see, for example, UN, 1972 and UNIDO, 1980). Discussions of CBA are to be found in most texts dealing with economic development planning (for example, Griffin and Enos, 1970, and Todaro, 1981). There is also an extensive, specialist literature on specific aspects of CBA. A recent and useful discussion of the application of CBA in the context of environmental problems in the Third World is provided by Cooper (1981). The reader should therefore experience few difficulties in following up an interest in CBA. We include other references on this topic in the guide to further reading at the end of the chapter.

What, then, is CBA? It is essentially a systematic technique used to analyse the economic justification of a potential investment decision. CBA can be used to examine the economic merits of individual proposals in single sectors—for example, a new road, electrification scheme or agricultural project—or it may be used to make decisions about investments between different sectors. CBA involves identifying, measuring and placing a monetary value on all the costs and all the benefits of a particular project proposal and then comparing these costs and benefits as an aid to the decision-making process. It is important to note that appraisals undertaken in the context of development planning are primarily concerned with government, or public-sector, decisions. These decisions, which are taken on behalf of the people (i.e. in the 'public interest') should involve consideration of the widest possible range of costs and benefits, but more particularly, the 'social costs and benefits' associated with specific project proposals.

This approach, which is termed 'social cost-benefit analysis' (SCBA), differs from that pursued by private organizations who will only be interested in the costs and benefits that directly affect themselves and will therefore ignore any broader social costs and benefits which may result from their investment decisions.

The preparation of the SCBA for a development project generally involves five main stages:

1. defining the project;
2. identifying and measuring costs and benefits.

3. placing monetary values on costs and benefits;
4. discounting of costs and benefits over the life-span of the project;
5. presentation of the results of the analysis.

To begin with, it is essential to be clear about what exactly is being appraised. The project or projects under consideration should therefore be clearly identified and their characteristics adequately specified, since these will influence the pattern of costs and benefits that are generated.

Identifying the costs and benefits to be taken into account is one of the major problems in CBA. This involves distinguishing between the different types of effect produced by allocating resources to particular projects. It is important to distinguish between direct and indirect effects and between internal and external effects. Direct (primary) and indirect (secondary) effects may be defined as follows:

Direct effects are increases or decreases in well-being, or real value of output, resulting from a particular resource allocation. ... Indirect effects are indirectly generated by the resource allocation and are usually taken to describe income multiplier effects induced by the allocation, and other effects stemming from the allocation. (Carley, 1980, p. 99)

Internal and external effects may, to quote Carley (1980, pp. 100–1), be defined as follows:

Internal effects accrue directly or indirectly to the agency, administrative unit, or target or client population of that unit or agency. External effects are those which fall on anyone not encompassed by the definition of the internal boundary and are unexpected benefits received for which no payment is made, or costs imposed with no direct compensation.

Identifying and measuring the effects of proposed objects and selecting those to be included in the analysis is difficult enough, but it is often far more difficult to place a monetary value on them. In this context economists generally draw a distinction between 'tangibles' and 'intangibles'. Briefly, tangibles are those effects that can be converted into, or measured in, monetary terms. Intangibles can be of two types: effects that may be quantified but not measured in monetary terms and those which cannot be either measured or quantified. It should be noted, however, that various terms are applied to these two types of intangible effect. It is because CBA has difficulty in accommodating social and environmental intangibles that the types of assessment approaches mentioned in the previous section have been developed.

Just how effects are valued is a complex topic which we cannot discuss in any great detail. It is, however, important to recognize that two concepts of cost are used in CBA: financial (or accounting) costs and opportunity costs, the latter representing the benefits forgone by using the resources elsewhere; conventionally, in the next best alternative use. Barnett and Hinchcliffe (1976, p. 31) illustrate the concept of opportunity cost by explaining that:

[the cost of] using a man's time on a project is the output he would have produced in a different activity. So if a man works on his garden and he is then employed on road construction, the cost of him working on roads is the value of food, which cannot now, but would otherwise, have been produced.

Although it is not usually too difficult to calculate the financial costs of a project, i.e. what it should cost in terms of things such as equipment purchases and manpower, the calculation of opportunity costs is often much more difficult. This is because these latter costs can only be readily established if the resources involved are, or can be, fully used and there therefore exists a price, wage, or rent for them. If a proper market for them does not exist then it is necessary to use what are termed 'shadow prices', which are really estimates of their value. Methods of determining these shadow prices have become a major, and somewhat controversial, topic in the literature of CBA. Clearly there are major problems in Third World countries—such as, for example, calculating the opportunity cost of a subsistence farmer's time and, more generally, calculating the opportunity cost of labour in areas of high unemployment or underemployment and where large numbers of people are not directly involved in the wage economy.

The same general conceptual and methodological difficulties also arise in connection with the calculation of the benefits of development projects. How are benefits to be valued? There are various schools of thought on this matter. Many economists favour valuing benefits by reference to the international trade price of the output, while others (for example, Griffin and Enos, 1970) argue that they may be measured by the price at which they are marketed, subject to certain conditions being met (Barnett and Hinchcliffe, 1976). These conditions are:

- (a) that the output is marketed, (b) that relative prices are expected to remain constant over time, (c) that the project itself does not affect relative prices, and (d) that the project does not generate a series of external economies. (Griffin and Enos, 1970, p. 108).

So, let us assume that costs and benefits have been identified, measured and valued. What happens next? To make a comparison between the flow of costs and benefits over the life-span of the project it is necessary to 'discount' the calculated values of net benefits so that ultimately we arrive at a figure which reflects their present value. The concept of discounting reflects the difference in importance attached to benefits received in the future and those received in the present. Most people prefer to receive benefits sooner rather than later and the discounting procedures used in CBA can reflect this preference. The discount rate (e.g. 10% or 15%), which is usually set by government, is therefore applied to the figures derived from the valuation stage. This can be done quite simply by using discounting tables which show the factors that should be applied to the values of the net benefits derived for each year. These discounted values can then be summed to arrive at what is termed the 'net present value' (NPV) of the project. If this is a positive value then the project can be regarded as economically

profitable. Two other performance measures are commonly used in CBA: the 'benefit-cost ratio' and the 'internal rate of return' (IRR). The former is obtained by simply summing the values of all discounted costs and discounted benefits and then dividing the costs by the benefits. A project may be regarded as making a positive contribution if this ratio is greater than 1. The IRR is not dependent on a particular discount rate; it actually governs the discount rate at which net discounted costs and benefits cancel out, i.e. the NPV is equal to zero. IRR is calculated by varying the rates of discount until a zero NPV is obtained. The rate which produces the zero value represents the IRR.

The results of a CBA will usually be presented in the form of a table of costs and benefits, their discounted values over the period of the project and other measures such as the benefit-cost ratio and internal rate of return. Assumptions and limitations of the analysis should be clearly pointed out, especially any effects that were not considered because they could not be appropriately valued.

CBA is an extremely useful technique but it is by no means perfect. It involves a great many assumptions, especially with regard to the valuation of effects. One of the main dangers of CBA is that it can appear almost too precise and scientific. It does, however, provide a 'single sum' measure of the relative performance of different options which can then be readily compared. An example of a simple CBA is given in the appendix at the end of this chapter, to illustrate the type of data required and the calculations involved.

2. *Cost-effectiveness analysis.* This type of appraisal technique can be used to derive quantitative measures of the performance of different options but only costs are expressed in monetary terms. Benefits are expressed in the form of measures of the effectiveness of plans, programmes or projects in meeting their specified objectives. Cost-effectiveness can be expressed in terms of a ratio and this may be done in two different ways. Costs can be held constant and the effect(s) allowed to vary (e.g. the area of land irrigated per \$1000 invested) or, alternatively, the effect(s) can be held constant and the costs allowed to vary (e.g. \$ per hectare of irrigated land). This type of approach has the advantage of relating performance measures very closely to objectives, as, in effect, they are derived from them. On the other hand, cost-effectiveness only provides a limited picture of the resource implications of different investment decisions.

3. *Cost minimization.* Cost minimization techniques are based on the assumption that the benefits to be gained from alternative courses of action are approximately the same and focuses only on the costs incurred. For example, it could be used to appraise different housing schemes with a view to identifying minimal housing construction costs. It does not, however, relate appraisal directly to objectives—unless, of course, cost minimization itself represents an aim of the exercise.

4. *Performance maximization.* Performance maximization is often regarded as a form of cost-effectiveness analysis. It is based on the assumption that the costs of

different alternatives are approximately the same and it focuses on the variations in the benefits yielded by the investment options. In some cases these benefits may take the form of financial returns but frequently it is necessary to derive other measures of performance. These measures can be related to the objectives of the project. It is also possible to look at the distributional implications (i.e. who is actually benefiting) by disaggregating the performance measures to examine the fortunes of different groups.

Physical planning techniques

As we suggested earlier, physical planners, and especially those in developed countries, frequently utilize certain economic appraisal techniques but they have also developed their own distinctive approaches to the appraisal problem. We shall briefly consider three techniques used by physical planners:

1. planning balance sheet analysis (PBSA);
2. the goals achievement matrix (GAM);
3. threshold analysis.

1. *Planning balance sheet analysis (PBSA).* PBSA is really an extension of CBA specifically designed for use in the context of urban and regional planning studies. The technique was first developed by Lichfield in the 1950s (Lichfield, 1956). Lichfield *et al.* (1975) suggest that a modified version of CBA for use in urban and regional planning is required for two main reasons: firstly, because planning proposals tend to be multisectoral and will, as a consequence, involve consideration of many items that cannot be quantified or measured in common units; and secondly, because equity issues are important in urban and regional planning and tend not to be adequately handled in conventional CBAs.

PBSA is a disaggregated form of appraisal technique (Carley, 1980). Plans are first broken down into a series of linked projects (Roberts, 1974). For each project the analysis is then directed at identifying what are termed 'producers', or 'operators', and 'consumers'. The former group set up and operate projects and, in effect, supply goods. Consumers will be involved in transactions with producers and will incur both costs and benefits. These costs and benefits may be expressed in monetary terms or in other units of measurement, or simply recorded as intangibles. The results of the analysis may be presented in the form of a descriptive table which represents a comprehensive set of social accounts (Carley, 1980; Roberts, 1974). Thus, in contrast to conventional CBA techniques, PBSA does not present the decision-maker with a single sum measure of performance but provides instead a detailed and disaggregated overview of the nature and scale of the costs and benefits involved and the way in which they are distributed among different groups in the population. It is left up to the decision-maker to trade off different types of effect.

2. *Goals achievement matrix (GAM).* Although PBSA has been acknowledged as a step forward in 'plan evaluation' it does nonetheless have its critics. One of

PERPUSTAKAANS-2 JURUSAN PWK-ITB

the most prominent of these has been Hill, who has pointed out that PBSA fails to relate costs and benefits to planning goals and objectives (Hill, 1968). Hill proposed another approach to the problem—namely, the goals achievement matrix (GAM). The preparation of a GAM involves the following main stages:

1. formulation of planning objectives;
2. specification of alternative courses of action;
3. preparation of a cost-benefit account (where effects may be measured in monetary terms, other units of measurement, or, if necessary, recorded as intangibles);
4. application of a weighting system to planning objectives and the incidence or distributional features of the costs and benefits resulting from each option.

In GAM benefits are taken to represent progress towards specified goals and costs to represent retrogression. The major problem associated with the technique concerns the derivation of the weights that are applied in the analysis (Bracken, 1981). In addition, as objectives are considered individually the technique does not give any indication of links or interdependencies between them (Roberts, 1974).

3. *Threshold analysis.* This is a rather different type of technique which is used to explore the cost implications of alternative patterns of urban development. It is essentially a cost-minimization technique. Threshold analysis was first developed and used in Poland (Kozłowski and Hughes, 1972) although it has subsequently been used elsewhere in both developed and Third World countries.

Threshold analysis is based on the proposition that towns and cities do not expand or grow in a continuous and regular manner but rather that they develop irregularly and discontinuously as a result of the influence of what are termed 'thresholds'. Continued growth is dependent on the ability to cross these thresholds. These may take the form of physiographic features (e.g. slopes or poorly drained areas) or they may reflect limited infrastructure capacity (e.g. water supply, roads). Development thresholds represent limitations on the possible growth of the town or city. They are not necessarily insurmountable but they can only be crossed or overcome by incurring additional expenditure. This expenditure (i.e. the costs incurred) represent what are termed 'threshold costs'. Threshold analysis is usually used to investigate different options for new housing development. In the analysis the total costs of providing housing for a resident are regarded as consisting of the following elements:

1. 'normal costs' (C_n) which are influenced by factors such as the type and density of dwellings, costs of materials and labour but not by the location of development;
2. 'additional costs' (C_a), or threshold costs, which, for example, reflect land characteristics and the need for new services;
3. therefore, 'total costs' (C_t) = $C_n + C_a$.

Two types of threshold may be encountered. 'Grade' thresholds usually reflect site conditions and can be overcome with additional investment during the development process. 'Stepped' thresholds have to be tackled by a lump-sum investment before development can commence and are usually associated with infrastructure limitations.

The overall objective in threshold analysis is to calculate, generally on a per capita basis for potential inhabitants, the total costs of pursuing different options for town or city expansion. This is done by holding certain costs constant and then investigating in detail the various threshold costs that may have to be incurred. Ultimately, this should lead to the identification of the least-cost option.

Threshold analysis is a useful technique for identifying the marginal costs of development. However, it is not without its disadvantages. These include its total orientation to the analysis of costs rather than both costs and benefits and its dependence on certain types of data which may not always be easily available (Roberts, 1974).

Social impact assessment (SIA)

In the two previous sections we examined specific appraisal techniques. Social impact assessment (SIA) is, in contrast, the broad term that can be applied to studies of the social and cultural impact of development plans, programmes and projects. When carrying out such studies, planners, and especially social planners, may make use of a wide variety of specialist techniques drawn from the social sciences. We referred to some of these techniques in Chapter 6 of this book, which dealt with data collection, analysis and presentation, including the role and methodology of social surveys.

In the present section we shall deal generally with the nature and purpose of the SIA. We shall not be able to describe any specific techniques in this section, but we shall direct the reader to some of the relevant literature.

The emergence and development of SIA has been closely associated with the field of environmental impact assessment (EIA), which we discuss in the following section. EIA developed in North America largely as a response to the perceived limitations of CBA and growing public concern about environmental issues in the late 1960s. EIA in North America has always been primarily directed to analysis of physical environmental problems (e.g. air, water, and noise pollution). In the early 1970s an increasing number of planners and social scientists expressed concern at the lack of attention given to the social and cultural impact of planning activity. This concern triggered off the development of the discrete field of social impact assessment studies. In North America today, EIA and SIA still tend to be regarded as discrete entities with their own emphases and methodologies. In other countries, however, a much broader interpretation of EIA has been adopted, an interpretation that often subsumes the field of SIA. Nonetheless, we feel that it is appropriate to draw the reader's attention to what should be regarded as an important field of appraisal activity in Third World

countries. This is especially so given the increasing importance attached to social planning in the Third World and the significance of social perspectives on the development process (Conyers, 1982).

According to Carley and Derow (1980, p. 4), SIA attempts to provide:

... information on the social and socio-economic impacts which may be associated with a new project, policy or programme. These impacts, or alterations in living conditions, include changes in psychological and physiological factors, community processes and changes in the production, distribution and consumption of goods and services.

Clearly, the latter types of impacts listed above would be expected to figure prominently in traditional economic appraisals of plans, programmes or projects. However, it is important to stress that in such appraisals they would be considered solely from an economic perspective. They may also be examined from a social perspective and this is what SIA attempts to do. In so doing, SIA is clearly not preoccupied with attaching money values to costs and benefits of change.

Carley and Derow suggest that most SIAs 'deal at minimum', with four major categories of impacts:

1. demographic (e.g. population composition change, population and labour movements, displacement and relocation problems);
2. socioeconomic (e.g. income changes, employment patterns);
3. institutional (e.g. demands on local financial and administrative services);
4. psychological and community factors (e.g. social networks, integration and cohesion).

The methodology of SIA is, as we have suggested, diverse. Clearly, to be capable of analysing the various types of impacts listed above it must necessarily draw upon many different research concepts and procedures. Wide-ranging reviews of the methodology of SIA and examples of the use of different approaches and techniques may be found in Finsterbusch (1980) and Finsterbusch and Wolf (1977). As an approach, SIA has, to date, mainly been used in developed countries, particularly in North America, and explicit applications in Third World countries have been somewhat limited. Nonetheless, as Carley and Derow observe in their very comprehensive review of SIA, anthropologists and others have long had an interest in the consequences of social change, especially those resulting from development planning. They also make the following pertinent comment:

As more studies reveal the limitations of the ubiquitous cost-benefit analysis as a sole project appraisal technique, so will administrators come to understand the value of a range of policy analytic perspectives on development problems and the inescapable importance of incorporating a consideration of socio-cultural impacts in development planning. (Carley and Derow, 1980, p. 76)

Conyers (1982) illustrates many of the social issues associated with project planning in her studies of the Bougainville copper mine in Papua New Guinea, the Mwamapuli Dam in Tanzania and two tobacco schemes in Zambia. She stresses the need for both 'before' and 'after' studies of the social impact of development projects. As far as social impact assessment of project proposals is concerned Conyers suggests that this should seek to achieve the following objectives:

Firstly, it should attempt to predict the likely social effects—both good and bad—of the project and to take account of these in the planning process. ... Secondly, it should examine the social and cultural conditions in the project area and consider what factors have to be taken into account in the planning process, in order to ensure the success of the project and to maximize the social benefits arising from it. ... Thirdly, the study should identify what kind of social services and facilities should be included in the project design in order to meet the basic social requirements of the people and minimize the social disruption which often occurs in such projects. (Conyers, 1982, pp. 98–9)

Cochrane (1979) sets out a comprehensive framework for the cultural appraisal of development projects. Cochrane emphasizes the need to 'increase project managers' awareness of cultural factors' (p. 6) and also comments (p. 21) that:

Instead of cultural dimensions being thought of, as they too often are, after the main details of project design have been decided, cultural factors must become an important part of project design. They are intrinsic, not extrinsic, variables.

He outlines a series of standard criteria which should be used in the process of cultural appraisal. These, he suggests, should relate to:

1. identification of social groups;
2. patterns of social organization;
3. belief systems;
4. wealth forms;
5. patterns of mobility;
6. access to basic human needs.

It seems reasonable to suggest that the practice of social and cultural appraisal of development plans, programmes and projects in the Third World will attract even greater attention in the future. A body of experience will be built up, techniques will be developed and refined and the relevance of this perspective will become more firmly established.

Environmental impact assessment (EIA)

EIA is the term that is applied to a wide variety of methods and techniques that are used to assess the nature, intensity and duration of the physical environmental effects of proposed projects. Although initially developed and

PERPUSTAKAANS-2 JURUSAN PWR-ITB

used in North America. EIA has subsequently been used in many developed and Third World countries. Its use in the Third World has been endorsed and encouraged by a number of international agencies, including the United Nations, the World Health Organization and the World Bank. The Independent Commission on International Development Issues (1980, p. 115) recommends that environmental impact assessment:

... should be undertaken wherever investments or other development activities may have adverse environmental consequences whether within the national territory concerned, for the environment of neighbouring countries or for the global commons.

As we have suggested, the environmental dimension of development has received a great deal of attention in recent years and although there remains a considerable amount of resistance to an environmental perspective, mainly because it is perceived as an obstacle to development (Independent Commission on International Development Issues, 1980), it is nonetheless increasingly recognized that environmental issues should be taken into account in development planning decisions (see, for example, Riddell, 1981; World Bank, 1978). EIA provides a means of doing this (UNEP, 1980; USAID, 1980).

The purpose of EIA is to provide decision-makers with a comprehensive assessment of the environmental implications of proposed development activities. EIA is most frequently used in the assessment of specific projects, although there is no reason why it cannot also be used to examine the implications of particular policies, plans or programmes. As we noted in the previous section, there are sometimes differences in the way in which the scope of EIA is perceived. Generally, EIA is taken to mean assessment of the physical environment, although in some cases social and cultural factors are also included. It is probably more appropriate to regard EIA and SIA as different types of activity as they tend to draw upon rather different skills and expertise. They may nonetheless be drawn together in the preparation of a final appraisal report for a specific project.

There is now a very large amount of written material on EIA, an increasing amount of which is concerned with EIA applications in the Third World. We have already mentioned some relevant material and shall include additional references in the guide to further reading at the end of the chapter.

EIA involves various activities, including:

1. identifying the dimensions of the environment likely to be affected by a new project;
2. identifying and predicting the likely impacts of the project;
3. analysing and interpreting these impacts;
4. displaying the results of the analysis and communicating these to decision-makers.

The prediction of specific impacts usually requires the use of specialist techniques

which lay outside the expertise of the professional planner. Assessment of major development projects may often be undertaken by outside experts. In other cases, where specialist skills are not available (for example, to analyse air or water pollution impacts), it will be appropriate to indicate that these impacts may result and may present problems. The important point here is that it is preferable to alert decision-makers to possible environmental problems rather than to ignore them completely in the appraisal process.

Environmental assessments will be of much more value if they focus on various features of the impacts considered. In particular, the assessment should indicate whether impacts are direct or indirect, beneficial or adverse, short-term or long-term, reversible or irreversible, and local or strategic.

There are a number of general approaches to EIA that have been used over the past 10–15 years. These approaches provide general frameworks for organizing and carrying out assessments. Descriptions of them, and examples of their application, are widely available in the literature. The most frequently used approaches are:

1. *ad hoc* methods;
2. checklists;
3. overlays;
4. matrices;
5. networks;
6. dynamic models.

A basic description of these different approaches may be found in Clark *et al.* (1978). The matrix approach in particular is widely used, especially in the Third World. Figure 4 shows how such an approach can be used to assess the impact of small-scale irrigation and water-management schemes. It should be noted that this example also includes certain types of social impact, although the major emphasis is on physical and biological factors.

Despite the availability of various methods and techniques for environmental assessment it is important to emphasize that carrying out such assessments in many Third World countries is no easy task. Not only are there the widespread problems of resource and manpower availability to overcome, but there is also the fact that, as Abel and Stocking (1981, p. 271) note:

... tropical and sub-tropical environments are not only more sensitive and complex than their temperate counterparts but also less studied and less understood. This makes the prediction of costs and benefits very difficult.

Nevertheless, despite these very real difficulties, assessment of the environmental consequences of development activities should be regarded as an integral component of the appraisal process. There are too many well-documented examples of the adverse environmental impacts of development for such factors to be excluded from the equation. EIA provides a means of identifying problems,

PROJECT COMPONENTS	ENVIRONMENTAL COMPONENTS	PHYSICAL ENVIRONMENT										BIOLOGICAL ENVIRONMENT										SOCIAL ENVIRONMENT									
		Agricultural lands	Soil erosion	Slope stability	Energy/mineral resources	Surface water quality	Ground water quality	Air quality	Noise	Aquatic ecosystems	Terrestrial ecosystems	Endangered species	Beneficial species	Pasture lands	Forest lands	Public health	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors	Disease vectors
PLANNING & DESIGN	Land - location	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Land - grading	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Source - surface water	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Source - ground water	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Transmission system	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Distribution system	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Pumping and control systems	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Drains - surface	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Drains - subsurface	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Water recovery/discharge	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Work force	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
CONSTRUCTION	Land preparation/grading	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Transmission/drainage system	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Access roads	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Work force support	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
OPERATION	Construction methods/materials	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Equipment maintenance	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Source protection	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Water monitoring	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Spill monitoring	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Extension services	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○

Figure 4. Example of a matrix approach to environmental assessment of development projects. (Source: USAID, 1980, after p. v-11)

which may then be avoided or mitigated through appropriate design modifications.

Presenting appraisals

In the preceding sections we discussed various ways in which appraisals may be carried out. The form of the appraisal carried out in a particular planning exercise will obviously depend on a variety of factors. These will include the nature of the organization involved, the type of decision involved, the scale and complexity of the project (or plan or programme) and the importance attached to non-economic factors. The availability of professional staff, technical support staff and appropriate materials will also be of importance.

As we have emphasized at various points in this chapter, the purpose of appraisal is to provide information for decision-makers to help them select a course of action from those on offer. It is therefore essential that the report of an appraisal should explain clearly the nature of the proposal under consideration and its costs and benefits—economic, social and environmental. Although the format of appraisal reports will vary from case to case, the following topics should usually be covered:

1. a description of the proposal and its objectives;
2. a description of the current situation, or baseline conditions;
3. economic appraisal;
4. social and cultural assessments;
5. environmental assessment;
6. overall assessment of the proposals emphasizing major costs and benefits;
7. conclusions;
8. recommendations.

In many cases, especially in project planning, it is also useful if the appraisal report sets out a preliminary framework for the evaluation of the project during and after the implementation stage.

Selecting options

In this chapter we have said very little about how options are actually selected; in other words, the actual process of making decisions. As we have stressed elsewhere, decision-making is a political activity. The techniques mentioned in this chapter are intended to help politicians make decisions, but they do not make them for them. Certainly there are 'decision rules' associated with some of the techniques we have discussed. The best example is provided by cost-benefit analysis. Clearly, one would expect decision-makers to select projects which have the greatest positive net present value, or the highest benefit to cost ratio, or the highest internal rate of return. CBA provides very explicit measures of the performance of different options and the selection process can be quite

straightforward. However, in many development planning situations important factors are not taken into account in traditional CBA applications. The problem for decision-makers revolves around the means by which they can compare costs and benefits expressed in monetary terms with those that cannot be measured in this way. Planners may indicate to them the importance of certain social or environmental impacts, but it is up to the decision-makers to make the necessary trade-offs between these different factors.

One aspect of appraisal that we have only touched upon in a very limited way is the use of weighting systems in relation to planning objectives and the costs and benefits of planning activity. This is a complex topic and one which has given rise to a considerable amount of debate (see, for example, Lichfield *et al.*, 1975). The question really is whose weights, or preferences, are to be used and how are these to be derived. It would seem appropriate that it is the politician's responsibility to indicate the relative significance or importance of different factors but this should, where possible, be supplemented by information from the people through participation exercises. It should be noted that if weights are used, then it is often useful to vary these to examine how 'sensitive' the performance of a proposal is to changes in the significance attached to the extent to which it achieves its different objectives and the costs and benefits it generates.

Indeed, the concept of 'sensitivity analysis' has an important role to play in many appraisals, and its application may not simply be restricted to weighting procedures. It may, for example, often be very useful to vary the assumptions about future conditions on which a particular planning exercise is based. This provides a means of exploring the implications of uncertainty and, in particular, determining how susceptible (i.e. 'sensitive') elements of the output of a plan, programme, or project may be to certain types of uncertainty.

Conclusions

Appraisal is certainly one of the most important stages in the planning process. It is also one of the most demanding. Its function, as we have noted, is to inform decision-makers, not to make their decisions for them. A variety of techniques are available to the contemporary development planner to help him fulfil this task. No single technique can accommodate the range of factors that should normally be taken into account in making decisions on development activities. If there is a trend in the application of appraisal techniques in the Third World then it is towards greater diversity in terms of both the techniques used and the factors taken into account in this crucial stage of the planning process.

Guide to further reading

The general principles of plan and project appraisal are usefully set out in *Evaluation in the Planning Process*, by N. Lichfield *et al.* (Oxford, Pergamon Press, 1975). The reader may also find it useful to refer to Lichfield's earlier paper entitled 'Evaluation methodology of urban and regional plans' (*Regional*

Studies, vol. 4, 1970, pp. 151-65). M. Carley's *Rational Techniques in Policy Analysis* (London, Heinemann, 1980) deals with many of the issues raised by the use of economic appraisal techniques. Most introductory textbooks on development planning, including those that we have mentioned elsewhere in this book, provide some coverage of the role of appraisal, especially in the context of development projects.

Cost-benefit analysis

There is an enormous literature on this topic, much of which relates specifically to Third World planning situations. A number of useful manuals are available including *Guidelines for Project Evaluation*, published by the United Nations (New York, United Nations, 1972), and, more recently, the *Manual for Evaluation of Industrial Projects* (New York, UNIDO, 1980). Useful introductory books on the topic include those by G. Irvin entitled *Modern Cost-Benefit Methods* (London, Macmillan, 1978) and E. Mishan's *Elements of Cost-Benefit Analysis* (London, George Allen & Unwin, 1976). The problem of incorporating environmental factors into cost-benefit analyses in the Third World is considered in some detail by C. Cooper, in *Economic Evaluation and the Environment* (Sevenoaks, Hodder & Stoughton, 1981). The reader will also find *The Appraisal of Development Projects*, by M. Roemer and J. Stern (New York, Praeger Publishers, 1975) and the *Guide to the Economic Appraisal of Projects in Developing Countries*, by the United Kingdom's Overseas Development Administration (London, HMSO, 1977) useful references.

The use of cost-benefit analysis in physical planning is discussed in some detail in the previously mentioned book by N. Lichfield *et al.*

Physical planning techniques

One of the most comprehensive reviews of the different appraisal techniques used by physical planners is certainly the book by N. Lichfield *et al.* mentioned above. M. Carley also discusses some of these techniques in his book, to which we have already referred. Threshold analysis is explained in some detail in *Threshold Analysis: A Quantitative Planning Technique*, by J. Kozlowski and J. Hughes (London, Architectural Press, 1972). Other useful books include: *An Introduction to Town Planning Techniques*, by M. Roberts (London, Hutchinson, 1974); *Urban and Regional Planning: A Systems Approach*, by J. B. McLoughlin (London, Faber & Faber, 1969); and *Urban Planning Methods: Research and Policy Analysis*, by I. Bracken (London, Methuen, 1981).

Social impact assessment

As we noted in the chapter, there is as yet only a limited amount of written material which deals with the appraisal of the social consequences of development projects. A very useful starting point for the reader interested in

social impact assessment is *Social Impact Assessment: A Cross Disciplinary Guide to the Literature*, by M. Carley and E. Derow (London, Policy Studies Institute, 1980), which has a short chapter dealing with the Third World. A comprehensive review of the methodology of social impact assessment is provided in *The Methodology of Social Impact Assessment*, by K. Finsterbusch and C. P. Wolf (Stroudsburg, PA, Dowden, Hutchinson & Ross, 1977). The reader may also find it useful to consult *Social Impact Assessment*, a monthly review of the field edited by C. P. Wolf, which has an increasing number of articles devoted to the Third World. *The Cultural Appraisal of Development Projects*, by G. Cochrane, is also a useful source of material on this aspect of appraisal methodology (New York, Praeger, 1979). The role of social planners in project appraisal illustrated with some case studies is considered in *An Introduction to Social Planning in the Third World*, by D. Conyers (Chichester, Wiley, 1982).

Environmental impact assessment

There is now a large amount of written material dealing with this topic, with regard to both methodologies and procedures. *Environmental Impact Assessment*, by L. Canter (Maidenhead, McGraw-Hill, 1977) provides a useful introduction to the subject, as does R. Munn (ed.), *Environmental Impact Assessment: Principles and Procedures* (Chichester, Wiley, 1978, 2nd edition).

As regards environmental issues and the application of environmental assessment techniques in the Third World a steadily growing amount of literature is available. *Ecodevelopment*, by R. Riddell (Westmead, Gower, 1981) provides one interesting perspective on these issues. The World Bank's *Environmental Considerations for the Industrial Development Sector* (Washington, World Bank, 1978) is a valuable source of material on potential environmental problems in Third World countries. The United Nations Asian and Pacific Development Institute has produced a number of useful reports on environmental assessment. These include *The Environmental Dimensions in Development* (Bangkok, UNAPDI, 1979) and *Environmental Assessment Statements: A Test Model Presentation* (Bangkok, UNEP/UNAPDI, 1979). The latter report presents an interesting assessment methodology which attempts to bridge the gap between environmental and economic appraisal approaches. The United Nations Environment Programme's *Guidelines for Assessing Industrial Environmental Impact and Environmental Criteria for the Siting of Industry* (Paris, UNEP, 1980) serve to illustrate the way in which major international agencies are now far more active in this particular field. For a very stimulating review of appraisal approaches in the Third World the reader is referred to 'The experience of developing countries', by N. Abel and M. Stocking in *Project Appraisal and Policy Review*, edited by T. O'Riordan and D. Sewell (Chichester, Wiley, 1981).

Appendix: Example of the data required in a cost-benefit analysis and the consequent calculations (reproduced from Oxfam, 1981, pp. 8.52-8.56, with permission)

Agricultural Development Programme, Guatemala

The base data

A. Costs	Year	Q 1	Q 2	Q 3	Q 4	Q 5
Salaries—Agricultural director		975	975	975	975	975
Part-time teacher		520	780	780	780	520
Two ploughs		300				
Small tools (revenue)		200	200	200	150	50
Operating expenses		10 000	8 000	8 000	8 000	5 000

Notes: (i) The two ploughs will have a joint residual value of £50 after 5 years.

(ii) Q = Quetzales, i.e. Guatemala currency.

B. Benefits after 5 years

- (1) Overall corn production doubles (see note i).
- (2) 30% of families with sloping fields will have made contour ditches which no longer allow rains to erode their fields (see note ii).
- (3) 25% of families with fruit trees will have increased their production because of better pruning and insect control methods.

Notes: (i) The population of the programme area is 20,000. The average family size is 5 and the average salary per family per annum is 100Q.

The doubling of corn production will produce a 50% increase in salary by the end of 5 years and the benefits due to increased production per annum are shown in the following table.

Yr. 1	5Q per family
2	14Q per family
3	25Q per family
4	38Q per family
5	50Q per family

- (ii) 80% of families have sloping fields and the percentage of those who will have made contour ditches, leading up to the 30%, and the money saved due to lack of erosion is shown by the following table.

Yr. 1	3%	40Q
2	7%	46Q
3	14%	55Q
4	22%	64Q
5	30%	73Q

(iii) Half the families have fruit trees, and the increased production will give an extra 5Q. Of those with fruit trees the following percentage will bear the extra fruit:

Yr. 1, 2%; Yr. 2, 5%; Yr. 3, 10%; Yr. 4, 17%; Yr. 5, 25%.

C. *Further information*

- Inflation will be equal for all types of prices.
- As costs are relatively certain and benefits relatively uncertain, assume a risk premium for benefits of 5% per year.
- Costs fall at the beginning of the year, and benefits accrue at the end of each year.
- Assume a required rate of return of 10%.

D. *Problem*

Calculate the net present value of net benefits and weigh up the solution against other evaluation techniques.

The calculations

A. <i>Costs</i>	Year	1	2	3	4	5
Salaries:						
(a) Agricultural director		975	975	975	975	975
(b) Part-time teacher		520	780	780	780	520
Two ploughs		300				
Small tools		200	200	200	150	50
Operating (expenses)		10 000	8 000	8 000	8 000	5 000
Total		11 995	9 955	9 955	9 905	6 545
Discount factor		1	0.91	0.83	0.75	0.68
Total NPV of costs		11 995 +	9 059 +	8 263 +	7 429 +	4 451
					= 41 197 Q	

B. *Benefits* Number of families in project area = $20\,000/5 = 4\,000$

1. *Corn production—increase in salary*

Year 1	$5Q \times 4\,000 = 20\,000Q$
2	$14Q \times 4\,000 = 56\,000Q$
3	$25Q \times 4\,000 = 100\,000Q$
4	$38Q \times 4\,000 = 152\,000Q$
5	$50Q \times 4\,000 = 200\,000Q$

2. *Cost of erosion saved*

80% of 4 000 have sloping fields, i.e. 3 200

Year 1	$3\% \times 3\,200 \times 40Q = 3\,840Q$
2	$7\% \times 3\,200 \times 46Q = 10\,304Q$
3	$14\% \times 3\,200 \times 55Q = 24\,640Q$
4	$22\% \times 3\,200 \times 64Q = 45\,056Q$
5	$30\% \times 3\,200 \times 73Q = 70\,080Q$

3. *Increased sales of fruit*

Number of families with fruit trees = $4\,000/2 = 2\,000Q$

Year 1	$2\% \times 5Q \times 2\,000 = 200Q$
2	$5\% \times 5Q \times 2\,000 = 500Q$
3	$10\% \times 5Q \times 2\,000 = 1\,000Q$
4	$17\% \times 5Q \times 2\,000 = 1\,700Q$
5	$25\% \times 5Q \times 2\,000 = 2\,500Q$

Total benefits

	Year	Q 1	Q 2	Q 3	Q 4	Q 5
Production—salary increase		20 000	56 000	100 000	152 000	200 000
Cost of erosion saved		3 840	10 304	24 640	45 056	70 080
Increased fruit sales		200	500	1 000	1 700	2 500
Residual value of plough						50
		24 040	66 804	125 640	198 756	272 630

Total benefits discounted to present value

Year 1	$24\,040 \times \frac{1}{1.15}$	=	20 904 Q
2	$66\,804 \times \frac{1}{(1.15)(1.2)}$	=	48 409 Q
3	$125\,640 \times \frac{1}{(1.15)(1.2)(1.25)}$	=	72 624 Q
4	$198\,756 \times \frac{1}{(1.15)(1.2)(1.25)(1.3)}$	=	88 336 Q
5	$272\,630 \times \frac{1}{(1.15)(1.2)(1.25)(1.3)(1.35)}$	=	89 977 Q

Total net present value of benefits

Less net present value of costs

Net present value of net benefits

320 250 Q
41 197 Q
<u>279 053 Q</u>

This result should then be weighed up against other evaluation techniques.

Chapter 9

Implementation, Monitoring and Evaluation

Introduction

Failure to implement the policies and required actions contained in plans, programmes or projects is widely recognized to be one, if not the major, weakness of contemporary planning in Third World countries (Waterston, 1965; Faber and Seers, 1972; Iglesias, 1976). If a plan or project does not result in change necessary to achieve desired goals and objectives then it is, in effect, meaningless. Goals and objectives have to be translated into action and it is implementation which provides the crucial mechanism that permits this progression from plan to action and to change in those dimensions of the economic, social and physical environment that are the object of planning activity.

Although there have been significant changes and improvements in approaches to planning and in the techniques used to formulate and appraise plans and projects, implementation still remains a major problem. All too often it is assumed that planning is only about producing a 'good' plan and that once this has been done and the plan has been endorsed by politicians then somehow the actions that must be taken will follow as a matter of course. This, however, is a very misguided view of the nature of planning and the nature of the relationship between preparing plans (or projects) and the means by which the objectives embodied in them can actually be achieved. In fact, preparing plans is in some senses the easy part of the overall planning process. It is generally much more difficult to identify precisely what has to be done to make a plan or project operational, who should be responsible, the time-scales involved, and, of course, implications for resource allocation and the budgetary process. These are central problems in the implementation task.

In this chapter we examine the nature of the implementation process, the factors which effect the implementation of plans and the role of the planner in this part of the planning cycle, focusing in particular on the analytical and managerial techniques available for this purpose. We also look at the monitoring and evaluation of implementation performance since, as we saw in Chapter 5 and shall re-emphasize later in this chapter, monitoring and evaluation should be integral parts of the process of plan implementation and they are activities in which the planner has a major role to play.

What is implementation?

Definitions of implementation vary, depending on the point of view of the person concerned. The word is sometimes used to refer to the whole process of

translating broad policy goals or objectives into visible results in the form of specific projects or programmes of action. Thus Pressman and Wildavsky (1973) define implementation 'as a process of interaction between the setting of goals and actions geared to achieving them', while Grindle (1980, p. 6) suggests that 'the task of implementation is to establish a link that allows the goals of public policies to be realized as outcomes of governmental activity'. In these cases implementation is seen from the policy-maker's point of view and it includes all the stages of the planning process described in Chapter 5 and portrayed in Figure 2, including those concerned primarily with plan preparation.

In the context of planning, however, implementation is usually used only to refer to the later stages in this cycle. It is concerned with what happens after the actions required to achieve specific goals or objectives have been identified and presented in the form of 'plans'—that is, with the process of actually carrying out these actions. It is this concept of implementation with which we shall be concerned in this chapter, although many of the issues which we shall discuss, particularly in terms of the factors which affect implementation, apply also in the broader context of policy implementation.

What is the role of the planner in implementation? As we have already indicated, there has been a tendency to think that the planner's role ends when he has produced a plan. Implementation is seen as a set of activities of a very different nature—such as the construction of physical infrastructure or the provision of specific technical or professional services (agricultural extension, health services, literacy programmes, and so on)—which are the responsibility not of planners but of functional technical and administrative personnel. There is no doubt that such activities are part of the implementation process and that without them there would be no visible outputs from the planning process. However, these activities would not happen by themselves, just because they are prescribed in the plans. In other words, plans have to be 'operationalized'. Thus Honadle (1979a, p. 6) observes that, in the context of project implementation, "implementation" refers to the process of converting resources (such as materials, technologies and funds) into goods and services which support behaviour change in beneficiary groups'. It is this part of the implementation process with which the planner is specifically concerned.

The role of the planner in the process of plan implementation is thus concerned with mobilizing, organizing and managing the resources needed to undertake the actions embodied in the plans. The specific activities which this involves have been conveniently summarized by Barrett and Fudge (1981) as follows:

1. you must know what you want to do;
2. the required resources must be available;
3. you must have the ability to assemble, control, and manage these resources to achieve what is desired;
4. where others are involved in carrying out specific implementation tasks, you must be able to communicate to them what exactly is required and by when, and generally be able to control the way they carry out their responsibilities.

Clearly, effective implementation is very demanding. A great many things can go wrong. In the following section we shall look at some of the factors which affect plan implementation, before going on to examine in more depth the various techniques which the planner may use to help him in this work.

Factors affecting plan implementation

Many different factors influence the process of plan implementation. When classifying these factors a distinction is often made between those related to the content of the plan and the way in which it was formulated and those associated with the methods of implementation (Waterston, 1965, chapter 9; Grindle, 1980). This distinction provides a useful basis for discussion but for our purposes it is perhaps useful to recognize four main types of factor:

- ① nature of the planning process;
- ② organization of planning and implementation;
- ③ content of plans;
- ④ management of the implementation process.

Let us look briefly at each of these.

Nature of the planning process

Many of the problems of plan implementation can be ultimately attributed to the tendency, which we have already noted, to view planning and implementation as two separate and even unrelated activities. These problems can only be overcome by adopting a new approach, in which the preparation and implementation of plans is seen as an ongoing cyclical process, as described in Chapter 5. Since we have already described this process in some detail, it is only necessary here to point out that this concept of planning has two major advantages in terms of plan implementation. Firstly, it shows how the actual implementation of plans follows on logically from the earlier stages of identifying and appraising alternative courses of action. Secondly, it emphasizes the importance of monitoring and evaluating implementation performance and feeding back the information thus gained into the decision-making process. In practical terms, this means that steps have to be taken to ensure that in the actual planning process all these stages follow on as smoothly as possible one to another.

Organization of planning and implementation

The successful implementation of a plan is largely a matter of proper organization and administration. (Waterston, 1965, p. 339)

The concept of planning as an ongoing cyclical process, as described above, emphasizes the importance of organizational issues because it implies that

planning is not something done by planners alone but a much more complex process involving many different individuals and organizations. The interrelationships of these various parties in both the preparation and implementation of plans thus affects both the content of the plans (and therefore their implementability) and the actual implementation process. Consequently, many of the problems of plan implementation can be attributed to organizational factors, including inadequate coordination between professional planners and others involved directly or indirectly in the planning process and lack of coordination between these other individuals or organizations, especially the various components of the government's administrative machinery (Waterston, 1965, chapters 8 and 9; Iglesias, 1976; Rondinelli, 1979). Since we shall be examining the organizational aspects of planning in depth in Part Three, we shall not go into further detail at this point.

Content of plans

One of the implications of the interrelationship of plan preparation and implementation is that many plans are more or less doomed to 'failure' from the start because of their content and mode of presentation and the way in which they were prepared. Rondinelli (1979) demonstrates how many of the 'recurring problems' of project implementation can be attributed to the planning or design stages. One such problem is that in order to accommodate uncertainty and to be flexible, project designs are frequently too vague and provide little guidance for implementors. Project designs can also be strongly influenced by conflicts between politicians and outside funding agencies. The need to reach an acceptable compromise often produces projects which are more difficult to implement. Sometimes implementation problems arise because a project is designed to inappropriate standards which reflect more the goals and objectives of funding agencies than those of the politicians and people in the country concerned. Foreign consultants and technical experts may also be quite unfamiliar with local working practices and produce project designs which are hopelessly ambitious. In other cases projects are subject to delay and cost overruns because they were deliberately under-costed. This was often done initially to make them appear more attractive propositions as the ratio between costs and benefits would appear more favourable. Rondinelli also points out that it is not even possible to monitor and evaluate many development projects because designers did not collect baseline data and failed to build into the design a mechanism for collecting data to assess progress.

Similarly, Waterston (1965) emphasizes the need for plans to be realistic in terms of the resources available for implementation and the political and administrative capacity required to support and implement them. 'A good plan', he says, 'is realistic and a realistic plan does not set unattainable targets' (Waterston, 1965, p. 344). Equally important is that plans be realistic in terms of the needs and attitudes of the people who are intended to benefit from them—

that is, the 'target group' (Cochrane, 1979; Grindle, 1980; Conyers, 1982). The history of development planning is full of examples of projects or programmes which were not implemented according to plan—or not used as intended—because the views of the people concerned were not given sufficient attention in the planning stages.

The need to prepare plans which are realistic in terms of the capacity and resources available to implement them, and acceptable to those who will be affected by them, has implications for the methods used to prepare plans. It means that those involved in, or affected by, their implementation should also be involved in the preparation stages, partly in order to ensure that plans are based on accurate and realistic information but also because those concerned are more likely to be committed to the projects or programmes if they have been involved in their design. The implications of this for the organization of planning activities are considered in Part Three. Furthermore, successful implementation is also dependent on the way in which plans are presented, since those people involved in, and affected by, their implementation are more likely to provide the support needed if the plans are presented in a form which they can easily understand and which indicates clearly what role they are expected to play in the implementation process or how they will be affected by it.

Management of the implementation process

We suggested earlier that implementation involves mobilizing, organizing and managing the resources needed to undertake the actions embodied in plans. These resources include finance, manpower and equipment. Many plans—even realistic ones—are not implemented as planned because these resources are not available in the right quantity, at the right place, and at the right time. In some cases this may be due to inadequate coordination between the preparation of plans and the procedures used to allocate resources. Thus one of the main obstacles to plan implementation in many countries is lack of coordination between the preparation of plans (especially comprehensive medium-term plans, such as the five-year plan documents produced in so many countries) and the annual budgeting process. Less obvious but equally important is coordination between planning and the allocation of manpower through the civil service machinery; most planners are familiar with the delays in project implementation caused by the length of time required to establish, fund and fill new positions in the civil service. In other cases the main problem may simply be poor management or organization of the implementation process. For example, the time taken to obtain the necessary resources may not be accurately assessed, the order in which various activities have to be undertaken may be ignored, or the various individuals or organizations involved may not be able or willing to play their part.

Some of these problems can only be overcome by organization changes. For example, in Chapter 14 we shall discuss ways of improving the relationship between the national planning agency and the ministry responsible for finance, in

order to improve coordination between planning and budgeting. However, others can be overcome, or at least reduced, by improved management of the actual process of implementation. There are a variety of techniques available to the planner to assist him with such managerial problems and the next section looks briefly at some of these.

Before going on to look at these implementation techniques, however, we must conclude this section with a reminder that, whatever efforts are made to improve plan implementation by any of the means we have discussed here, it will never be possible to remove all obstacles to the implementation process because some factors are beyond the control of either the planner or others involved in the preparation and implementation of plans. Thus, to take just a few examples, plan implementation is frequently hampered by unexpected weather or other 'natural' disasters, international economic problems (resulting, for example, in shortages of foreign exchange required to purchase essential equipment), sudden political changes and personality problems among the various individuals involved. Nevertheless, such problems should not prevent the planner from seeking to improve—even if not to perfect—the implementation process.

Some implementation techniques

Planners faced with the task of implementing plans or projects can make use of various techniques which will help them structure the implementation problem and set it within a time framework. Implementation techniques fall into two main groups: simple or traditional techniques and network techniques (Goodman and Love, 1980). The basic function of both groups of techniques is to help identify the structure of the problem and analyse the sequence in which the parts of the problem (i.e. specific tasks) should be tackled. As the techniques increase in their complexity and sophistication they can provide more information about the stages in the implementation programme and the time-scales which should be allocated for the completion of each stage. The network techniques involve a considerable amount of calculation and for complicated implementation problems access to computing facilities would generally be required. In this section we examine some of the more common techniques within each of these two groups.

Although these techniques can in themselves be very useful in helping the planner to structure implementation problems and decide on the sequence in which activities should be carried out, they are likely to be more effective if employed as part of a broader approach to the management of the planning and implementation process. We therefore go on in the next section to examine some of these management approaches.

Our aim in both sections will be merely to discuss the basic principles of the various techniques and management approaches; it will not be possible to go into any detail concerning their application. Such details are provided in the appropriate specialist literature and suggestions for further reading are included at the end of the chapter.

Simple implementation techniques

1. *Project breakdown structure (PBS)*. PBS is a relatively simple and extremely valuable technique which makes the planner examine his plan or project in a systematic and comprehensive way. It involves breaking down the plan or project into a hierarchical structure of its component parts. From this carefully structured, overall view the planner can identify relationships between the various parts and start to visualize the sequence in which different tasks should be carried out. It is obviously advantageous to be able to break the plan or project down into discrete parts which can then be assigned to specific agencies or individuals to deal with. PBSs can be constructed on the basis of a combination of past experience and systematic thinking (Goodman and Love, 1980). The PBS does not deal explicitly with time but it often represents an input to more sophisticated implementation techniques.

2. *Bar charts*. Bar (or Gantt) charts are widely used in implementation and provide a simple graphical representation of the parts of a plan or project related to a time frame. A bar chart (Figure 5) is constructed in the following way. The parts (i.e. activities) of the plan or project are defined, usually by using PBS. The sequence in which these activities should be carried out is then determined. The amount of time required for each activity is estimated. Plan or project activities are listed and those which can be carried out at the same time identified and distinguished from those that have to be carried out sequentially. The chart itself is very simply constructed. Time is represented on the horizontal axis, which is subdivided into columns indicating weeks, months or years. The rows of the chart are allocated to the activities. Bars are entered to indicate the time period allocated for each activity and the state of progress at any particular point in time. Updating the chart is very important as only then will it be able to give a quick, overall impression of the state of progress. The chart cannot, however,

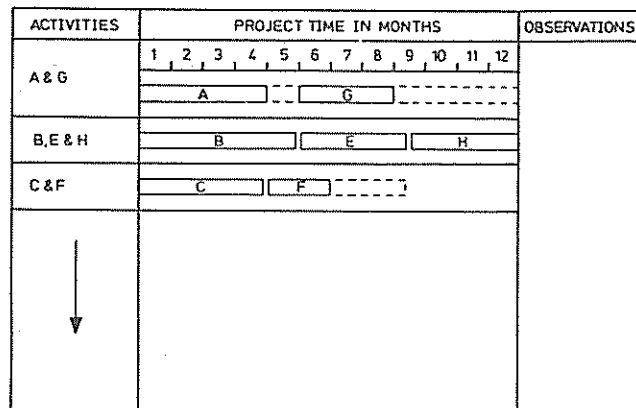


Figure 5. A bar (or Gantt) chart for project implementation

show how different activities are linked together. It is usual to work backwards from some intended completion date when formulating the chart and this can present problems if the date is subsequently changed. The other problem with the technique is that it can only show a limited amount of information. It is, however, widely used in Third World countries and is a very valuable technique, especially for the implementation of capital works or other similar projects.

3. *Milestone charts*. A milestone chart is a development of the bar chart (see Figure 6). Milestones or checkpoints, representing key events or points in time, are introduced into the chart. These are used as reference points when reporting on progress with specific activities or with the exercise as a whole. As Goodman and Love (1980) point out, with the introduction of the milestone concept it is possible to start considering links and dependencies between different activities, although it is necessary to include 'dependency arrows' to show the true logical relationship between activities.

Network techniques

Network techniques are more sophisticated implementation techniques which are suitable for planning the implementation of relatively large and complicated projects. Nevertheless, as Figure 6 demonstrates, they have evolved from the basic bar chart concept.

1. *Critical path analysis*. Critical path analysis (CPA) is one of the most widely used network techniques. Like the simpler techniques discussed above, it commences with the identification of activities. These are defined as tasks consuming time and various other resources and which have a specific starting and finishing point. An arrow diagram is then constructed. Arrows are used to represent activities and circles to represent events, the latter indicating the completion of a particular activity. The duration of each activity is then estimated and introduced into the network. The next stage in the analysis involves finding out the sequence of events based on the estimated activity durations, that will give the shortest completion time and that which will yield the longest. An important concept used in CPA is 'float'. Activities having 'float' do not critically influence the project's ability to be finished in the shortest possible time. There is therefore some flexibility as to when they need to be carried out. On the other hand, some activities are essential to the earliest completion of the project and no flexibility exists regarding when they can be carried out. These activities are on the 'critical path' and must be carried out as soon as possible after the activities on which they themselves are dependent have been completed, so that the project as a whole remains on schedule.

Potential CPA applications in Third World planning tend to be limited due to the complexity of the technique and its computational requirements. Packard (1972) has shown how a less quantitative form of CPA may be used in development administration. CPA applications in the Third World have been subject to a considerable degree of criticism. Honadle (1979a), for example,

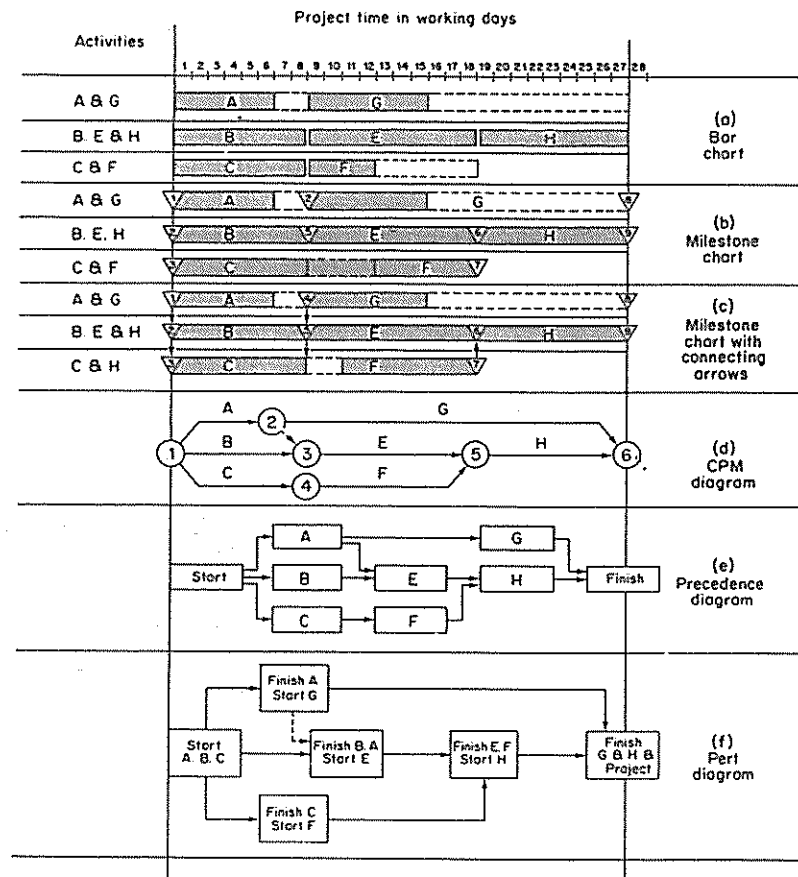


Figure 6. Evolution of a bar chart to a milestone chart and to network diagrams. (Source: Goodman and Love, 1980, p. 143, reproduced with permission)

draws attention to the fact that network analysis techniques are used to formulate implementation plans which although 'efficient' are also inflexible. Consequently, these plans become more sensitive to managerial shortcomings and the impact of uncertainties.

2. Programme evaluation and review technique. Programme evaluation and review technique (PERT) is another very powerful implementation technique of the network type and is similar in many respects to CPA. It may be applied to networks based on either activities or events, the latter representing the completion of significant tasks or other key points in the life of the project. It differs from CPA primarily in computational terms. Three estimates of activity

duration are used in PERT rather than the single value used in CPA. PERT also uses probabilistic estimates of the earliest and latest times at which key events must occur. The basic stages in PERT are much the same as CPA. Activities and events (milestones) are identified. A graphical model of the project is constructed. The time element is introduced using the three estimates of activity duration: optimistic time, most likely time and pessimistic time. Event times, the critical path and slacks (which correspond to the floats in CPA) are then calculated. PERT is especially useful as a technique for determining the likelihood of completing a project within a specified time period.

Managing the implementation process

As indicated earlier, the techniques just described are likely to be more effective if used as part of a broader approach to implementation management. The main aim of such approaches is to coordinate the various stages of the planning and implementation process and the various agencies involved in order to ensure that implementation takes place as smoothly and efficiently as possible. A variety of approaches are available but they can be divided into two main types: implementation management systems and planning-budgeting systems. The main difference between the two types is in the focus of their attention, the former being concerned with general implementation management and the latter more specifically with the role of budgeting in the implementation process. Consequently, they should not really be regarded as alternatives, since in some situations it may be appropriate to adopt a system which incorporates elements of both.

Implementation management systems

We use the term implementation management systems here to refer to systems which attempt to coordinate or manage the implementation of plans or projects through the use of a combination of measures, including implementation techniques such as those described above, a variety of reporting or monitoring procedures (which we shall examine in more detail later in the chapter) and various managerial techniques designed to control or coordinate the various individuals or agencies involved in the implementation process. Many variations of such systems exist. In order to illustrate their general form and purpose, we shall describe two specific examples: programming and implementation management (PIM) and the operations room system. It should, however, be noted that they are cited as examples rather than as models. Both were developed for use in very specific conditions and—as experience has already shown—they are unlikely to operate effectively in different situations without considerable modification. The most important consideration in adopting any form of management system is that it be consistent with the needs and constraints of the particular environment in which it has to operate.

PIM was devised and first used in Kenya in the early 1970s, although

subsequently there have been attempts to introduce similar systems elsewhere. According to Belshaw and Chambers, who played a major role in its design, PIM was 'designed to meet the need for a method of programming, operational control and evaluation for a wide variety of rural development programmes and projects' (Belshaw and Chambers, 1972, p. 1). Its background and development has been fully documented elsewhere (Belshaw and Chambers, 1972; Chambers, 1974) and we will not elaborate on these aspects here. We will, however, outline briefly its main features. The system has three main elements:

1. an annual programming exercise (APE);
2. a monthly management meeting (MMM);
3. a monthly management report (MMR).

The APE involves deciding on those projects to be phased over the current annual planning period. When this has been decided, staff from various ministries and departments concerned with project implementation are brought together for a 'joint programming meeting'. At this meeting the objectives of each project are scrutinized. When there is agreement on the desirability of project objectives and the project's potential for achieving them, attention then shifts to programming. At this point bar charts are used. When agreement has been reached on the phasing programme the information on the bar chart is transferred onto two forms: the annual programming chart (APC), which just includes the basic bar chart information, and the annual phasing form (APF), which also includes information regarding the assignment of responsibilities to individual officers, the resources required for each activity and their start and finish dates.

Monthly management meetings involve those responsible for project implementation and are used to discuss and check on progress. They are also used to update the APC and to identify possible implementation problems and required remedial actions. This meeting provides the basis for the preparation of the MMR, which is normally written by the area coordinator (or another senior officer). This document does not simply report 'routine information' but acts in effect as 'an operational control device'. It should be written soon after the meeting and then be distributed widely and, most importantly, as quickly as possible. The report is divided into two main sections: the progress and action summary—a short sharp statement of the position and of action required' (Belshaw and Chambers, 1972, pp. 8-9)—and then a section elaborating on the points raised in the summary.

The various attempts which were made to introduce PIM at district level in Kenya, mainly in connection with the district-based special rural development programme (SRDP), were of somewhat limited success (Oyugi, 1981). It was reasonably successful in bringing officers together, ensuring greater coordination, drawing attention to the details of the programming, giving subordinates an opportunity to communicate more freely and effectively with senior officers and securing the commitment of staff to work to agreed targets and

timetables. However, some staff found it difficult to work within the system and were not clear about their commitment to implementation tasks and completion of the various reporting forms was found to be too complex and time-consuming a duty. There were also problems for 'linkmen' from the headquarters of ministries, who often had to spend a considerable amount of time travelling to meetings to which they would only make a limited input, although their presence was regarded as being of particular importance in view of the need to impress upon them the importance of releasing central funds for project implementation. Because of these and other problems, PIM is no longer used as such in Kenya. Nevertheless, this does not mean that modified—and in particular simplified—versions of it cannot be useful management tools, both in Kenya and elsewhere.

The operations room system originated in Malaysia in the late 1950s. Esman (1972, p. 137) describes it as:

a simple but ingenious technology for project planning, scheduling and monitoring, emphasizing the imperatives of interagency coordination, the establishment and maintenance of time schedules, and the participation of elected legislators in the choice of minor projects.

The basic feature of the system is a central room—the operations room—which is used for regular meetings of those involved in the planning and implementation of development projects and contains up-to-date records of the progress of all projects, displayed in the form of maps, charts and large loose-leaf books or files. The Malaysian system is sometimes called the 'red book' system because of the red covers used for these large record books.

The main advantage of the operations room system is the way in which project records are maintained in a highly visible form and used as a focus for all discussions on the planning and implementation of development projects. This helps to bring together the various individuals and agencies involved, to focus their attention on implementation progress and problems and to encourage them to make on-the-spot decisions regarding future action required. Operations rooms were introduced at federal, state and district level in Malaysia and initially the results were very encouraging. Consequently, the system rapidly gained a reputation, both within the country and elsewhere, as one of the most successful tools for managing the implementation of development projects and programmes. As a result of this reputation a number of other countries have attempted to adopt similar systems, although in some cases these have been more as data collection or documentation centres rather than, as in Malaysia, as centres for managing the implementation process.

However, subsequent experience in Malaysia and in the other countries which have tried to adopt the operations room approach has shown that, like most other techniques, it also has its problems. The main problem is the amount of time, effort and organization required to keep the system operating effectively. Its initial success in Malaysia was in large part due to the personal support and exhortation provided by the then Deputy Prime Minister, Tun Razak, who had

played a major role in its design and introduction (Esman, 1972). In less favourable environments, however, there is a risk that the system will either collapse through lack of support, as has often happened when other countries have attempted to reproduce the Malaysian system, or that, as later occurred in Malaysia itself, it will become 'an end in itself rather than an evolving instrument of rural development' (Esman, 1972, p. 105). Nevertheless, as with PIM, this does not mean that the whole approach is of no value; merely that any such system must be adapted to the environment in which it has to function and that its users must be aware of, and committed to provide, the resources needed to maintain it.

Planning-budgeting systems

We use the term planning-budgeting systems here to refer to a variety of management approaches which are, like the implementation management systems described above, concerned with coordinating the various stages of the planning and implementation process and the various agencies involved in it, but which focus in particular on strengthening links between planning and budgeting.

We have already suggested that one of the factors which hampers plan implementation is lack of coordination between planning and budgeting. The importance of improving such coordination is succinctly expressed by Caiden and Wildavsky (1974, p. 239):

Plan implementation depends upon planners' ability to insure that the public sector moves consistently toward plan objectives; governmental resources must be directed toward this end, and not diverted away from plan purposes. If the plan is to be meaningful, it must be reflected in the budget. If the plan goes one way and the budget another, the plan simply is ignored.

However, although the significance of this relationship has long been recognized (Waterston, 1965, 1972), there is still a noticeable gap between planning and budgeting in many developing countries and a surprising lack of concern with budgeting in much of the literature on development planning (Allan and Hinchliffe, 1982). Caiden and Wildavsky (1974) suggest that the reasons for this include fundamental differences in the objectives and methods of planning and budgeting and in the attitudes and interests of planners and budgeters. This in turn suggests that closer coordination is dependent, at least in part, on changes in conventional methods of planning and/or budgeting.

There are two main ways of approaching this problem. One involves changing the planning system to make it fit more closely with existing budgeting procedures. Thus breaking down a medium-term plan into a series of annual plans (or into a 'rolling' plan which, instead of operating for a fixed period of time, is extended year by year) and scheduling the annual planning process so that the plan is available before the budget is prepared are measures commonly introduced for this purpose. The other approach is to introduce changes in budgeting procedures, usually by re-classifying the various components of the

budget in a way which reflects the relationship between government expenditure and the major objectives, programmes or projects incorporated in the plan. This is often referred to as programme budgeting or performance budgeting.

The most sophisticated planning-budgeting systems generally involve elements of both approaches. Most attempts to develop such systems can be traced back to experience in the USA in the 1960s, where a system known as the planning-programming-budgeting system (PPBS) was introduced at the federal level. Systems modelled on, or similar to, PPBS have subsequently been introduced into many developed countries in a variety of organizational situations, including both public and private organizations, central and local levels of government, and sectoral and inter-departmental budgeting procedures (Novick, 1973). Thus in the UK, for example, PPBS has been used at the local government level as a tool for coordinating inter-departmental activities through what is generally known as 'corporate' planning (Eddison, 1975). A brief description of the aims and methods of PPBS is warranted at this point, not because it should be seen as a model for adoption elsewhere (since, as we shall see later, its direct applicability in developing countries is probably very limited) but because it illustrates the basic principles underlying most planning-budgeting systems.

As its name suggests, PPBS consists of three main elements. The planning element involves identifying goals and objectives, formulating alternative courses of action, selecting an option and allocating resources; in other words, the mainstream planning activities that we have described in earlier chapters. Programming basically means organizing and controlling the activities that have to be undertaken when carrying out planning decisions. Budgeting refers to the process of transforming the decisions made in the planning and programming elements of the system into a financial plan for a set period, usually just one year.

PPBS is, potentially, a quite powerful management tool. According to Eddison (1975, pp. 35-40), it is based on four simple yet very important assumptions. These are:

1. decisions are likely to be better if we know what it is we are trying to achieve;
2. decisions are likely to be better if information is available as to how resources are being deployed as between objectives rather than as between departments or committees responsible for implementation;
3. decisions are likely to be better if the effectiveness of current programmes, policies and projects is evaluated;
4. decisions are likely to be better if alternative ways of achieving an objective are considered and analysed.

There are four main activities involved in a fully developed PPBS system. Following the identification of problems and the framing of objectives it is necessary to prepare what are termed 'programme structures'. To prepare a programme structure it is necessary to group all the activities of the agencies involved in planning so that they relate to the goals and objectives rather than the

organizational structures of the agencies. In order to do this, it is usual to break down major objectives into sub-objectives and then to organize these so that they relate clearly to packages of activities (i.e. the programmes) that must be carried out to achieve them. The second main stage in the PPBS sequence is termed 'programme analysis' and this basically involves carrying out an appraisal of the programmes to establish their effectiveness in meeting objectives. Different types of criteria may be applied in this analysis. For example, programmes can be appraised in terms of their ability to yield the maximum performance for a given input of resources (i.e. performance maximization) or alternatively, analysis can be directed at achieving a particular level of performance or output at the minimum cost (i.e. cost minimization). The purpose of the appraisal is really to provide decision-makers with information about the costs and benefits of different options, on a similar basis to that described in the previous chapter.

Programme structuring and analysis now have to be related to the decision-making and budgetary process, and this is done by formulating what is termed a 'corporate plan'. This plan outlines the agency's programmes and their costs and anticipated outputs, or benefits, for the next year and a certain number of years thereafter. It could, for example, be for three years but is unlikely to be for more than five years at the most. The first year of the plan will, in effect, represent the agency's budget and each year, as a new budget cycle commences, the plan will be rolled forward.

The final stage in the sequence involves 'monitoring and reviewing' progress with the implementation of the plan. It is essential to know what is actually happening on the ground and whether the targets set for the outputs of the various components of the corporate plan are actually being achieved. Furthermore, it is also important to be able to identify possible new planning problems which may be emerging and which may require a response from the agencies involved. A close check must also be kept on expenditures so that the budget position can also be monitored.

As this brief description suggests, comprehensive PPBS-type systems are highly demanding, especially in terms of information and organizational capacity. Consequently their use, even in developed countries, has tended to be fraught with problems and the subject of considerable controversy (Novick, 1973; Caiden and Wildavsky, 1974). In developing countries, where problems of information and organization tend to be greater rather than less, their value becomes subject to even more debate. Thus Caiden and Wildavsky (1974, p. 160) go so far as to conclude that 'the experience with program budgeting has been much the same in poor countries and rich; no-one knows how to do it'.

Because of these problems, many planning-budgeting systems in developed and, in particular, developing countries tend to be much less comprehensive than the 'official' PPBS approach described above, with the result that terms such as PPBS and programme budgeting are often used very loosely to apply to a wide range of activities (Novick, 1973, chapter 2; Caiden and Wildavsky, 1974, p. 160). Most attempts to improve coordination between planning and budgeting in developing countries have consisted of piecemeal adjustments, such as the

introduction of annual plans or changes in accounting procedures, rather than the introduction of a comprehensive system. Moreover, they have tended to be confined primarily or entirely to the capital budget, thus ignoring not only the fact that the capital budget has direct implications for the recurrent budget but also the importance of the recurrent budget in determining the direction and impact of government activity (Caiden and Wildavsky, 1974; Stolper, 1966). Recently, however, a few countries have begun to develop more comprehensive systems which try to link the various activities involved in planning and budgeting in a more systematic way and to encompass both capital and recurrent budgets. One example is Papua New Guinea's national public expenditure planning (NPEP) system, which focuses its attention on channelling new government expenditure (both capital and recurrent) in directions which are consistent with national policy objectives, thus gradually influencing more and more of the total government budget as time progresses (Allan and Hinchliffe, 1982).

What then is the solution to the problems of planning and budgeting in developing countries? On the one hand, the need to bridge the gap between the two is obvious, thus making some sort of planning-budgeting system even more important than in developed countries where development planning tends to play a less significant role. On the other hand, the established systems available for this purpose, such as PPBS, have very serious limitations. As we have already suggested, this is an aspect of development planning which has been neglected in the past (Allan and Hinchliffe, 1982) and so few clear guidelines are available. However, the solutions probably lie in the direction of developing and refining the various piecemeal measures already being tried and tested, emphasizing—as in the recent efforts in countries such as Papua New Guinea—the importance of integrating these into a more comprehensive (but hopefully not more complex) system and, in particular, focusing relatively more attention on the recurrent budget. In other words, the need is to develop planning-budgeting systems which build upon the basic principles behind PPBS but are designed to meet local needs and conditions.

Monitoring and evaluation

We have already touched on the issue of monitoring at several points in this chapter. The implementation techniques we described and approaches, such as programming and implementation management and the operations room, are tools that planners can use to check on progress with plan or project implementation. In this section we shall look in more detail at the role of monitoring and evaluation in the planning process.

Monitoring

Monitoring in the context of planning can mean various things. Many writers do not clearly differentiate between this activity and the evaluation, or as it is

MASTAKAAN S-2 JURUSAN PWK-ITB

sometimes termed 'review', of plans and projects. Others use the term to refer to a kind of data gathering exercise, which involves economic, social and environmental dimensions of the geographical area being planned. As we suggested in Chapter 6, this is an essential ingredient of planning activity, since it helps to pinpoint problems requiring action and it is also important in the context of coping with uncertainty in planning. More often, however, monitoring refers to the activity of measuring progress in plan or project implementation and it is this form of monitoring which is considered here.

Monitoring involves collecting information about what actually happens during the implementation process, in order to find out how the inputs to the plan or project (i.e. resources) are being used, how activities essential to implementation are proceeding, whether or not deadlines are being met, and generally whether or not things are working out as intended. Project monitoring, to take a particular focus, is fundamentally concerned with measuring quantities relating to resources expended and to time, in particular. It is a continuous activity and it should provide information that allows the planner to identify possible changes required in subsequent stages of the implementation process. It is really therefore a mechanism for correcting deviations that may have arisen between what was intended to be done and what has actually been done. It is part of the learning process in planning.

Monitoring is essentially an 'in-house' activity (Rakodi, 1982). In other words, it is carried out by those directly involved in plan or project implementation. As Rakodi (1982, p. 134) points out, it:

... should be an integral part of the management information system. ... Monitoring can provide inputs into internal reporting systems, with the aim of enhancing coordination, permitting problems to be anticipated or diagnosed at an early stage and corrective action taken, and putting forward suggestions to eliminate problems and bottlenecks during implementation. This may be achieved by providing two types of input to the review process:

1. regular reports, which form part of the normal management information flow;
2. periodic reports on problems or particular issues.

We have already seen how a monitoring component is built into the various implementation-management and planning-budgeting systems.

The data required for effective implementation monitoring may be obtained from various sources. The main ones will be regular project records themselves and periodic studies involving interviews with project staff and beneficiaries, small questionnaire surveys and direct observation of project activity. Budgetary reviews provide an important (although sometimes under-utilized) source of data, especially when budgetary systems are designed to meet planning needs, as in the planning-budgeting systems described in the previous section.

It is important that any form of reporting system set up to provide information for monitoring purposes is designed appropriately, so that relevant information can be collected; it is also important that records are completed regularly and

accurately and that information collection is carried out in a consistent fashion during implementation (Rakodi, 1982). It should also be remembered that the staff who have to complete the records are often those also directly involved in implementing the projects and implementation cannot simply be stopped while monitoring is carried out. There is very great pressure on those carrying out implementation monitoring to do it as quickly as possible so that results and findings can be acted upon sooner rather than later. This factor has to be taken into account when considering the kinds of data collection techniques that are appropriate. They should not be too complex or demanding of project staff time. We saw in the previous section that one of the problems of the PIM approach in Kenya was that the reporting system was too complex and time-consuming and so the reports were not completed properly. This is a very common occurrence in monitoring plan or project implementation.

Finally, it is necessary to consider who will see the reports of monitoring exercises. It is important that these reports reach the people who will have to take any corrective action required, otherwise there is no point in the monitoring. Moreover, the type of information collected and the format in which the findings are presented will depend on the people for whom they are intended.

Evaluation

Evaluation is really an appraisal of a plan or project's performance which is undertaken either at periodic intervals (often at the end of phases or stages) during the implementation stage, when it may be termed 'on-going evaluation' (Rakodi, 1980), or after implementation when the plan or project has been operational for some time. This latter activity is often called 'ex-post evaluation'. Evaluation is very much concerned with the quality of what actually happens on the ground. It should seek to identify the extent to which specified objectives are being achieved or have been achieved, impacts on the 'target population' and any unintended consequences (Rakodi, 1982).

Various groups of actors may be directly interested in evaluation exercises. These include lending or donor agencies, who will want to know if any conditions attached to a loan are being fulfilled and whether the project is performing as expected in financial terms, the government or agency that borrowed the money, again for similar reasons but also to prepare future submissions, and the management of the project, who will require an overview of the project in terms of both its implementation progress and its impacts (Kinsey, 1976).

As with monitoring of implementation activities, the purpose of evaluation is, to quote Curtis and Watson (1983), 'to learn from experience, so that what is planned for the future is better than what went before'. As Curtis and Watson's paper indicates, evaluation is a complex task and a great many decisions have to be taken about how it should be organized and the type of methodology which is used. We cannot pursue many of these issues in any detail and so will focus on some of the major factors involved in the evaluation process. We should like to

thank Donald Curtis and John Watson for permission to draw extensively from their paper in the remainder of this section.

One major issue that has to be resolved prior to an evaluation is clearly the point in time at which it will be carried out, in relation to the overall time-scale of the plan or project involved. In view of the resource constraints under which planners in most Third World countries operate, it is unrealistic to expect that many on-going evaluations can be undertaken. Evaluation, if it is undertaken, is probably more likely to take place after implementation has been completed.

Another key question to be resolved is who should actually carry out the evaluation. Should it be done internally or externally? Internal and external evaluation both have their advantages and disadvantages. Internal evaluation, for example, has the advantage of being cheaper, is carried out by officers with a 'good working knowledge of the facts' and can be fitted into regular planning and budgetary cycles. On the other hand, local officers may seek to hide their 'misdeeds' and they may lack 'comparative experience'. External evaluation may be more objective and contribute new ideas and comparative perspectives but may also be expensive, slow, and subject to distortion because local officers may not provide evaluators with all the information they need and the evaluators themselves, due to their lack of familiarity with the programme, plan or project, may misinterpret problems.

The other major factor that we should mention concerns the scope of the evaluation undertaken. Curtis and Watson (1983, p. 4) suggest that four main areas of study should be incorporated in evaluation work:

1. a review of performance—'providing formal measures of the extent of implementation of the programme';
2. an impact analysis—'to find out how far the programme has been successful in meeting social, economic, or environmental objectives';
3. an appropriateness assessment—'to see how well the programme components equate with the needs and priorities of households or other units in the target population';
4. an institutional evaluation—'including "grass-roots" as well as higher-level institutions involved in the provision of services'.

1. *Performance measures.* These relate to the inputs to, and outputs of, the programme, plan, or project. These measures, which are often produced routinely and in a quantified form, can be used in three ways:

1. to monitor progress and to check that activities are being carried out on time and within the cost limits set;
2. as efficiency measures (by using the ratio of inputs to outputs);
3. as a proxy for measuring the impact of a plan, programme or project.

The most readily available and frequently used input indicators are levels of expenditure. Output indicators will vary according to the type of project or

programme involved. Construction and supply statistics are, however, frequently used.

2. *Impact indicators.* These will often cover a wide variety of topics and should deal with both direct and indirect impacts. We have already drawn attention to some of the problems associated with impact identification, definition, and measurement in an early chapter. Curtis and Watson argue that the measurement of direct impacts involves the following steps:

1. specifying objectives—what were the aims of the project programmes?;
2. specifying the target group—who? how many? where?
3. listing and reviewing potential indicators;
4. collecting and analysing data—using existing sources or possibly rapid survey techniques such as those discussed in Chapter 7 of this book.

Indirect impacts are often far more difficult to measure unless they take the form of dramatic (and usually adverse) changes. Curtis and Watson suggest one possible approach for tackling this problem and the reader is referred to their paper for more details.

Four broad categories of impact are likely to figure in most evaluations although their significance may well vary from case to case. These are economic impacts, social impacts, health impacts and environmental impacts. Table 3 presents some representative examples of some of these impacts and the impact indicators suggested by Curtis and Watson.

3. *Appropriateness assessment.* This means looking at the parts of a programme or at a project from the viewpoint of the user or supposed beneficiaries. Users, actual or potential, may fall into a number of different groups and they should be classified. The most suitable way of tackling the classification of users is to examine their social characteristics. Curtis and Watson suggest that the user's response is best understood in terms of what he has to gain and lose, and that it is useful to conceptualize the problem in terms of a balance sheet.

4. *Institutional evaluation.* This aspect of an evaluation should focus on the organizational structure of the agency (or agencies) involved in implementation. Particular attention should be given to project organization at the local level and Curtis and Watson suggest the need to ask the following basic questions:

1. What is the organization to do and what does it do?
2. Does the organization have sufficient power or authority?
3. Are roles and procedures clearly specified?
4. Are leaders sufficiently well rewarded?
5. Is membership valuable for ordinary participants?
6. Are members able to keep a check on their leaders?

Table 3. Examples of impact indicators for monitoring and evaluation. (after Curtis and Watson, 1983)

Key Questions	Check for	Indicators
<i>Economic impact</i> Have there been any changes in employment opportunities as a result of the programme?	New permanent jobs of the project Increased employment in service industries such as shops, education, entertainment Losses of jobs due to increased mechanizations on project Losses of jobs due to competition from new projects within the local market	Employment statistics, tax records, village records, etc.
<i>Social impact</i> To what extent has the project benefited groups within the population differentially?	Domination by the locally powerful Resale of resources allocated to the poor, to the wealthy	Benefits by size of holding, income, size of house, party membership, etc. Ownership after x months
<i>Health impact</i> Has the project had any effect on domestic water availability?	Pollution of streams and water courses Drying up of water sources seasonally or perennially	Visual inspection Visual inspection, local information, hydrological surveys
<i>Environmental impact</i> Has there been any effect upon soil?	Surface erosion or gulying Soil fertility changes	Longitudinal survey on soil levels, consecutive aerial photograph data, atmospheric dust counts, etc. Crop yield records, marketing records, soil fertility surveys, weed species information, etc.

Finally, Curtis and Watson suggest that an evaluation is often usefully rounded off by 'a critical look at project management' and asking the following questions:

1. Was the project effectively planned? (This entails looking at objectives, project selection, design, appraisal and programming.)
2. What were the reasons for delay?
3. How well are operation and maintenance arranged?
4. Were the terms of participation adequate?

Conclusions

In this chapter we have discussed a wide range of issues concerning implementation, monitoring and evaluation. We have drawn attention to some of the difficulties confronting planners during the implementation stage of the planning process, we have emphasized that purposeful action must be taken to ensure effective implementation, and we have examined some of the specific techniques and broader management approaches which can be used to aid the implementation process. We have also stressed the importance of monitoring and evaluation studies and considered some ways in which their effectiveness can be increased.

Perhaps the most important lessons which emerge from this chapter are, firstly, that plan implementation is affected by actions taken throughout the planning cycle—from the initial formulation of goals, through the design of plans, programmes and projects, to the final monitoring and evaluation of performance—and secondly, that the various techniques and approaches used to improve implementation must be designed or adapted to meet the specific needs and conditions of the environment in which they have to operate. Honadle (1979a, p. 5) sums up the implementation problem effectively when he comments that:

What is clearly needed, then, is an early dose of realism in both the study and practice of development administration. ... Diagnosing the need for more attainable objectives, more realistic analyses, and more manageable project designs is relatively simple, but filling that need is much more difficult.

Guide to further reading

General

The following works provide general coverage of the topics in this chapter, with particular emphasis on the factors affecting plan implementation:

- Barrett, S., and C. Fudge (eds), *Policy and Action* (London, Methuen, 1981) (not directed specifically to developing countries).
Chambers, R., *Managing Rural Development* (Uppsala, Scandinavian Institute of African Studies, 1974), chapter 2.

SIKAKAANS-2 JURUSAN PWK-ITB

- Faber, M., and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus, 1972), volume 1.
- Goodman, L. J., and R. N. Love, *Management of Development Projects* (New York, Pergamon Press, 1979) and *Project Planning and Management* (New York, Pergamon Press, 1980).
- Grindle, M. (ed), *Politics and Policy Implementation in the Third World* (Princeton, Princeton University Press, 1980).
- Honadle, G., and R. Klauss (eds), *International Development Administration: Implementation Analysis for Development Projects* (New York, Praeger, 1979).
- Iglesias, G. U., *Implementation: The Problem of Achieving Results* (Manila, Eastern Regional Organization for Public Administration, 1976).
- Waterston, A., *Development Planning: Lessons of Experience* (Baltimore, Johns Hopkins Press, 1965), chapters 8 and 9.

Implementation techniques

A very useful summary of the range of implementation techniques available is provided in chapter 8 of Goodman and Love's second book, *Project Planning and Management*, cited above.

Implementation management approaches

The PIM approach is described in Chapter 2 of Chambers' book *Managing Rural Development* (cited above), and in Belshaw, D., and R. Chambers, *PIM: A Practical Management System for Implementing Rural-Development Programmes and Projects* (Nairobi, Institute of Development Studies, University of Nairobi, 1972).

The operations room approach is described in Esman, M. J., *Administration and Development in Malaysia* (Ithaca, Cornell University Press, 1972) and the relevant sections have been usefully combined to constitute a chapter by Esman in Rondinelli, D. A. (ed), *Planning Development Projects* (Stroudsburg Pa., Dowden Hutchinson and Ross, 1977).

Planning-budgeting systems are usefully discussed in Caiden, N., and A. Wildavsky, *Planning and Budgeting in Poor Countries* (New York, Wiley, 1974); Beenhakker, A., *A System for Development Planning and Budgeting* (Farnborough, Gower, 1980); and Allan, B., and K. Hinchliffe, *Planning, Policy Analysis and Public Expenditure: Theory and the Papua New Guinea Experience* (Farnborough, Gower, 1982). Useful articles also appear from time to time in the journal *Finance and Development*, published by the International Monetary Fund, and other relevant material may be located in Joseph, R. M., *Budgeting in Third World Countries: An Annotated Bibliography* (Monticello, Illinois: Vance Bibliographies, No. P893, 1982). Readers requiring more information on PPBS systems in developed countries are recommended to consult Novick, D. (ed), *Current Practice in Program Budgeting (PPBS)* (London, Heinemann, 1973).

Monitoring and evaluation

Some of the most useful works on monitoring and evaluation in developing countries are: Casley, D. J., and D. A. Lury, *Monitoring and Evaluation of Agriculture and Rural Development Projects* (Baltimore and London, Johns Hopkins Press, for the World Bank, 1982); Curtis, D., and J. R. Watson, *Review: A Guide to Monitoring and Concurrent Evaluation for District Offices* (University of Birmingham, Institute of Local Government Studies, Development Administration Group Occasional Paper 19, 1983); Food and Agriculture Organization (FAO), *Monitoring Systems for Agricultural and Rural Development Projects* (Rome, FAO, 1981); and Rakodi, C., 'The role of monitoring and evaluation in project planning, in relation to the upgrading of unauthorized housing areas', *Public Administration and Development*, vol. 2 (1982), pp. 129-46. In addition, much of the material included in the section on *Implementation management approaches*, especially that on PIM, is relevant to monitoring.

Mention should also be made of the large number of books on evaluation which have been published (many by Sage Publications) since the mid-1970s. Most of these are designed for use in developed rather than developing countries. However, those which may be of some interest to Third World planners include: Abt, C. C. (ed), *Evaluation of Social Programmes* (1976); Hoole, F. W., *Evaluation Research and Development Activities* (1978); and Patton, M. Q., *Utilization-Focused Evaluation* (1978). All the above are published in Beverly Hills, California, by Sage Publications.

Chapter 10

Summary and Conclusions

In this part of the book we have reviewed the methodology of contemporary development planning. We have emphasized the need to view planning in terms of a continuous, cyclical process, which includes not only the preparation of plans but also their implementation, monitoring and evaluation and we have described in some detail the various stages involved in this process. We have referred to a wide range of methods and techniques which development planners can use to undertake the tasks associated with the various stages and this review of methods and techniques, although not totally comprehensive, should nonetheless alert the reader to the diversity of methodological approaches available to the development planner.

It has also been our intention to draw out the common themes in the methodologies of economic development planning and physical planning. Although these two streams of professional planning activity still retain their different emphases they may both be tackled in a systematic fashion through a process-oriented approach to planning. Indeed, such an approach offers one of the most effective ways of integrating these two vitally important fields of planning. As we have suggested, it is becoming evident that the overall approaches to economic development planning and physical planning are actually converging and that, although practitioners in the two fields may describe the way in which they work in slightly different terms, they are nonetheless both working to a process model of planning.

This convergence in the overall planning approach provides an important basis for an interdisciplinary approach to development planning. The basis is being further strengthened by the emergence of other common methodological themes. These themes are evident in the context of data collection and analysis but are especially marked with regard to the use of modelling and forecasting techniques. Closer links between economic and non-economic approaches to planning issues are also being fostered in the context of project appraisal techniques. As we showed in Chapter 8, the long-standing preoccupation with economic appraisal techniques is attached to social and environmental factors in development planning. The widespread recognition of implementation problems has also played a prominent role in drawing out the importance of integrated and better coordinated planning approaches, which should again serve to increase the pressure for an interdisciplinary perspective on development planning.

The methods and techniques we have described vary enormously in terms of their complexity and the technical skills required to utilize them. Some are very data-intensive, others far less so. Some require specialist equipment or facilities,

while others may be used where only the most basic materials are available. The range of methods and techniques available is in one sense a positive factor, although there may be situations in which the planner feels he is faced with the rather daunting prospect of choosing a technique from too wide a range of possibilities. It is extremely difficult, if not impossible, to set out guidelines for the use of particular methods and techniques in relation to specific types of planning problems. There is always the danger that once a particular methodological approach has been prescribed for a specific type of problem, then no other technique will be considered and similar problems will always be tackled in the same way. Although there may sometimes be advantages in adopting a consistent methodological approach—where a technique has been tried and tested and where the limits of its reliability are known—there may also be advantages in attempting innovative approaches. We would accept, however, that the pressures under which many Third World planners have to work mean that it is extremely difficult for them to develop or try new approaches. Nonetheless, they should, in our view, avoid taking too rigid a view of the way in which techniques should be matched up to particular planning problems. Similarly, techniques may themselves be adapted to meet the particular requirements which occur in the Third World. However, it would perhaps be useful to reiterate the point that we made in Chapter 5, namely that the use of techniques should be governed by the problems that are being dealt with. Planners should not pursue the use of particular techniques purely as an end in itself. Furthermore, there is considerable merit in keeping things as simple as possible. Techniques which are simple and straightforward to use are not necessarily inferior by any means. Excessive and unnecessary complexity and sophistication do not serve any useful purpose and may often be counterproductive.

Most of the methods and techniques we have described in the previous chapters of this part of the book are relatively specialized, in the sense that they are designed for specific purposes and they demand a certain level of technical proficiency on the part of the planner, although—as we have emphasized—the technical complexity of different techniques varies a great deal. There are, however, other more general skills which the planner requires at various stages in the planning process if he is to perform his task capably and effectively. Foremost amongst these skills is the ability to present ideas, concepts, methods and the output of planning exercises both verbally and in written form. Unfortunately, the development of these skills is often not accorded a sufficiently high priority in planning education.

There is probably little that we can say here regarding the development of verbal communication skills. Much depends on the personality of the individual and the type of post that he or she occupies. Clearly, it is important to prepare formal presentations carefully and to talk as simply and succinctly as possible. It is often extremely useful to prepare visual aids—such as maps, diagrams or tables—to accompany a verbal presentation.

Report writing is an extremely important aspect of any planning activity and one which can consume a large part of the planner's time. There are different

types of planning reports and these will often be written for quite different audiences. Some reports will present research findings derived from surveys and will often include large amounts of data. Useful guidance on the preparation of this type of report is provided by Peil *et al.* (1982, chapter 9). Reports dealing with policy issues and presenting particular plans, programmes or projects are often much more difficult to write than research reports. Whereas the latter are often written for a specialist audience (and may subsequently be used as a basis for 'policy reports'), reports which deal specifically with problems and possible courses of action will usually be prepared for administrators and politicians, who will ultimately make the decisions. Administrators and politicians are rarely planning specialists and it is therefore important to avoid the use of planning jargon and unnecessarily complex explanations of the basis for, and nature of, proposed policies. Furthermore, reports for these groups should be short and to the point, otherwise they are unlikely to be read. Administrators and politicians will want to know the nature and extent of the particular problem being tackled, proposed courses of action and the likely costs and benefits associated with these. They will usually be concerned only to read the main points involved and will not want to find a large amount of the report devoted to peripheral matters or pages of data or formulae. The report should therefore be concise and well structured and the arguments embodied in it should be presented in a logical and consistent fashion.

Also important are a series of skills related to the process of coordinating and reconciling different opinions, viewpoints, attitudes or interests. The planner may find himself faced with widely differing—and often conflicting—reports or recommendations about a particular issue, or involved in meetings or informal discussions between people whose views about the subject under discussion differ radically. In such cases the planner requires both the analytical ability to compare and combine various pieces of information or components of a plan and a variety of managerial and diplomatic skills needed to encourage coordination and teamwork. Many of these skills are difficult to instill through formal learning processes, since they depend to a large extent on personality and experience and also on the role of the planner in any particular situation. We shall return to many of these issues in our discussion of the organization of planning in the next part of the book.

In conclusion, a brief comment is required about the way in which the planner should approach the problem of introducing any form of methodological improvement in the planning process. Throughout this part of the book we have pointed out the practical limitations of all the methods and techniques described and, in particular, emphasized the value of relatively simple, straightforward techniques. Nevertheless, we may still have created the impression that planning is 'no good' or 'unprofessional' if it does not follow the full sequence of steps, or draw upon the whole range of planning techniques, described in the previous chapters. This should not be the case. On the contrary, the information in these chapters should be regarded by the practical planner as a sort of data bank, which gives him (or her) some idea of the range of methods and techniques available

and from which he can then select those parts which appear to be both necessary and feasible in the particular situation in which he is working. This may not result in revolutionary changes in current planning practice but hopefully it will enable gradual—and realistic—improvements to be made.

Part Three
ORGANIZATION FOR PLANNING

Chapter 11

Organization and Planning

Introduction

In Chapter 9 we quoted Waterston's statement that 'the successful implementation of a plan is largely a matter of proper organization and administration' (Waterston, 1965, p. 339). We then went on to show that plan implementation is affected not only by the organization of the implementation stage itself but also by the way in which the earlier stages of plan preparation are organized, since this affects the content, relevance and acceptability of the plan. In other words, it is necessary to consider the whole of the organizational framework within which plans are prepared and implemented. The last part of the book is devoted to these organizational aspects of planning. In this chapter we introduce some basic principles and issues about the relationship between organization and planning, which are then developed in detail in the following chapters.

The nature of organization

When discussing the organizational framework within which an activity, such as planning, takes place, it is useful to distinguish two different—although interrelated—aspects of organization: organizational *structures* and organizational *procedures*. Each of these aspects is in itself the subject of a major field of study, supported by a vast literature and of concern not only to planners but to anyone responsible for the design or operation of any sort of public or private organization. Thus organizational structure is the focus of studies of organization theory and design, while organizational procedures are the subject of the vast field of management science. In this chapter we can do no more than introduce some of the fundamental principles of these fields and indicate how they relate specifically to planning. Further reading material is suggested at the end of the chapter.

The structure of organizations

Every organized human activity ... gives rise to two fundamental and opposing requirements: the division of labor into various tasks to be performed and the coordination of these tasks to accomplish the activity. The structure of an organization can be defined simply as the sum total of the ways in which it divides its labor into distinct tasks and then achieves coordination among them. (Mintzberg, 1979, p. 2; emphasis omitted)

An organizational structure is most easily portrayed in the form of an *organization chart* (sometimes called an *organigram*), which shows in diagrammatic form the various individuals or groups within the organization who are responsible for each of the major tasks and the lines of communication between them. Figure 7 represents a highly simplified but fairly typical type of organization chart.

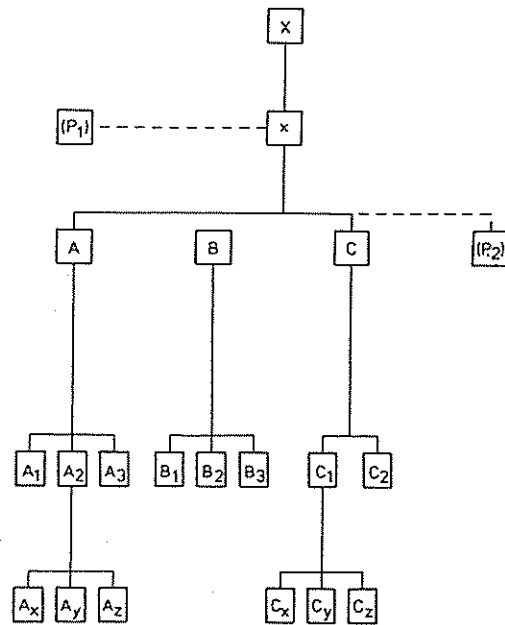


Figure 7. A simplified representation of an organization chart

An organization chart is particularly useful because it indicates the degree and form of coordination between the component parts of the organization. Two aspects of this coordination are shown particularly clearly. Firstly, the chart emphasizes the typical hierarchical structure of most organizations, which is responsible for many of the problems of centralization and impersonality associated with 'bureaucracy'. We shall examine some of the implications of this for planning in Chapter 13, when we consider questions of centralization and decentralization.

Secondly, an organization chart points out the difference between coordination achieved through direct control or supervision and that which has to be obtained by more direct means, usually involving some form of consultation or negotiation. Thus in Figure 7 it is obvious that, for example,

coordination between A and A_z can be achieved by direct control or supervision, while coordination between A_z and C_z tends to involve more indirect means. Because of the way in which the structure is portrayed in diagrammatic form, the former is often called *vertical* coordination and the latter *horizontal* (or *lateral*) coordination. We shall be using these terms in this chapter and in those that follow. It should also be noted that sometimes the word 'coordination' is used to refer only to the more indirect forms of communication which occur when it is not possible to exert direct control. We shall, however, continue to use it in a broader sense to refer to either form of communication or linkage between the various components of an organization.

We shall see later that the distinction between these two different kinds of coordination is particularly important in discussions about the organization of planning, because both the preparation and the implementation of plans tend to depend to a large extent on achieving horizontal coordination between organizations, or parts of organizations, which are not subject to a common line of control. This is obviously much more difficult to achieve than vertical coordination, which can resort to direct control or supervision, and many of the organizational problems in planning can be attributed, at least in part, to this.

Organizational procedures

We use the term organizational procedures to refer to the various administrative or management procedures which can be used to achieve either vertical or horizontal coordination within an organization. We have already touched upon such procedures in Part Two, since we were not able to consider specific planning techniques in isolation from the more general organizational procedures which influence the way in which the techniques are used and their effectiveness. Thus in Chapter 9, for example, we examined how specific implementation techniques can be used in conjunction with more general organizational procedures in order to manage the implementation process. Moreover, it should also be emphasized that organizational procedures cannot be considered in isolation from the organizational structures in which they have to operate.

It is impossible in the space available here even to provide an overview of the full range of administrative and managerial procedures available. We shall, therefore, merely suggest three different types of procedures which are likely to be relevant to those concerned with the organization of planning: informal organizational structures, modes of communication and leadership skills. Examples of the application of specific procedures within each of these broad types will be introduced in later chapters in the context of more detailed discussion of the organization of particular kinds of planning activity.

Informal organizational structures are structures which have less official status than formal structures and usually cut across the formal structures, in the sense that they involve people from different formal organizations or from different parts of the same organization. Examples include committees, task forces, special teams of staff and *ad hoc* meetings. Such structures are usually established for a

specific purpose which requires close coordination between people who are not subject to the same line of vertical control, such as the investigation of a particular problem which involves more than one agency or the development of a particular geographical area. They are very important in planning—as any planner who seems to spend most of his working hours in meetings well knows! The status, composition, mode of operation and duration of such structures varies enormously and one of the arts of the organization of planning is choosing the most appropriate model for a particular purpose.

Communication between individuals (or groups of individuals) within or between organizations can take place in a number of ways. For most people involved in government administration the choice is usually between personal (face-to-face) contact, written communications (letters, memoranda, reports, etc.) and telecommunications (telephone, telegram, short-wave radio or telex). The choice will depend on a variety of factors, including the type of message to be communicated, its urgency and the relative availability, cost and reliability of the various methods. However, it is perhaps worth noting that, where personal contact is possible, its use may be of particular merit, especially if lengthy discussion or resolution of a controversial or sensitive issue is required—as is often the case in planning. Furthermore, it should be emphasized that a combination of methods is often desirable. Thus a personal visit or telephone call often needs to be followed up by written confirmation of the main decisions reached, the proceedings of important meetings are usually recorded in the form of minutes, and the results of discussions about proposed development programmes or projects are often incorporated in formal plan documents. It should, however, be reiterated that plan documents and other forms of written communication should not be seen as ends in themselves but as tools which facilitate the implementation of the decisions embodied in them.

Leadership skills play an important part in the operation of any organization; in fact, organizational effectiveness is often highly dependent on the quality of leadership. Such skills include formal procedures of control, supervision and delegation and less formal means of encouragement and exhortation. The relative importance of different skills depends on the type of organization, the nature of the tasks it has to perform, the political, social and economic environment in which it has to operate and the personality of the leader concerned. One of the problems of leadership training is that, although there are skills which can be developed by training, personality and experience often have a much more important effect than attending formal training courses. In planning this problem is compounded by the fact that when the planner has to play a leadership role it is most likely to be in an informal structure (such as the chairman of a planning team or committee), where he (or she) has no formal authority to support his position. Furthermore, this also means that the planner's work is often hampered and frustrated by inadequate leadership on the part of those who are in positions of formal authority and therefore hold responsibility for either authorizing or implementing planning proposals. We shall be investigating such problems further at a later stage.

The organization of planning

The organizational aspects of planning will be discussed in detail in the chapters which follow. At this point our intention is only to define the scope of the discussion and, in particular, to point out the organizational implications of the particular concept of planning which we have adopted in this book. We have emphasized throughout that planning should be seen as a complex process of decision-making, which involves many different individuals and organizations and cannot be clearly separated from the related processes of policy formulation and plan implementation. This has two major organizational implications.

Firstly, it means that one cannot consider the organization of planning without considering the whole organizational framework within which decisions are made and implemented. Colin Leys (1972, p. 60) suggests that:

Any useful conceptualization of the planning process must start from a model of politics. ... The actual pattern of decisions about matters of public policy can be best understood in terms of the interplay of competing political forces, and the outcomes are likely to reflect the relative strengths of the various combinations of such forces in particular sectors at particular times.

The organization of planning is thus an extremely complex affair, fraught with problems, because it involves coordination between so many different groups, each with its own interests and priorities. Moreover, as we suggested earlier, much of this coordination has to be achieved through informal means, since these groups are not subject to a common line of vertical control. Consequently, in the following chapters we shall find ourselves examining a wide range of organizational issues and problems and we shall discover that most of the problems have no easy or obvious solutions.

Secondly, this concept of planning has important implications for the role of professional planners and planning agencies. At this point our conceptualization of planning differs somewhat from that of Leys. Having defined decision-making in political terms, he then goes on to suggest that:

From this point of view the decision to 'go in for planning' needs to be seen as the introduction of a new group competing with those already in the political system for the determination of policy on matters where scarce resources are being competed for. (Leys, 1972, p.61)

We concede that, in practice, many planning agencies have, especially in the early years of development planning, become no more than another interest group competing over the allocation of scarce resources. However, we do not believe that this should normally be their role. We maintain that they should, as far as possible, plan a coordinating role—encouraging, reconciling, and combining the planning proposals of other agencies rather than preparing their own independent plans which conflict, and therefore compete, with those of the other agencies.

This has obvious implications for the location of a planning agency within an

organization. Thus if we look back at Figure 7, we see that one component of the organization, P, is shown in two possible locations, (P₁) and (P₂). In this case, P indicates the planning agency—that is, that part of the organization responsible for planning the activities of the organization as a whole. We can then see from the diagram that the planning agency is more likely to be able to play a coordinating, rather than a competing, role if it is located at (P₁) rather than at (P₂). Furthermore, it also has implications for the internal structure and organization of a planning agency and for the role and qualities of the individual planner. We shall return to all these issues, and also examine the extent to which it is in practice possible for the planner to play a coordinating rather than a competing role, in Chapter 14.

Some practicalities

There is a tendency when discussing organizational structures and procedures to forget that organizations are made up of individual human beings and that they have to operate within a particular political, social and economic environment. This then leads to false assumptions about the effectiveness and transferability of specific structures or procedures. Therefore, just as in Part Two we emphasized the need to consider the value of the particular planning techniques described in the context of the environment in which they are to be applied, here we must emphasize the need to consider organizational structures and procedures in the same way. This point is made in a slightly different but very effective way by Jon Moris (1976, p. 77):

Let us distinguish carefully between *techniques* and *administrative culture*. Techniques are by definition readily identifiable skills; and, as such, they are subject to transfer by training. They have been the object of virtually all 'management training' that has been conducted in Fourth World [i.e. the poorest countries] contexts to date. Administrative culture, on the other hand, is the combined outcome of a long process of *informal work socialization* and the interaction of complex administrative structures. It is much less amenable to direct transfer, perhaps hardly subject to programmatic transfer at all.

If we examine the role of what Moris called the 'administrative culture' more carefully, we see that it influences the organizational aspects of planning in several different ways. It affects the extent to which any major change in the existing organization—such as a radical restructuring or the introduction of an entirely new set of procedures—is possible at all. This point is often forgotten by those who advocate administrative reform as the solution to nearly every organizational problem. It also influences the choice of specific organizational structures or procedures and the way in which they are introduced. Finally, it affects the way in which the new structures or procedures actually operate and therefore the extent to which they actually achieve the desired objective or have any significant impact on the way in which decisions are made or implemented.

When reading the chapters which follow, it is important to remember these practical issues and to bear in mind the increasing misgivings, expressed by

people such as Moris, about the extent to which conventional administrative and managerial approaches can solve the organizational problems of planning in developing countries. And as a final cautionary note, let us repeat the point made by the UN many years ago in its *Handbook on Public Administration*, that 'the administrative organization of a Government is not an end in itself but a means for the achievement of national objectives' (United Nations, 1961, p. 15).

Guide to further reading

There is very little written material on the particular organizational requirements for planning. Consequently, those interested in reading further on the issues which have arisen in this chapter will find themselves reading general material on administrative organization and management.

The United Nations is perhaps the most useful source of written material on administration and management in developing countries. The following UN publications (all published in New York) are particularly useful:

Handbook on the Improvement of Administrative Management in Public Administration (1979). This is one of the most recent UN publications in the field; its main focus is on management techniques.

Administration for Development (1971). This is one of the most useful publications because it is concerned specifically with planning.

Development Administration: Current Approaches and Trends in Public Administration for National Development (1975). This includes useful information on the nature of organizational structures and organization and management procedures.

A Handbook on Public Administration (1961). This handbook is now rather dated and has to some extent been superseded by later publications; however, it still provides a useful overview of the field.

Proceedings of the Interregional Seminar on Organization and Administration of Development Planning Agencies (1974) and *Public Administration in the Second United Nations Development Decade* (1971). These are both conference proceedings and so are less comprehensive in coverage. However, the first is particularly relevant for planning purposes.

In addition to the various UN publications, the following are also useful:

Gant, G., *Development Administration* (Madison, University of Wisconsin Press, 1979).

Honadle, G., and R. Klauss (eds), *International Development Administration* (New York, Praeger, 1979).

Morgan, E. P. (ed.), *The Administration of Change in Africa* (New York, Dunellen Publishing Company, 1974).

Onah, J. O. (ed.), *Management Practice in Developing Countries* (London, Cassell, 1981). This book is, however, concerned mainly with business management.

STAKAANS-2 JURUSAN PWK-ITS

Unfortunately, there are no books on organization theory directed specifically towards developing countries. The reader may, however, like to look at the following books on organization theory in general:

Mintzberg, H., *The Structuring of Organizations* (Englewood Cliffs, NJ, Prentice-Hall, 1979). This is a particularly readable book, an ideal text for those with no previous experience in this field.

Hicks, H. G., *The Management of Organizations: A Systems and Human Resources Approach* (New York, McGraw-Hill, 2nd edition, 1972).

Pugh, D. S. (ed.), *Organization Theory* (Harmondsworth, Penguin Books, 1971).

In addition, a report by the World Bank, *The Design of Organizations for Rural Development Projects: A Progress Report* (Washington DC, World Bank Staff Working Paper No. 375, 1980), includes some useful material on general organizational design, although it is directed mainly towards the organization of integrated rural development projects.

The following general books on administration and management may also be of interest:

Bourn, J., *Management in Central and Local Government* (London, Pitman, 1979).

Dunsire, A., *Administration* (London, Martin Robertson, 1973).

Keeling, D., *Management in Government* (London, George Allen & Unwin, 1972).

Finally, useful journals in this field include *Public Administration and Development* (formerly *Journal of Administration Overseas*), *International Review of Administrative Sciences* and the *Journal of Comparative Administration*.

Chapter 12

The Operational Level of Planning Activity

Introduction

In Chapter 1 it was suggested that planning can be undertaken at a number of different operational levels. In many Third World nations the aim is to plan the development of the national economy or society as a whole—in other words, to achieve what is often referred to as 'comprehensive' national development planning. However, whether or not this aim is actually achieved, it is also necessary to plan at a number of other 'sub-levels' and in Chapter 1 we distinguished three such levels of planning activity: project planning, sectoral planning and integrated area planning. The interrelationship between these three levels was portrayed diagrammatically in Figure 1.

This chapter examines these operational levels of planning in more detail. We begin by looking at each of the three 'sub-levels'—project planning, sectoral planning and area planning—and then consider how the three can be combined in the form of comprehensive national planning.

Project planning

Introduction

We used the term 'project' in Chapter 1 to refer to an activity, or set of related activities, which is planned and implemented as an identifiable whole. Consequently, it can be planned in isolation, irrespective of the existence of any other form of planning activity—although this does not mean that it cannot or should not be integrated into other forms of planning, a point to which we shall return later. We suggested that it is sometimes useful to distinguish between a *project* and a *programme*. A project (for example, a road, hospital, or irrigation scheme) generally has a specific geographical location and is often identifiable as a physical object, while a programme (such as the introduction of a new crop or efforts to improve nutrition) tends to be more abstract in form and to have a wider geographical spread. However, since the approach to planning is similar we shall discuss the two together here under the general name of project planning.

The role of project planning

The planning of individual projects or programmes has a longer history than most kinds of development planning because the special nature of such projects

usually demands some sort of conscious planning activity, especially when they involve large inputs of resources. Thus, for example, it would be impractical to embark upon the construction of a major road, dam or mining project or a programme designed specifically to introduce a new crop, improve nutrition or eliminate a particular disease without some sort of planning. However, as we mentioned in Chapter 3, the general disillusionment with conventional planning methods which emerged in the late 1960s resulted in, among other things, increasing emphasis on project planning and an attempt to improve its methodology.

The particular concern with project planning can largely be attributed to a desire to improve the implementation performance of plans. In the 1950s and early 1960s the main emphasis had been on macro-level planning, with relatively little effort devoted to planning the specific projects or programmes required to implement the macro-level plans. Thus, for example, the importance of establishing import-replacement industries or expanding agricultural production would be emphasized in national plan documents but inadequate attention would be given to planning the specific industrial or agricultural projects which would then be required. Waterston, writing in 1965, maintained that:

By far the greatest number of failures to carry out public sector projects and programs [at] reasonable cost and in reasonable periods of time are traceable to inadequate project selection and preparation. (Waterston, 1965, p. 320)

Thorough project planning is particularly important in the case of certain categories of project, including those which require large sums of money (especially if they will be funded through overseas aid or other special funding), those which involve several different departments or agencies, and those involving activities which are new or experimental in nature or particularly difficult or complex. The increasing importance of both internationally funded projects and projects of an interdepartmental or 'integrated' nature helps to explain the increasing attention devoted to the role and methods of project planning.

Another factor which has contributed to the emphasis on project planning is a feeling that it is more likely to lead to practical or visible results than other forms of planning activity. Bendavid-Val (1975, p. 3) quotes an anonymous 'learned professor with many years experience in development' who declared at a symposium:

I believe that projects are the only thing that matters. Nothing has come of all the planning I have done but the projects remain. ... When planners leave, nothing remains. When the builders leave, a monument stays behind ...; and the people see and feel that development is taking place.

This view is closely related to the fact that planning a specific project is often a more manageable activity than other kinds of planning. It has a clearly defined scope and time-span and, as the above quotation suggests, the results can be seen more easily.

However, as Bendavid-Val goes on to point out, a project approach to planning has a number of shortcomings. Particularly serious is the tendency for projects to be planned in isolation, rather than as part of a broader development policy or plan. For instance, a great deal of effort may be devoted to planning a commercial livestock project without first preparing a general agricultural strategy for the area, which would consider—among other things—the relative importance to be attached to crop and animal husbandry. In other words, the planning process starts with the identification of projects rather than with more fundamental questions about the goals, objectives, or development policies which the projects should be helping to achieve. In many cases it is very difficult to avoid this rather short-sighted approach, since in most Third World countries there are long lists of projects waiting to be implemented but broader development policies or strategies are far less likely to exist because their preparation is a relatively complex and time-consuming task, which is often postponed until there is more time, skilled manpower or data available. Nevertheless, whenever possible an attempt should be made to prepare such strategies or policies, if only to provide a basis for some sort of priority-ranking of the many project proposals.

Too much emphasis on projects tends to lead to a 'shopping-list' approach to planning, in which plans consist of no more than lists of projects (especially capital projects) submitted by individual sectors, regions, or other interest groups. Many national and, in particular, regional or local development plans are like this. One might question whether such documents should really be called 'plans', since they do not usually result from the sort of decision-making process which we have in this book referred to as 'planning'—that is, a process of deciding how best to use resources to achieve particular goals. Furthermore, the 'shopping-list' approach tends to over-emphasize the role of capital expenditure in achieving development objectives, with the result that inadequate attention is given to ways of improving the use of existing resources through changes in recurrent expenditure. Thus, changes in the school curriculum or the work of agricultural extension staff, for example, may be more important than new schools or agricultural projects. This is particularly so when, as is often the case, funds for capital expenditure are very limited; in most countries recurrent expenditure accounts for a very large part of government spending (Caiden and Wildavsky, 1974, pp. 87–8) but most planning effort is devoted to the relatively small proportion of capital expenditure.

Similarly, too much emphasis on project planning also encourages an approach to development which focuses on large, visible projects rather than smaller, less obvious forms of development, a tendency which is often reinforced by both overseas aid agencies and local politicians. The reasons for this bias towards large projects have been bluntly stated by Chambers:

For some donors, big is beautiful because big is bankable; pressures to spend aid funds are best overcome through large projects, often for infrastructure. Such projects tend to have a high import content, which pleases industrialized donors.

They are usually highly visible and photogenic which pleases political leaders and civil servants alike. They are professionally challenging. They may provide opportunities for corruption at the higher levels of government. They provide contacts for local professionals and civil servants which may make it easier for them to join the brain drain to the richer world. Consultant firms throughout the world find large projects a source of profitable employment. Implementation can be assured where necessary through the use of foreign skills. *Finally, the methods of appraisal for such projects have been quite highly developed, routinized and accepted and have a high measure of general utility.* (Chambers, 1978, p. 211; emphasis added)

Project planning: organization and methods

As a result of the increased concern with project planning, considerable effort has been devoted to improving its methodology—as the above quotation from Chambers' article suggests. Much of this effort has been concerned with specific aspects of project planning, particularly project appraisal and, more recently, monitoring and evaluation techniques. However, there have also been attempts to examine the process of project planning and implementation as a whole, beginning with the identification of a project and continuing through to the monitoring and evaluation stages (Goodman and Love, 1979, 1980). The specific techniques required for project planning have already been discussed in Part Three, under the coverage of general planning techniques. In this chapter, therefore, we shall focus on the organization aspects of project planning.

The organizational issue which arises most often in project planning is how the organizational structure required to plan and implement the project should fit into the wider organizational structure of the sector or area within which the project is located. This does not usually present serious problems if the project is relatively small and clearly within the responsibility of one agency, since then it is only a matter of deciding which individual or section within the agency should take responsibility for it.

However, if the project is relatively large or complex this may not be practical, since the project is likely to be hampered by the rather rigid, hierarchical structure of the agency within which it is located. Particular problems occur in the case of projects which involve more than one agency. In such instances a good case can be made for establishing a special organizational structure, located either within an existing agency or in a semi-autonomous position. However, this also creates problems, particularly problems related to coordinating the project with the broader policy framework of a sector or area, controlling the project staff, budgeting and financial control and—where necessary—eventually handing over responsibility for the project to the normal administrative organization. Lele, for example, describes how the Lilongwe Land Development Programme in Malawi began to purchase some of the maize grown by farmers in the project area because of shortcomings of the official government marketing agency but, in so doing, it was forced into a situation (particularly with regard to pricing policies) which created problems for the project and made it difficult to hand full responsibility for marketing back to the official agency (Lele, 1975, pp.

105–7). There is no easy solution to this sort of organizational problem. As one writer on project organization has said:

If the project does not fit, it will not have any significant impact; if it fits too well, it will only perpetuate the status quo. Designing a satisfactory balance is part of the art of design. (Honadle, 1979b, p. 28)

We shall encounter very similar problems in the case of integrated area planning later in the chapter.

Another problem which often arises in project planning is lack of coordination between the agencies involved in different stages of the planning and implementation of a project. Many small capital works projects suffer from this problem. For example, the initiative for a rural health centre may come from the local community or a local level planning committee; but it then has to be approved first by a regional committee or other agency and then by the finance ministry—and probably also the health ministry—at the national level, its construction is the responsibility of the regional office of the public works ministry, together with a contribution of self-help labour, and finally the centre has to be staffed, equipped and maintained by the ministry of health. Similar problems occur in the case of larger projects, especially if the project is planned by outside consultants and then handed over to the appropriate government authority for implementation.

The example of the rural health centre also raises another problem—that of obtaining local involvement in the planning and implementation of a project. This is, however, a wider problem which applies to all operational levels of planning; consequently, we shall examine it separately in the next chapter.

Conclusions

This brief review of project planning has suggested that it is very important to plan specific projects (or programmes) carefully, since such projects are often the means by which more general development policies or plans are implemented. However, there is a risk that project planning will occur in isolation and that too much emphasis will be placed on large, visible projects rather than on other ways of achieving development objectives. Furthermore, a number of organizational problems arise in project planning and implementation. We shall return to some of these issues in the last section of the chapter.

Sectoral planning

Introduction

In Chapter 1 it was explained that in most countries it is possible to identify a number of different functional divisions which correspond to the division of government into ministries, departments or other agencies and the term 'sectoral

planning' normally refers to planning for these functional divisions or 'sectors'. Examples of sectoral planning thus include agricultural planning, industrial planning, education planning, transport planning, and so on.

However, since the word 'sector' is—like so many other words with which we are concerned—often used in a variety of ways, a little more discussion of its usage is needed here. Most of the confusion can be explained by the fact that, although the word 'sector' is almost always used to refer to a subdivision of a whole made on a functional basis, the scale of the subdivision may vary enormously. Thus in some cases a sector is a subdivision much larger than the functional responsibility of a single government department or ministry. For example, the economy may be subdivided into the public sector (which includes all activities controlled directly by the state) and the private sector, or alternatively into the rural and urban sectors or the formal and informal sectors. In other cases, however, the term is used to refer to subdivisions which are smaller than a typical government agency, as when, for example, education is subdivided into primary, secondary and tertiary sectors or transport into road, air and water sectors.

Consequently, the term sector does not always correspond to the area of responsibility of a government agency; sometimes it refers to a larger functional area and sometimes to a subdivision of the agency. Moreover, in some cases governments deliberately create agencies which cut across sectoral boundaries; we shall examine some examples of these later in the chapter. However, for the purposes of the discussion in this chapter, the important point to note is that sectoral planning means planning for subdivisions of the whole country on a *functional* (rather than an area) basis and that these sectors tend to correspond to the division of responsibility between government ministries, departments or other agencies.

The role of sectoral planning

Sectoral planning is probably the easiest kind of planning to introduce and the one for which the need is most obvious. This is because of the general tendency, noted above, for sectoral activities to correspond to the responsibilities of particular government agencies. Any such agency has to plan its activities in some sort of fashion, since it has to make decisions about the use of the resources available to it, and such planning is relatively easy because it can take place through the normal hierarchical structure of the agency. Moreover, there is also a relatively good chance that plans will be implemented because the same organizational structure is generally responsible for both preparing and implementing the plans. It is, therefore, not surprising that sectoral planning is in many countries the most common form of planning and the basis from which national development plans are compiled. We noted in Chapter 7 that many economic models are sectorally based.

The importance of sectoral planning should not be underestimated. As long as sectorally based government agencies continue to be the main means of

channelling government resources and implementing government policies, sectoral planning will continue to be important as a means of ensuring the effective use of these resources. However, sectoral planning also has its limitations, of which the most obvious—and the most serious—is that it discourages coordination between sectors and between agencies. This in turn leads to inefficiencies in the use of resources between agencies, discourages and complicates the planning of projects or programmes which involve more than one sector or agency and, in the worst cases, results in conflict or duplication between agencies.

Consequently most countries, while acknowledging the importance of sectoral planning, also recognize the need to coordinate sectoral plans, both at the national level, where the national planning agency has a major role to play, and through the development of area-based planning. We shall examine both these measures later in the chapter.

Sectoral planning: organization and methods

Although it is almost inevitable that some form of planning is practised within any sectorally based government agency, the quality of this planning often leaves much to be desired. Most government agencies are so preoccupied with routine administration and dealing with unexpected crises that inadequate attention is given to systematic planning, especially on a medium- or long-term basis. Consequently, plans tend to be rudimentary, short-sighted and unambitious. For example, decisions are often made on the basis of 'guesstimates' or hunches based on administrative experience, rather than on systematic collection and analysis of data; there is a tendency to assume that the existing way of tackling problems or issues is the only possible way; and, partly because of this, annual financial estimates are usually based on last year's estimates rather than on any attempt to consider the most effective way of using financial resources to achieve particular objectives. Ironically, many (although not all) of the 'crisis' situations which absorb so much time and effort, and thus reduce the time and resources available for planning, could be avoided—or at least dealt with more effectively—if there was more systematic, longer-term planning.

Concern with the quality of sectoral planning generally leads to calls from within a sectoral organization, and in particular from the national planning agency, for the establishment of special planning units, staffed by full-time qualified planners, within each sectoral agency. This approach has the advantage of ensuring that planning decisions are made (or at least coordinated) by people who are trained in basic planning skills and who have a full-time commitment to planning and are, therefore, less likely to be diverted into other activities. However, it may also create problems, since there is a danger that the planners will use techniques which are not appropriate in the environment in which they are working and that they will isolate themselves from other staff in the organization. Plans are then likely to be unrealistic, over-ambitious or unacceptable to those who will be responsible for implementing them. This is a

dilemma which arises in other forms of planning too and we shall examine it in depth in Chapter 14.

Conclusions

We may conclude by reiterating that sectoral planning has been, and is likely to remain, one of the most important operational levels of planning. However, in most countries there is a need for more coordination between sectoral planning and other forms of planning activity and for improvements in the methodology and organization of planning within sectoral agencies. Improvements in the methods and organization of sectoral planning should, in particular, aim to improve the quality of planning without divorcing it from the normal administrative activities of the sectoral agencies, in order to ensure that plans are implemented.

Integrated area planning

Introduction

In Chapter 1 we defined 'integrated area planning' as planning for all functional sectors or activities within a geographical area and we explained our reasons for using it in preference to other terms, such as 'regional planning'. Further explanation of this choice is now necessary before going on to consider the role of integrated area planning and its organization and methodology.

There are two main reasons for using the word 'area' in preference to other words, such as 'region'. Firstly, 'area' suggests any sort of geographical space, irrespective of its size, its political or administrative status, or its position in a hierarchy of political or administrative units. The term 'region', on the other hand, is often associated with a relatively large area, fairly 'high up' in the hierarchy; while words such as 'province', 'district'—and sometimes also 'region'—tend to be confused with recognized political or administrative units in particular countries. Secondly, the term 'regional planning' may be used to mean either planning activities *within* a region (intra-regional planning) or planning the distribution of activities or resources *between* regions (inter-regional planning), while our concern here is particularly with planning *within* a region or area and the term 'area planning' seems to make this point clearer.

Our use of the word 'integrated' requires rather more explanation, since it is a word which has probably been over-used in recent years. The term 'integrated planning' is commonly used in at least three different ways, only one of which is appropriate here (Belshaw, 1982; Food and Agriculture Organization, 1978). Integrated planning is sometimes used to refer to the planning of a particular project or programme which requires inputs from several different sectors, agencies or disciplines. Examples include nutrition projects, integrated rural development projects and programmes designed to generate employment through a variety of measures. In other cases it is used to refer to the planning of

projects or programmes which are designed specifically to integrate one part (or sector) of the population—such as the rural sector or, more specifically, the rural poor—into the development of the nation or the area. The third meaning of integrated planning, and the one with which we are most concerned here, is that of planning for all functional sectors or activities within a geographical area.

There is considerable overlap between the three meanings. For example, an integrated rural development 'project' which is concerned with all sectoral activities within a geographical area and is particularly concerned with the welfare of the rural poor in this area is 'integrated' in all three senses. Moreover, the variation in usage can be explained mainly in terms of the different uses of the word 'sector'. In all three cases 'integration' implies bringing together different sectors and 'integrated planning' suggests an approach to planning which cuts across sectoral planning. Thus integrated area planning is seen here as an alternative operational level of planning to that of planning by sectoral agencies, in the sense that the emphasis is on area—or 'territory' (Friedmann and Weaver, 1979)—rather than on function. Nevertheless, the types of sectors which are being integrated in the three cases are different and so the implications for planning are different.

It is also necessary to consider the different degrees, forms or levels of integration which can be achieved. The term integrated area planning is often used very loosely to refer to any planning exercise which makes some attempt to coordinate the activities in one sector with those in another. For example, it may be used to describe a planning exercise in which 'integration' means no more than making sure that there are no obvious conflicts or inconsistencies between the activities planned in each sector. Many so-called area plans are produced in this way. Integrated planning may also be used to describe plans which are prepared by one sector or agency but take into account the immediate implications for some other sectors. Thus many so-called integrated rural development plans are really only agricultural plans which include proposals for supporting infrastructure (such as roads and marketing facilities) and services (such as extension work) and are the responsibility of one major agency, the ministry of agriculture (Belshaw, 1982).

When we refer to integrated area planning here, we are implying rather more effective integration than in the above examples. We are using the term to describe a planning exercise which involves all sectors and agencies in the area and which attempts to integrate their activities within a general framework for the development of the area as a whole. Furthermore, the word integrate is used here to mean not only avoiding obvious inconsistencies or conflicts between sectors but in a more positive sense of achieving functional and spatial 'harmony' between the activities of different sectors and the most effective distribution of resources between agencies. In this sense it can be said that an integrated area plan should be more than just the sum of the various sectoral plans for that area—in the same way that in systems theory, a system is defined as being more than the sum of its individual parts. We shall consider the practical implications of this when discussing the methodology of integrated planning below.

The role of integrated area planning

Integrated area planning is perhaps the least developed of the three operational sub-levels of planning considered here. The need for it has gradually arisen as a result of two sets of factors. On the one hand, it has emerged in response to the deficiencies of sectoral planning which we noted earlier. The problems which have arisen from the lack of coordination between plans for different sectors have encouraged attempts to improve coordination between sectors, especially in certain types of development activity—such as rural development programmes—where inter-sectoral links are particularly important. On the other hand, it has developed as a way of meeting the developmental needs of specific geographical areas. This sort of area-based approach to development planning has tended to emerge in response either to the existence of areas which require special development effort or to the needs of a decentralized system of government or planning which focuses attention on the area level. In either case it also coincides with a belief that an area must be treated as a whole, not just as a number of different sectors—a view that has been supported by the popularity of a systems approach to planning.

The first well-known example of integrated area planning is the Tennessee Valley Authority in the United States, which was set up in the 1930s to coordinate the multi-purpose development of the Tennessee River and to ensure the maximum benefits to, and full involvement of, the people of the area (Pritchett, 1943; Moore, 1967). The approach later spread to other river valley planning projects in both developed and developing countries, river valleys providing a particularly suitable venue for this sort of planning because of the need to plan the area as a whole and the scope for multi-purpose—and therefore multi-sectoral—use of the resources provided by the river.

From river valleys the concept of integrated area planning was then extended to other areas requiring special planning attention, especially areas with particular development potential or problems and areas where the introduction of a major development project (such as a new trunk road, a dam or a mine) required a reassessment of the overall development of the area. The North-Eastern Region of Brazil (Robock, 1963) and the Guayana Region of Venezuela (Rodwin and Associates, 1969) are two of the best-known examples in the Third World; North-East Brazil was a particularly underdeveloped area, while the Guayana Region was an area with undeveloped resource potential. The planning undertaken in association with the Mwamapuli Dam in Tanzania and the Ok Tedi copper mine in Papua New Guinea are less well-known examples of integrated planning in areas with major development projects (Conyers, 1982, chapter 5).

During the 1970s the role of integrated area planning received increasing attention as part of a world-wide emphasis on integrated rural development. Integrated rural development has been seen by Third World governments and, in particular, by international aid agencies as a way of improving the standards of living of the poorest sectors of the population—and at the same time increasing

production of food and other rural produce—by tackling the problems of rural areas in a coordinated manner (Food and Agriculture Organization, 1978). In many cases this approach emerged as an extension of the earlier use of integrated area planning to tackle the problems of areas with special planning needs, since integrated rural development programmes are usually located in parts of a country which have been selected to receive special attention.

In some countries, however, a less selective approach to integrated area planning has emerged, often as part of a decentralization of political, administrative or planning responsibilities. Thus, for example, in countries such as Tanzania and Papua New Guinea the decentralization of government activities has increased the need for integrated planning of the areas to which functions have been decentralized, while in Kenya efforts to improve the coordination of planning activities at district level have been introduced as part of a general move to improve the quality of planning and implementation. In these cases, integrated planning is encouraged throughout the country, not only in selected areas, although some areas may still receive special assistance—either because of their particular need or simply because resources (including the overseas aid often used to finance ambitious integrated rural development programmes) are limited.

It should at this point be noted that in cases like this, where area planning is associated with the decentralization of decision-making, it is also seen as a way of increasing popular participation in planning. This, however, raises a number of issues related to the level to which planning is decentralized and the kind of people who are involved in planning at that level. These are issues which will be considered in the next chapter. For the time being our concern is with area planning as an operational level of planning activity, which provides an alternative approach to that of sectoral planning, rather than in the context of different spatial levels of planning activity.

Integrated area planning: organization and methods

Although integrated area planning has received considerable attention since the early 1970s, particularly in association with integrated rural development programmes, it has encountered serious obstacles and its methodology remains relatively underdeveloped (Belshaw, 1982). We suggested earlier that many so-called integrated plans are not really 'integrated' in the sense intended here and, because integrated rural development has become fashionable, especially as a way of attracting foreign aid, the label has been attached to many programmes which have not really been planned in an integrated manner. The report of an inter-regional seminar on integrated rural development (IRD) recorded in 1978 that:

There is now a propensity to pick up *ex-post*, convenient bits and pieces of programme, put them together and say they constitute the IRD programme. (Food and Agriculture Organization, 1978, p. 9)

In the majority of countries most effective planning activity continues to be on a sectoral rather than an area basis.

Many of the problems of integrated area planning can be attributed to the lack of an appropriate organizational structure, which is in turn due to the fact noted earlier that most governments are organized on an hierarchical, sectoral basis. Responsibility for development activity is divided between ministries, departments or other agencies on a functional or sectoral basis and each agency has its headquarters in the national capital and subordinate staff located at area level. Consequently, any attempt to prepare an integrated plan for a particular area is hampered by the lack of authority of staff at that level and the lack of coordination between the various agencies which they represent.

Those governments which embark upon integrated area planning therefore have to decide what organizational measures are best able to deal with this situation. Thus Friedmann (1969, p. 150), describing the Guayana programme in Venezuela, pointed out that:

One important question was whether the development of the Guayana's resource economy could be carried out efficiently and expeditiously through the coordinated action of many public agencies or whether the complexity and scale of the task would require an organization endowed with broad executive powers. The choice is a familiar one in regional planning.

There are, in fact, three main ways of tackling the situation. Perhaps the most popular way, eventually adopted in the Guayana and also in the Tennessee Valley, North-East Brazil and some of the externally funded integrated rural development programmes, is to establish a special organizational structure to plan and implement development in the area. This structure may be a special administrative arm of the central government, a local government authority or (as in the Guayana) a statutory corporation. The main problem which tends to arise in this approach is lack of coordination between the new organizational structure and the sectoral, hierarchical structure on which it is superimposed, a problem which closely resembles that noted earlier when a special organizational structure is set up to plan and implement a particular project or programme (Lele, 1975, chapte 8). It is particularly serious if the boundaries of the planning area do not coincide with those of normal political and administrative areas, as in the case of many river basins and in many of Zambia's integrated rural development projects (Zambia, 1981).

Another approach which is frequently used, especially in less ambitious planning exercises, is to employ a consultant planning team from outside the area—and often from outside the country—to prepare the development plan. It is argued that such a team is more likely to have the attitudes and expertise needed for the preparation of an integrated plan than those staff based in the area, who are hampered by their sectoral bias and the pressure of routine administrative work. In this case the problems generally arise when it comes to the implementation stage. The plan is then handed over to the normal administrative staff, who are frequently unable to handle an integrated plan because of the sectoral bias of the organizational structure in which they work

and are usually uncommitted—or even actually opposed—to the plan because they were not involved in its preparation. In many cases implementation is also hampered because the plan is not presented in a way which facilitates its implementation; such plans, especially if prepared by 'academic' consultants, tend to give too much attention to detailed descriptions of the existing situation and rather vague—and often over-ambitious—policies for future development and too little to specific activities or projects required to implement these policies. Consequently, the majority of plans produced in this way never get further than the drawing-board stage.

The third approach is to reform the existing organizational structure and to improve the capacity of staff in the area to prepare and implement their own plans. The organizational reforms involve measures to strengthen the 'horizontal' links between the representatives of the sectoral agencies within an area and weaken the 'vertical' links which tie them to their headquarters at the national level. In other words, they involve a combination of decentralization and horizontal coordination. Some countries, such as Kenya, attempt to do this by a series of gradual reforms (Oyugi, 1981); while others, including Tanzania, Zambia, and Papua New Guinea, have introduced more radical reforms (Conyers, 1981). Papua New Guinea has actually created a department of the national public service in each province and transferred field staff from their sectoral departments to the new provincial organizations, thus implying that inter-sectoral links within a province are now more important than national-provincial links within the sectors. The decentralization of control over finance and personnel is particularly important in such reforms because these are the main resources which are required to implement plans. Since such reforms are often also seen as a way of increasing popular participation in planning, we shall consider alternative organizational structures in more detail in the next chapter. These reforms then have to be supported by efforts to train staff at the area level in basic planning skills appropriate for use within the new organizational structure.

This approach to the problems of integrated area planning is perhaps the most difficult to introduce, particularly if major administrative and financial reforms are required, and it tends to result in less ambitious plans and a less sophisticated—or 'lower level'—form of integration. However, unlike the other two approaches, it does not result in a dual administrative structure (in which the area administration is superimposed upon the normal sectoral administration), it bridges the gap between plan preparation and plan implementation and it provides a basis for integrated planning in all parts of the country, not only in selected areas or subject to the availability of overseas financial and technical assistance.

Conclusions

We have devoted considerable space to a discussion of integrated area planning, not because it is—or should be—the most important operational level of

planning but because it is a level which creates particular problems, especially from an organizational point of view. These problems are due to the fact that integrated area planning cuts across the conventional sectoral structure of most government organizations. We have seen how the need for area planning has arisen in an attempt to counteract the prevailing trend towards sectoral planning and to consider the development of an area as a whole; and we have seen how such attempts are inevitably obstructed by the sectoral structure whose influence they are designed to counteract. Finally we have considered the various ways in which these obstructions can be at least partially removed.

As already indicated, we shall return to the subject of area planning in a different perspective in the next chapter, when we consider the various spatial levels at which planning may be practised. Meanwhile, in the last part of this chapter we consider how the three operational levels of planning we have considered so far—project planning, sectoral planning and area planning—can be brought together at the national level.

Comprehensive national planning

If we consider project planning, sectoral planning or area planning on its own, it is fairly easy to see how individual plans can be joined together to form a national development plan. Thus a national plan can be produced by putting together a list of projects (the 'shopping-list' approach), or by combining plans for every sector or every area. Alternatively, if one adopts a 'top-down' approach, a national plan can be disaggregated into specific projects or into either sectoral plans or area plans. In both cases the national planning agency is likely to play a major role in the process of aggregation or disaggregation.

However, this assumes that a country can—or should—make a choice between project planning, sectoral planning and area planning, while the evidence presented in this chapter suggests that this should not be the case, since each type of planning has its strengths and weaknesses. It is therefore necessary to seek a way of combining the three types of planning at the national level, as was implied in the concept of 'comprehensive' national planning portrayed diagrammatically in Figure 1 (Chapter 1).

At this point a more detailed discussion of the meaning of 'comprehensive' planning is required. The word comprehensive is itself a source of some confusion since, as may already be apparent to the reader, it can be used in a variety of ways. In discussions of the theoretical basis of planning it is generally used to refer to an approach to planning which takes all relevant factors into account before making a decision. However, in the practice of planning it is more often used, especially by economists, to mean planning for both the private and public sectors or, less often, in the more limited sense of planning all functional sectors or activities within the public sector. In this chapter we try to combine all these meanings by using it to refer to planning all activities at all operational levels. In other words, we use it to describe efforts to combine the project, sectoral and area approaches to planning at the national level.

Comprehensive planning, in the sense intended here, is not easy to achieve. It is conceptually fairly easy to combine project planning with either sectoral or area planning, since both sectoral and area plans have to be translated into specific projects or programmes if they are to be implemented. One way of doing this is the 'themes-strategy-projects' approach to regional (area) planning advocated by Bendavid-Val (1975), which could equally well be applied to sectoral planning. This approach involves three main stages: first, the identification of basic themes which suggest the direction in which development should be heading; second, the formulation of more detailed strategies which elaborate upon the basic themes; and third, the identification and detailed planning of specific projects to implement (or operationalize) the strategies. This approach provides a useful framework for identifying the specific planning activities which should be undertaken by both sectoral and area planning agencies. Moreover, it also suggests the different time perspectives which are required for different types of planning. Thus, project planning should normally be undertaken at frequent (usually annual) intervals, while the formulation of strategies and, in particular, basic development themes can be undertaken much less frequently, although periodic reviews will be required.

The most difficult task is to integrate the sectoral and area levels of planning. There is no easy way of doing this, since the two are fundamentally different. However, it is possible to reach some sort of compromise by adopting an iterative approach, in which the planning process involves a series of stages, undertaken alternatively by sectors and areas. Thus, for example, the preparation of a national plan might begin with the formulation of a national development strategy, outlining the main national objectives and the broad strategies which will be used to achieve these objectives. The sectoral agencies could then translate these broad strategies into more detailed strategies relating specifically to their particular functional activities. These sectoral strategies would then provide the framework for more detailed planning at the area level, where their relevance to local conditions and the interrelationships between sectors would be considered. Finally specific projects and programmes would be identified and planned by both sectoral agencies and areas, depending on the division of responsibility between them, and these would then be aggregated at the national level.

This basic model has to be varied to suit the particular conditions of each country, especially the nature of the political and administrative system and the availability of planning expertise. Moreover, the process is much more complex than the above description suggests. There has, in particular, to be much more iteration, both between sectors and areas and between the national level and the operational levels of individual sectors and areas. For example, the views of sectoral agencies and area authorities should be taken into consideration in formulating the basic national development strategy and there should be consultation between sectors and areas during the formulation of more detailed sectoral and area strategies and the identification of projects and programmes. However, the basic framework does indicate how the three sub-levels of planning activity can be brought together to produce a comprehensive national plan. We

STAMP: PERPUSTAKAAN S-2 JURUSAN PWK-ITB

consider this process from a different perspective in the next chapter, when we compare the 'top-down' and 'bottom-up' approaches to planning.

Guide to further reading

Many of the works cited in the guides to further reading at the end of the chapters on planning techniques in Part Three will provide useful reading for those involved in planning at any of the operational levels discussed in this chapter, since most of the techniques examined in Part Three are applicable in a wide range of planning activities. In this section, therefore, we list only material specifically directed towards particular planning levels, with special emphasis on the organizational aspects of planning at these levels.

Project planning

Two of the most useful books on project planning are *Management of Development Projects* (1979) and *Project Planning and Management* (1980) by L. J. Goodman and R. N. Love (New York, Pergamon Press). A broader view of project planning, with particular emphasis on rural development, is provided in *The Design of Rural Development* by U. Lele (Baltimore, Johns Hopkins Press, 1975).

Most other material is concerned with specific aspects of project planning, especially project appraisal and, to a lesser extent, implementation and monitoring; see the guides to further reading at the end of Chapters 8 and 9 for further details. The organizational aspects of project implementation are well covered in *International Development Administration*, edited by G. Honadle and R. Klauss (New York, Praeger, 1979) and *Implementation: The Problem of Achieving Results*, edited by G. Iglesias (Manila, Eastern Regional Organization for Public Administration, 1976).

Sectoral planning

There is very little material specifically on sectoral planning as such. However, because sectoral planning has tended to be the dominant level of planning activity in so many countries, much general material on the organization and methodology of planning is written with sectoral planning in mind. Furthermore, there are numerous books and articles on planning in specific sectors, such as agriculture, education, health, transport and so on. The role of sectoral planning in national planning is particularly well demonstrated in *Planning Development* by K. B. Griffin and J. L. Enos (London, Addison-Wesley, 1970), which includes four chapters on sectoral planning.

Integrated area planning

There is a vast literature on regional (area) planning in both developed and

developing nations. It is only possible to list a few of the more recent and/or useful works here. They are:

- Bendavid-Val, A., and P. P. Waller (eds), *Action-Oriented Approaches to Regional Development Planning* (New York, Praeger, 1975).
- Friedmann, J., and C. Weaver, *Territory and Function: The Evolution of Regional Planning* (London, Edward Arnold, 1979).
- Gant, G., *Development Administration* (Madison, University of Wisconsin Press, 1979), chapter 7.
- Hall, P., *Urban and Regional Planning* (Harmondsworth, Penguin Books, 1974).
- Hilhorst, J., *Regional Planning: A Systems Approach* (Rotterdam, University of Rotterdam Press, 1971).
- Misra, R. P. and K. V. Sundaram, *Multi-Level Planning and Integrated Rural Development in India* (Delhi, Heritage Publications, 1980).
- Saha, S. K. and C. J. Barrow (eds), *River Basin Planning: Theory and Practice* (Chichester, Wiley, 1981).
- United Nations, *Selected Experiences in Regional Development* (New York, 1970).
- United Nations Research Institute for Social Development (UNRISD), a series of ten volumes on regional planning edited by A. Kuklinski and published in The Hague by Mouton in the early 1970s. The series includes volumes on specific regions (including South-East Asia and Latin America) and on particular issues or policies, such as growth centres and information for regional planning.

There is also a growing literature on integrated rural development, although this is still an area where 'theory' lags behind 'practice' (Belshaw, 1982). Much of this literature is relevant to area planning, including the following:

- Food and Agriculture Organization, *Report on the FAO/SIDA/DSE Inter-Regional Symposium on Integrated Rural Development* (Rome, 1978).
- Lele, U., *The Design of Rural Development* (Baltimore, Johns Hopkins Press, 1975).
- Klauss, R., 'Interorganizational relationships in project implementation'. In Honadle, G., and R. Klauss (eds), *International Development Administration* (New York, Praeger, 1979), chapter 9.
- Rondinelli, D. A., and K. Ruddle, *Urbanization and Development: A Spatial Policy for Equitable Growth* (New York, Praeger, 1978), especially chapter 5.
- World Bank, *The Design of Organizations for Rural Development Projects: A Progress Report* (Washington, DC, World Bank Staff Working Paper No. 375, 1980).

Case studies of integrated rural development projects, including the well-known and much debated Comilla project in Bangladesh, are included in *Attacking Rural Poverty* by P. H. Coombs with M. Ahmed (Baltimore, Johns Hopkins

Press, 1974), although the main focus of this book is on community development approaches.

Finally, for a useful critical review article on integrated rural development, see Ruttan, V., 'Integrated rural development programs: a skeptical perspective'. *International Development Review*, vol. 17 (1975), pp. 9-16.

Comprehensive national development planning

Although there is a great deal of literature on national development planning, there is relatively little on the problems of achieving comprehensive planning and, in particular, the integration of project, sectoral, and area approaches. Some useful material can, however, be found in the following:

Bendavid-Val, A., 'The themes-strategy-projects approach to planning for regional development'. In Bendavid-Val, A., and P. P. Waller (eds), *Action-Oriented Approaches to Regional Development Planning* (New York, Praeger, 1975), chapter 1.

Caiden, N., and A. Wildavsky, *Planning and Budgeting in Poor Countries* (Chichester, Wiley, 1974), especially chapters 4-7.

Waterston, A., *Development Planning: Lessons of Experience* (Baltimore, Johns Hopkins Press, 1965), especially chapters 4 and 11.

Chapter 13

The Spatial Level of Planning Activity

Introduction

The previous chapter examined alternative *operational levels* of planning activity, considering in particular the relationship between—and relative merits of—planning at the project, sectoral and area levels. In this chapter we turn to the related issue of the *spatial level* of planning.

The operational level and the spatial level are not alternative methods of planning. They merely represent different dimensions of the organization of planning activity, or different ways of examining the way in which planning activity is organized. Thus any of the three operational 'sub-levels' of planning which we have considered—project, sector and area—can be undertaken at a variety of different spatial levels. This is most obvious in the case of area planning, which (as we pointed out in the previous chapter) can be undertaken at any level from that of a large region with several million people (as, for example, in the case of the states of India or Nigeria, the regions of the Sudan or large 'natural' regions such as river basins) to that of a small village community. However, sectoral planning can also involve planning at several different spatial levels, usually linked together in either an aggregative ('bottom-up') or disaggregative ('top-down') way. Even in the case of project planning, much of the actual work of planning may be done not at the site of the project but at any of several 'higher' planning levels.

This chapter is concerned with the choice between alternative planning levels. A large part of the chapter is devoted to an examination of the relative merits of making decisions at 'higher' and 'lower' levels in the spatial hierarchy; in other words, to the advantages and disadvantages of centralizing or decentralizing planning activity. The last section then draws some conclusions from this about the choice of planning level and the process of coordinating planning between different spatial levels. However, before embarking upon these focal issues it is necessary, firstly, to consider the spatial implications of the relationship between planning and implementation and, secondly, to look briefly at the concepts of centralization and decentralization.

Planning and implementation: spatial implications

The need to regard the preparation and implementation of plans as two interrelated components of an integrated process of development rather than as two separate activities has been emphasized throughout the book. In Chapter 11

we pointed out that, in terms of organizational structures, this means that one cannot consider the organizational structure within which plans are prepared without also considering the organization of plan implementation. In spatial terms, therefore, when considering the appropriate spatial level for planning it is also necessary to consider the level at which implementation will take place. There are two dimensions of this relationship which require attention here.

Firstly, it is quite common for the various stages of the planning and implementation process to be conducted at different spatial levels. Thus, for example, a sectoral plan for the extension of primary health care may be prepared by the ministry of health at the national level but implemented by its staff at regional or local level. Alternatively, a local government authority or a regional or local level planning committee may prepare a plan for the development of its area and also be responsible for the actual execution of the plan—but the power to approve the plan and allocate the financial resources needed to implement it may rest at the national level. This kind of division of responsibility can have a significant effect on the development process because, if there is not sufficient coordination between the various spatial levels involved, plans will not be implemented satisfactorily.

This does not necessarily mean that all stages of the planning and implementation process should be conducted at the same level, since in many instances some sort of division of responsibility is required. For example, there are often good reasons why local plans should be subject to some form of national control. However, it does mean that one must consider the role of the various spatial levels in all stages of the process, not just the preparation of plans. Consequently, in this chapter we shall be concerned with the centralization and decentralization not only of planning but of government functions in general.

The second dimension of the spatial relations between planning and implementation concerns the boundaries of planning areas. One of the fundamental choices which planners have to make is whether existing political or administrative areas should automatically be used as planning areas or whether special planning areas should be selected, using criteria which are appropriate for the particular type of planning concerned. Much of the older literature on regional planning was preoccupied with the choice of criteria for selecting and classifying different kinds of planning region (Dickinson, 1964; Hall, 1970, chapter 2; Hilhorst, 1971, chapter III; Friedmann, 1964). More recently, however, awareness of the very low rate of success in implementing regional plans has encouraged many regional planners to make greater use of existing political or administrative areas for planning purposes. There are, of course, some occasions when the existing political or administrative areas cannot be used. The most obvious cases are those where planning is concerned with particular issues which cut across political or administrative boundaries, as for example when planning the development of a large river basin which includes parts of a number of political or administrative areas, the industrial development of a metropolis whose hinterland extends beyond the boundaries of its political or administrative jurisdiction or the development of an area with particular

problems or potential. In such cases, special steps have to be taken to ensure that the organizational structure for implementing such plans exists or can be provided. In general, however, the chances of implementing plans tend to be greater if planning areas correspond to political or administrative areas and this factor often outweighs any advantages which might be gained by choosing special planning areas.

The concepts of centralization and decentralization

So much confusion surrounds the concepts of centralization and decentralization that some general discussion of their meaning is essential before it is possible to discuss their advantages and disadvantages in meaningful terms. There is an unfortunate tendency to justify moves to centralize or decentralize planning, and government activities in general, without sufficient explanations of what is meant by centralization and decentralization in these contexts. Since our concern here is with organizational structures, let us begin by considering how the two terms are used in literature on organization theory. Thus Mintzberg explains that:

When all the power for decision making rests at a single point in the organization—ultimately in the hands of a single individual—we shall call the structure centralized; to the extent that the power is dispersed among many individuals, we shall call the structure decentralized. (Mintzberg, 1979, p. 181)

This definition provides a useful basis from which to discuss the two concepts. However, for our purposes it is convenient to limit the concept of decentralization to the dispersal of decision-making power to individuals (or parts of an organization) at 'lower' levels in the spatial hierarchy—in other words, to individuals or groups located away from the spatial centre of decision-making authority, which is normally the capital city. Most references to the decentralization of government or planning have in mind this spatial form of decentralization and we shall adopt this usage of the term in the rest of this chapter.

There are four main points about the concepts of centralization and decentralization which require clarification before we can go on to examine their advantages and disadvantages for planning purposes. First it is important to note that discussions about centralization and decentralization are not discussions about the relative merits of two clear-cut alternatives—a centralized organization or a decentralized one—but about the *degree* of centralization or decentralization which is desired. As Faltas points out:

An organization can be neither absolutely centralized nor decentralized and still be an organization. In the former case, we would have a one-man show; in the latter, we would have a rabble of actors, each one doing his own thing. (Faltas, 1982, p. 5)

In other words, centralization and decentralization should not be regarded as

opposing states but as processes of movement in either direction along a continuum. Thus we would not describe the two organizations in Figure 8a by saying that A is centralized and B is decentralized but by saying that A is more centralized than B (or B is more decentralized than A). Alternatively, we might discuss whether an organization currently in position A would function better or worse if it were to move to position B—that is, if it were to become more decentralized.

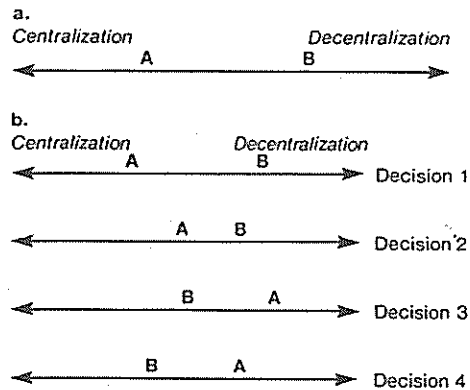


Figure 8. Measuring centralization and decentralization

Secondly, the degree of centralization or decentralization of decision-making in any particular organization will depend on the particular type of decision under consideration, since some decisions may be relatively centralized while others are relatively decentralized. This makes comparisons of organizations more complex than Figure 8 suggests. Thus comparisons between the two organizations shown in Figure 8b would be difficult, because when one considers some types of decision (decisions 1 and 2) A is more centralized than B, but when one considers other types of decisions (3 and 4) it is less centralized (or more decentralized) than B.

It should be noted that the word 'decision' is used in this context to refer to decisions which affect the operation and activities of an organization. However, such decisions can take many different forms and the complexity of discussions of centralization and decentralization is compounded by the different ways in which such decisions can be classified. One approach is to classify decisions according to the subject-matter concerned. For example, in Figure 8b, decisions 1, 2, 3, and 4 might be decisions about education, health, agriculture, and water supply respectively. Thus organization A would be more centralized in terms of decisions about education and health but less centralized in terms of decisions about agriculture and water supply. However, decisions 1–4 could also be different types of decision within any subject area. For example, category 1 might

be decisions about major policy issues, category 2 decisions about detailed planning strategies, category 3 decisions about financial control, and category 4 decisions about personal matters. In this case organization B would be an organization which has the power to make policies and plans but lacks much control over the financial and manpower resources needed to implement them.

Thirdly, when some degree of decentralization does occur, the power to make decisions can be decentralized to different kinds of people, or groups of people. For example, it can be decentralized to locally elected political leaders, to local representatives of the ruling political party, to representatives of central government agencies based in the area, to a senior central government official (such as a state governor or the equivalent of a district commissioner under the British colonial system)—or to some sort of committee or council which combines all these different people. Political scientists have traditionally emphasized the difference between decentralization to locally elected bodies (known as *devolution*) and decentralization to central government representatives (usually called *deconcentration*) (Maddick, 1963; United Nations, 1962). However, this distinction can sometimes cause confusion, particularly in cases of decentralization to local bodies composed of both locally elected representatives and central government appointees. Further discussion of these semantical issues is not necessary here.

This additional dimension makes the comparison of organizations in terms of the degree of centralization and decentralization an even more complex process. This point is well illustrated by a recent decentralization programme in Zambia. When details of the programme were announced in 1980, they aroused considerable controversy and some people argued that the programme was actually one of centralization, not decentralization. This apparent confusion can be explained by looking more closely at the nature of the programme (Conyers, 1981). Directly elected local government councils were replaced by councils composed of local representatives of the ruling party, a move which might be regarded as centralization, since it increased the party's control over local decision-making. However, the new councils were given the power to control a much wider range of government functions and so the programme could also quite justifiably be described as decentralization.

Finally, so far in this section we have been discussing centralization and decentralization as if there was only one possible spatial level to which decision-making powers could be decentralized. However, this is of course not the case and, as we have already suggested in the introduction to this chapter, there is a great deal of difference between decentralizing decision-making to an area with several million people and decentralization to a small village-level community. This adds another dimension to the concepts of centralization and decentralization and makes comparisons even more complex. Thus, for example, is a country with a federal government structure, in which there is a high degree of decentralization to a few large state governments but very little decentralization below that level, more or less decentralized than a country with decentralization of more limited powers to many small local government authorities?

Let us now summarize this brief discussion of the concepts of centralization and decentralization. Firstly, we are using the terms here to refer to the degree to which decision-making is (or is not) dispersed to lower levels in the spatial hierarchy. Secondly, the use of the word 'degree' is important in the above definition because it emphasizes that we are concerned not with two clear-cut alternatives, centralization or decentralization, but with a continuum ranging from highly centralized to highly decentralized. Thirdly, there are several different criteria which can be taken into account in determining the position of an organization on this continuum and, therefore, classifying it according to the degree of centralization or decentralization.

In particular, such classifications can be based on the significance of the decisions over which powers are decentralized, the kind of people to whom these decision-making powers are decentralized or the spatial level to which they are decentralized. Discussions about the advantages and disadvantages of centralization or decentralization, or comparisons of organizations (or countries) in terms of the degree of centralization or decentralization, are only meaningful if those involved clarify the criteria they are using at the start of the discussion. With these points in mind we shall now consider the advantages and disadvantages of both increasing centralization and increasing decentralization in the context of planning.

The case for centralization

When development planning first gained popularity in the late 1950s and early 1960s it was seen as a basically centralized activity, conducted by a central planning agency located in the national capital. It was, of course, necessary for the planners to obtain information from sources outside the capital city but the analysis of this information and the formulation of planning proposals and preparation of plan documents was normally conducted at the national level. The physical planning machinery also tended to be centralized. This centralization of planning activity can be partially explained by shortage of manpower and, in the case of development planning, the fact that attention was focused on the management of the national economy and this macroeconomic kind of planning requires strong central control. However, at that time there was also a trend in many countries, especially those which had recently gained political independence, towards increasing centralization of other forms of decision-making. This was often reflected both in a reduction of the powers of local level governments and the increasing centralization of the central government's administrative structure, especially in Africa (Davey, 1971; Johns and Riley, 1975).

More recently there has been, for reasons which we shall examine in the next section of the chapter, a move in the opposite direction in many countries, resulting in increasing decentralization of planning in particular and decision-making in general (Rondinelli, 1981; Conyers, 1983). Nevertheless, in all nations—even those where decentralization is officially advocated—there

continues to be considerable pressure to maintain, or even increase, central control over decision-making. This section examines the main arguments used to justify a relatively high degree of centralization of planning and decision-making.

The arguments in favour of centralization can be divided into two broad categories: political and managerial.

Political arguments

The most frequently used argument in favour of centralization is the need to maintain a strong national development policy. This in turn suggests the need not only to strengthen the policy-making capacity at the national level but also to limit the freedom of regional or local bodies to formulate their own policies which might conflict with national policies. The tendency for many countries to increase central control in the immediate post-independence period could often be explained by the concern to make and implement radically new development policies in order to bring about rapid change. We noted in Chapter 1 that this concern played a major role in the introduction of development planning in any form.

Another important political argument is related to regional equity. A relatively high degree of centralization enables the central government to control the distribution of resources between regions, while in a more decentralized system there is a risk that the more developed regions will be able to make better use of the powers decentralized to them, thereby increasing inequalities even further. A similar argument is often used in relation to inequalities between individuals or groups. Centralization enables the central government to control the distribution of resources between social groups through the introduction of egalitarian development policies, while the decentralization of power may only benefit a relatively small group of already privileged people at the regional or local level. It should be noted that, in both cases, the arguments are only valid if the central government is itself willing—and able—to pursue policies designed to reduce inequalities. Where this is not the case, egalitarian arguments cannot be used to justify centralization.

The third argument which is used to justify publicly a relatively high degree of centralization is the need to strengthen national unity. This is partly related to the other two arguments, since a strong and egalitarian national development policy can help to develop a sense of national unity. In addition, however, centralization enables the state to use channels such as the media, formal and informal education systems and national policy documents to actively encourage a sense of national unity and identity. In more extreme cases this process might be more aptly described as political indoctrination, a term which suggests that too much of this kind of central control is generally regarded as undesirable, and we shall see in the next section that it can also be argued that national unity can best be obtained through a reasonable degree of decentralization.

Another reason for centralization which, for obvious reasons, is not usually publicly stated, is the desire of those individuals or groups holding power at the

national level to maintain or increase this power for its own sake—or more accurately, for the benefits and privileges which it brings to them. Unfortunately, this is often the most powerful force in support of centralization or, to put it slightly differently, the main factor hampering attempts to increase decentralization. Rondinelli (1981) suggests that this problem can be partially overcome by showing national leaders that significant decentralization can be achieved without a major loss of those powers which are likely to be most important to them. Nevertheless, while this is undoubtedly true, the fact remains that decentralization does involve a redistribution of power and those who are likely to lose power as a result will inevitably have reservations, even if the powers they lose are relatively unimportant to them.

All these arguments tend to result in a particular kind of centralization. They tend to encourage central control over 'allocative' decisions rather than 'implementation' decisions, since allocative decisions are those associated with the formulation of national policies and the distribution of resources. They also tend to encourage centralization within the political and planning systems more than in the structure of implementing agencies. This is reflected in the trends already noted to limit devolution to locally elected political bodies at regional or local level and to strengthen the role of the cabinet (or equivalent body) and the central planning agency. Deconcentration to regional or local administrative staff is less likely to be discouraged, although in many cases the desire to maintain control over all aspects of development activity and, in particular, the personal ambition of those at the highest levels of the administration may discourage any form of decentralization.

Managerial arguments

The other type of argument is concerned with the effectiveness or efficiency with which decisions are made and implemented. These arguments suggest that a relatively high degree of centralization results in more accurate or appropriate decisions and a greater output for a greater input of manpower, money and time. More specifically, centralization enables decisions to be made on the basis of an overall national view rather than from the more limited perspective of an individual region or group and it is generally quicker and involves less skilled manpower. It also facilitates central control and coordination of planning and implementation—thus reducing conflicts, inconsistencies or duplication between regions or—at the national level—functional agencies.

We shall see in the next section that there is another side to this argument. In particular, we shall see that there are certain kinds of information which are not available at the national level and certain kinds of coordination which cannot be obtained from the centre. For the time being, however, it is only necessary to note that there are some important managerial arguments in favour of centralization, particularly if there is a shortage of skilled manpower or time.

These managerial arguments tend to lead to somewhat different kinds of centralization than the political arguments. They tend to emphasize the need for

central control over implementation decisions more than allocative decisions and for centralization within the administrative system more than the political system. However, the interrelationship between allocative and implementation decisions, and between the role of the politician and that of the administrator, is such that political-allocative centralization is often necessary in order to ensure central control over administration and implementation. Moreover, the managerial arguments, like the political arguments, tend to support the establishment of a powerful central planning agency, rather than the decentralization of professional planning activities to the regions or local authorities.

The case for decentralization

It has already been mentioned that in recent years there has been a reaction against the earlier centralization of planning and decision-making. This has resulted in a variety of efforts to decentralize political, administrative and planning systems and a growing interest in decentralization among international agencies, such as the United Nations and the International Labour Organization (Conyers, 1983). The reasons for this can best be understood by examining the arguments in favour of decentralizing decision-making powers. These arguments can also be considered under two headings: political and managerial.

Political arguments

The most important political argument for decentralization is people's right to participate in making decisions about their own development. There are very few Third World governments which do not declare themselves in favour of such participation, although in many cases very little positive action is taken actually to achieve it.

In some cases the need for participation is met simply by electing members of the central government through democratic means. It is thus argued that, although decision-making is centralized, local people can influence the decision-making process by choosing the people who make the decisions on their behalf. Increasingly, however, it is felt that effective participation requires some decentralization of the decision-making process. Thus President Kaunda of Zambia distinguishes between 'political democracy' and 'participatory democracy'. He defines participatory democracy as 'the type of democracy in which citizens participate not only through their freely elected representatives but also by their own direct involvement in the decision-making process' (Kaunda, 1974, pp. 9–10). This concept of popular participation is also an integral component of the basic needs approach to development which has guided many national and international development policies since the mid-1970s (Ghai *et al.*, 1977) and this has led to an interest in decentralized planning among international agencies concerned with basic needs strategies, particularly the ILO (ILO, 1981).

Decentralization is also advocated as a means of distributing political power more widely and, in some situations, reducing the undesirable effects of a weak, corrupt, or unconcerned central government—or providing some sort of safeguard in case such a government should emerge at some time in the future. If the central government is unconcerned about basic problems such as social or regional inequality, this argument may be extended to suggest that decentralization reduces inequalities, thus apparently contradicting the argument used by those in favour of centralization. This apparent contradiction can be explained by the fact that the relationship between decentralization and inequality is not a simple one; the impact of decentralization on inequality depends on the degree and form of inequality, the form of decentralization, and the composition and policies of both central and regional (or local) government authorities.

Another apparent contradiction is that decentralization can also be advocated as a means of strengthening, rather than reducing, national unity. Decentralization programmes in countries such as Nigeria, the Sudan and Papua New Guinea have been justified at least in part on this basis. The relationship between decentralization and national unity is rather different from that between decentralization and inequality. The apparent contradiction is because governments may attempt to achieve unity either by encouraging—or even enforcing—uniformity (centralization) or by allowing each region to develop in its own way within a broad national policy framework (decentralization). The latter approach is well expressed in the words of a local political leader in Papua New Guinea, who sees decentralization as a positive step 'towards building genuine unity and nationalism based on the recognition of our regional cultural and ethnic diversities' (Hannett, 1974), and by Zambia's President Kaunda, who sees it as a means of achieving 'unity based on a frank and positive acceptance of the diversity of our peoples' (Kaunda, 1974, p. 40).

These various political objectives—popular participation, distribution of political power and national unity—cannot be achieved through any form of decentralization. They all require that there be some decentralization of control over allocative as well as implementation decisions, although in the case of national unity there may in some situations be a risk that decentralization of too much control over allocative decisions could result in the fragmentation of the nation state.

It is also generally necessary that decision-making powers be decentralized to locally elected political representatives, not just to central government administrators or appointees or to local offices of the national planning agency. However, the existence of locally elected political leaders does not necessarily guarantee effective popular participation or a more equal distribution of political power. A great deal depends on the existing social and political structure in the area and the characteristics and methods of selection of the local political leaders. Where these leaders represent the interests only of a small existing elite, it is possible that the views of the mass of the population could be better represented through field staff or other agents of the central government.

Equally important is the level to which decision-making powers are decentralized. Decentralization to a few large regions may sometimes be adequate to reduce pressures from powerful regional groups (although once again there is a risk that too much or the wrong sort of decentralization could encourage fragmentation rather than strengthen unity) but it will not be very effective as a means of achieving popular participation or distributing the power base more widely. In fact, the desire to achieve effective popular participation may well lead to pressure to decentralize further and further down the spatial hierarchy; even within a single village there are likely to be divisions on the basis of class, caste or clan and each group is likely to press for more say in decision-making. Where there are major inequalities at the village level, as in many Asian and Latin American countries, decentralization of decision-making powers even to this level may merely reinforce the existing power structure and do nothing to meet the basic needs of the majority of the population.

It should be apparent from the above discussion that there are many obstacles to the achievement of popular participation. These obstacles are, in fact, so numerous that 'effective' participation must usually be regarded as an ideal or goal which guides policy and action rather than as an objective which can be actually or easily obtained in the foreseeable future (Apthorpe and Conyers, 1982). Further discussion is beyond the scope of this book and the reader who is interested in this very important topic is referred to the guide to further reading at the end of the chapter. At this point it is only necessary to recognize that, in most situations, decentralization of decision-making encourages popular participation in the process of development planning but that the degree and form of participation which results depends not only on the form of decentralization but also on the local social and political structure and organization.

Managerial arguments

Popular participation in decision-making has so far been discussed as a basic human right and, therefore, as an end in itself. However, it may also be regarded, from a management point of view, as a means of improving the way in which plans are prepared and implemented. There are two main reasons for this.

Firstly, popular participation is a way of providing more accurate and detailed knowledge about local needs and conditions, with the result that plans are more likely to be relevant, implementable and acceptable to the local population. This sort of information is very difficult to obtain at the national level and as a result many local development projects and programmes which are planned at the national level encounter problems in the implementation stage. Recognition of this has gradually led to the realization that, although macro-level data is important for some planning purposes, this is not the only sort of data required, particularly in the case of local-level projects and programmes in rural areas. This in turn has led not only to attempts to improve the flow of information from local

to national level but, more importantly, to moves towards some decentralization of decision-making.

Secondly, if the people who will be affected by a project or programme are involved in its planning, they are more likely to accept it when it is introduced and sometimes even to make a contribution to its establishment or maintenance through some sort of self-help effort because they will identify with it. In every country there are many examples of projects which were rejected or neglected because the local people saw them as something imposed upon them by the government rather than as something which they really wanted. Moreover, it is generally accepted that self-help contributions, in the form of cash or kind, are more likely to be forthcoming if the people have been involved in the planning stages.

Decentralization may also be advocated as a way of improving the management of development by increasing flexibility and responsiveness. If projects and programmes are planned and implemented at the local level, it is easier to make adjustments if unanticipated changes are required. For example, if a capital works project—such as a road or a health centre—is not implemented according to plan, it is easier to make adjustments such as the extension of the time required or the transfer of funds from this project to another. Similarly, if in the course of implementing a programme such as the introduction of a new cash crop, problems arise—for example, the crop proves unsuitable in certain parts of the area because of adverse soil conditions or opposition from local farmers—changes can be made more easily and quickly if control is decentralized.

Finally, decentralization is also advocated as a means of improving coordination between the various agencies involved in planning and implementing development programmes at the regional or local level; in other words, it is seen as a way of achieving the type of integrated area planning described in Chapter 12. If decision-making is highly centralized, each agency in the area has to seek approval from its headquarters before going ahead with any project or activity; thus coordination at the area level is only possible if there is agreement between the various agencies at the national level, and often such agreement does not occur because each agency has its own priorities and these priorities are not necessarily the same as those at the area level. Decentralization, on the other hand, while not guaranteeing coordination or integration, does at least allow the various agencies to make their own decisions and so to cooperate with other agencies if it is in their interests—or they can be persuaded—to do so. Furthermore, as we suggested in Chapter 12, many decentralization programmes go further than this by including some measures to actually enforce coordination, such as the introduction of a person (or group of people) with formal coordinating powers.

The managerial arguments in favour of decentralization result in rather different priorities in terms of the type of decentralization required. They put relatively more emphasis on decentralization of control over implementation decisions and on the decentralization of powers to administrative staff at the regional or local level and, as we have already mentioned, they often include

measures to coordinate activities within the area. In fact, the general concern to improve the planning and implementation of rural development programmes in recent years has led to a variety of organizational changes in many countries, all designed to bring about some degree of decentralization and coordination at the area level (Rondinelli, 1981). These moves are part of the increased attention devoted to integrated area planning which we noted in Chapter 12.

This does not mean that managerial considerations discourage more political forms of decentralization, such as decentralization of the power to make allocative decisions and devolution to locally elected political bodies. Such moves will often strengthen the more administrative measures and generally contribute to managerial improvement. However, they are of relatively less importance from a managerial point of view than from a political point of view. This is reflected in the fact that the type of decentralization programme described above, involving both decentralization and coordination at the area level, is often introduced in countries which wish to retain a relatively high degree of political centralization.

Managerial considerations do not necessarily require decision-making powers to be decentralized to the lowest possible level in the spatial hierarchy. More important perhaps is that they be decentralized to the levels at which development programmes and projects are actually implemented. In many countries this has in recent years resulted in increasing emphasis on a relatively small political or administrative area, often known (especially in those countries which were once subject to British colonial rule) as the district (Stöhr and Taylor, 1981). This is generally the lowest level at which most government agencies are represented and, therefore, an important level in the implementation of rural development programmes. However, it may also result, especially in larger countries with several major political and administrative levels, in a hierarchy of planning levels to which decision-making powers are progressively decentralized. We shall consider this in more detail in the next section.

The choice of spatial planning levels

The analysis in the last two sections has shown that there is no obvious answer to the question of what is the appropriate spatial level of planning activity. There are very powerful arguments in support of both increasing centralization and increasing decentralization and a great deal depends on the social and political structure of the country concerned, the objectives of development planning in the country and the particular types of decisions which are under consideration. However, this does not mean that we cannot draw some conclusions from the discussion in this chapter.

The first conclusion, which was mentioned at the beginning of the chapter but now needs to be re-emphasized, is that the spatial level of planning activity cannot be considered in isolation from the spatial level at which all forms of decisions about the planning and implementation of development programmes are made. In other words, it is necessary to consider the degree of centralization

or decentralization in the structure of government as a whole, not just in the formal planning structure. This explains why we have devoted so much attention in this chapter to discussions of centralized and decentralized systems of government.

The second conclusion, which emerges from our examination of the arguments for both centralization and decentralization, is that there is no single spatial level at which all decisions can or should be made, even if one considers only one country. Some decisions can best be made at one level, some at another, and so on, depending on the type of decision and the particular objectives one is concerned to achieve. Recognition of this fact provides the basis for designing an analytical framework within which one might discuss the optimum degree and form of centralization or decentralization in any particular situation.

The basic component of such a framework is the identification of a hierarchy of spatial planning levels, extending from the national level through a series of intermediate levels of decreasing size right down to the level of the village (or its equivalent in an urban area) or even a part of a village. In order to provide the necessary coordination between planning and implementation, these should as far as possible correspond to recognized political or administrative units, although in some cases where a particular planning problem exists it may be necessary to identify special planning regions.

Having thus identified a hierarchy of planning levels, the next step is to decide which decisions should be made at which level, remembering that decisions can be classified according to their subject-matter (agriculture, health services, public works, and so on) and according to their nature and significance (recognizing in particular the distinction between allocative and implementation decisions). This can only be determined by considering the advantages and disadvantages of each level in the light of the objectives one is trying to achieve, remembering the existence of both political and managerial objectives and recognizing the need to consider the point of view not only of people at the national level but also of those at the particular spatial level under consideration—and the fact that these two views may sometimes conflict.

As part of the same process it is necessary to decide who should hold the decision-making powers at each level. Once again this can only be done in the light of conditions and objectives pertaining in the particular situation. However, it may help to remember that a choice can be made between individuals and groups and between locally elected representatives and central government administrators or appointees (or a combination of the two) and also to remember that, in many cases, one of the objectives may be to coordinate activities at the area level as well as to decentralize the decision-making process.

Finally, it is necessary to consider the interrelationship between the various spatial levels in the overall process of decision-making. One of the disadvantages of any significant degree of decentralization is that it makes vertical coordination and control more difficult and often increases the cost, duration and complexity

of any planning exercise. We noted earlier that this is sometimes used as an argument in favour of increased centralization. The alternative approach is to try to improve the process of vertical coordination.

Coordination between the various spatial levels can be achieved in a number of ways. Firstly, it is important to ensure that the division of decision-making powers between the various levels is clearly defined, so that there is no confusion about roles and responsibilities. Secondly, it is necessary to provide channels of communication between the levels. These channels may be within the political, administrative or professional planning system, or a combination of all three, depending on the nature of regional and local decision-making bodies. Thirdly, procedures must be introduced in order to determine the role which each level will play in any particular part of the planning process, such as the production of a five-year or annual plan document, the design of a new national health programme or the planning of an integrated rural development project in a particular area.

The whole process of coordinating planning between different spatial levels, including the division of functions between these levels, can be approached in two different ways. One is the 'top-down' approach, in which the planning process starts at the national level, at which many basic decisions (especially those of an allocative nature) are made, and then the plan is disaggregated—and increasing degrees of detail worked out—at progressively lower levels in the hierarchy. The other approach is the 'bottom-up' approach, in which initial proposals are made at the local level and then these are aggregated—and obvious cases of conflict or duplication removed—at progressively higher levels.

These contrasting approaches provide a useful conceptual basis for comparing different systems and they also help to indicate the degree of centralization or decentralization in any particular system. In practice, however, most planning processes are a mixture of top-down and bottom-up approaches, with some parts of the process being initiated at the national level and others at various lower levels and with considerable communication both up and down the vertical channels in the course of preparing the plans. The Chinese planning system is well known as an example of a system which combines the top-down and bottom-up approaches (Conyers, 1977; Robinson, 1975; Wu and Ip, 1981), although its value as a model for use elsewhere is somewhat limited because of China's unique political organization.

In conclusion, it should be emphasized that the system for determining the spatial levels of planning and coordinating activities between them, which we have elaborated here, should not be regarded as a rigid set of procedures which have to be adopted in all situations. It is not anticipated that it will always be possible, or even desirable, to follow these procedures precisely, since many other more pragmatic issues will help to determine the levels at which decisions are made and the interaction between these levels in the planning process. Nevertheless, they can be used as guidelines in helping to determine the procedures which are appropriate in any particular situation.

Guide to further reading

Centralization and decentralization

Literature on centralization and decentralization can be divided into two categories: what might now be regarded as 'classical' works written during a period of interest in decentralization and local government in the early 1960s and more recent material resulting from a current resurge of interest in decentralization.

The classical works include:

- Hicks, U. K., *Development from Below* (Oxford, Clarendon Press, 1961).
 Maddick, H., *Democracy, Decentralization and Development* (Bombay, Asia Publishing House, 1963).
 United Nations, *Decentralization for National and Local Development* (New York, 1962).

The more recent material tends, unfortunately, to be less accessible. It includes the following:

- Institute of International Studies, University of California at Berkeley, series of mimeographed reports produced in connection with a Project on Managing Decentralization, mainly in 1981.
 International Labour Organization (ILO), series of reports on decentralized planning published from 1981 onwards as part of the World Employment Programme Research Working Paper series, published in Geneva and available from ILO offices.
 Kochen, M., and K. W. Deutsch, *Decentralization: Sketches Towards a Rational Theory* (Cambridge Mass., Oelgeschlager Gunn & Hain, 1980).
 Rondinelli, D. A. 'Government decentralization in comparative perspective: theory and practice in developing countries', *International Review of Administrative Sciences*, vol. 67 (1981), pp. 133-45.
 Rowat, D. C. (ed.), *International Handbook on Local Government Reorganization* (London, Aldwych Press, 1980).
 United Nations, Development Administration Division, Report and papers of an *Interregional Seminar on Decentralization for Development*, Khartoum, September 1981 (New York, mimeo).
 United Nations Centre for Regional Development (UNCRD), *Implementing Decentralization Policies and Programmes*, Report on UNCRD Workshop, Nagoya, July 1981 (Nagoya, Japan, UNCRD, 1981).

Popular participation and self-help

We have seen that discussions on decentralization inevitably raise issues related to popular participation in planning and development. There is a large literature in this field, spanning several different disciplines. Some of the more useful material for planners in developing countries is as follows:

A series of reports produced by the Rural Development Committee of the Centre for International Studies at Cornell University during the 1970s. Some of the main objectives and findings of the research from which these reports resulted are usefully summarized in the following monographs published by the Committee: *Rural Development Participation: Concepts and Measures for Project Design, Implementation and Evaluation* by J. M. Cohen and N. T. Uphoff (Rural Development Monograph No. 2, 1977) and *Feasibility and Application of Rural Development Participation: A State-of-the-Art Paper* by N. T. Uphoff, J. M. Cohen, and A. A. Goldsmith (Rural Development Monograph No. 3, 1979).

Conyers, D., *An Introduction to Social Planning in the Third World* (Chichester, Wiley, 1982), chapters 6 and 7.

International Labour Organization (ILO), series of reports produced as part of the World Employment Programme Research Working Paper series, published in Geneva and available from ILO offices.

O'Regan, F. et al., *Public Participation in Regional Development Planning* (Washington DC, The Development GAP, 1979).

United Nations, *Popular Participation in Decision-Making for Development* (New York, 1975).

United Nations Research Institute for Social Development (UNRISD), various reports on popular participation, including the following: *Enquiry into Participation: A Research Approach* by A. Pearse and M. Stiefel (Geneva, 1979); a revised version of the above which includes comments by a variety of people and is entitled *Debaters' Comments on Enquiry into Participation*, edited by S. Cohen (Geneva, 1980); and a series of reports entitled *Dialogue About Participation*, published periodically.

For the relationship between popular participation and self-help, the following are useful:

Kirsch, O. C. et al., *The Role of Self-Help Groups in Rural Development* (Saarbrücken, Verlag-Breitenbach, 1980).

Lele, U., *The Design of Rural Development* (Baltimore, Johns Hopkins Press, 1975).

Choice of spatial planning levels

There is not much information available on the process of dividing planning functions between spatial levels and coordinating information flows between these levels. However, the following are of some value in this respect:

Misra, R. P., and K. V. Sundaram, *Multilevel Planning and Integrated Rural Development in India* (Delhi, Heritage Publications, 1980).

Stöhr, W. B., and D. R. Fraser-Taylor (eds.), *Development from Above or Below? The Dialectics of Regional Planning in Developing Countries* (Chichester, Wiley, 1981).

Uphoff, N. T., and M. J. Esman, *Local Organization for Rural Development: Analysis of Asian Experience* (Ithaca, Rural Development Committee, Centre for International Studies, Cornell University, 1974).

Waterston, A., *Development Planning: Lessons of Experience* (Baltimore, Johns Hopkins Press, 1965), chapter 16.

Chapter 14

Planners and Planning Agencies

Introduction

In Chapter 1 we discussed briefly the relationship between planning and professional planners. We pointed out that planning, as a process of decision-making, involves a wide range of individuals and organizations—including politicians, administrators, private organizations, and the general public—and so almost anyone may be a 'planner' in the sense that he (or she) is involved in some sort of planning activity at some time. In our discussions of the organization of planning so far, we have also tended to adopt this broad approach to planning, emphasizing the need to consider the whole of the organizational structure within which decisions are made. However, we went on in Chapter 1 to explain that the word 'planner' is more often used to refer to a *professional planner*—that is, someone who is employed, and often also trained, specifically to perform a planning role. We suggested that planning can take place without professional planners but that their presence can, if carefully utilized, generally improve the planning process.

Our concern in this chapter is with these professional planners and the organizations in which they work. The chapter is divided into four main sections. The first section looks at the role and qualities of a planner and at different types of professional planner. The next section then examines the role and structure of those organizations in which planners work, including national planning agencies, planning units within functional agencies, and area-based planning units, and the third section focuses on the education of planners. Then in the last section of the chapter—and of the book—we broaden the discussion again to consider the role of planners and planning agencies in the society in which they have to operate.

The professional planner

In discussions about the introduction or extension of planning activities one often hears comments such as the following: 'the main obstacle to the development of planning is the lack of skilled planners' or, more specifically, 'we cannot introduce planning in every ministry (or in every region) yet because there are not enough trained planners'. However, at both national and regional level one may also hear complaints from professional and technical personnel about the inadequacies of, and problems caused by, professional planning staff.

These divergent views about the value of professional planners can be

explained partly by the fact that there are both advantages and disadvantages in employing professional planners and partly by variations in the quality and performance of different types of planner. In this section of the chapter we therefore examine the advantages and disadvantages of employing professional planning staff and then consider the qualities required by a planner and the many different types of planner which exist.

The professional planner: help or hindrance?

There are two main arguments which can be used to support the case for full-time professional planning staff. The first is related to the fact we have already noted that most planning activities involve some form of communication or interaction between individuals, groups or organizations with different experiences and interests. The role of a full-time professional planner in such situations is to stimulate and facilitate the communication process. He (or she) is able to provide this sort of assistance partly because planning is his main role and he therefore has the time and commitment to devote to it, whereas other people have many other commitments which are (to them) more important and consume most of their time and energy, and partly because he should have a broader, more balanced view of the problem at hand than any of the individual people or organizations involved, since they see the situation only from their own particular viewpoints. In other words, the planner is able to act as a facilitator, coordinator and negotiator.

Secondly, the professional planner has been specially trained to perform this role. He should, in particular be skilled in the arts of coordination and making decisions and he should be aware of the nature of the planning process, including the need to see planning as part of an integrated process of making and implementing decisions in order to achieve specific goals and objectives. Moreover, he should also have the skills (as well as the time) needed to perform some of the more mundane functions associated with planning—such as the collection, processing and analysis of data, the preparation of plan documents and the routine monitoring of implementation progress. These are the particular professional skills of the planner and they are needed to complement the rather different kinds of technical skills of the staff in the agencies whose activities he is trying to coordinate—and the political skills of the politician.

There are also two main counter-arguments used by those who maintain that professional planners are unnecessary and may even hamper the planning process. One of these arguments is that the planner is ignorant of the particular technical and practical issues involved in any of the activities which he tries to coordinate. Thus, for example, agricultural staff may complain that a planner who urges them to concentrate on increasing the output of smallholder farms is unaware of the problems involved in bringing about any significant change in smallholder farming. Similarly, when the ministry of education is encouraged by the national planning agency to make the educational system more relevant to rural life, it may feel that the planners are unaware of the many problems

involved—the attitudes of parents and children, the need to continue to prepare some children for urban employment, the lack of appropriate teaching materials, and so on. In other words, the planner is seen as someone who interferes in something about which he knows very little and he may thus be regarded with scorn and—especially if he is in a position where he can force other organizations to comply with his wishes—resentment.

The other argument is that the planner delays and complicates the process of decision-making. He may do this either by simply being an extra component in the decision-making process, thus increasing the number of people who have to be informed or consulted or have to give their views or approval, or by introducing new criteria which have to be followed in the process of making a decision. Thus, for example, if a national planning agency becomes involved in the approval of the annual capital works budget, it not only constitutes an extra channel through which project proposals have to be channelled (often midway between the technical ministries and the ministry of finance) but may also complicate the process by demanding that, for instance, all proposals be submitted on special forms which indicate the feasibility of the proposed project and the contribution it will make towards meeting national development objectives. Such procedures may be highly desirable but they add to the length and complexity of the planning process and thus cause resentment, particularly if—as is often the case—the new procedures are unrealistic in terms of the availability of data, analytical skills or time in the technical ministries.

This brief discussion of the advantages and disadvantages of the professional planner suggests that, although there can be definite advantages in employing a professional planner, some form of planning activity can take place without his presence and, perhaps more important in the present discussion, the planner has a very delicate role to play and he can quite easily cause more harm than good if he oversteps his role or makes unrealistic demands. It is thus important that we now look in more detail at the role of a planner and the qualities which he should possess.

The planner's role

It was suggested above that the planner should be a facilitator, coordinator and negotiator. Although this concept of the planner's role is gaining increasing support in both developed and developing countries (Webber, 1963; International Union of Local Authorities, 1967; Seers, 1972; Eversley, 1973; Boisier, 1979), there are still many planners and planning agencies, and many books and articles on planning, which do not adopt this view. Consequently, it may be useful to examine each of the three components of this role in more detail here.

As a *facilitator* the role of the planner is to encourage planning, both by making relevant individuals and organizations more aware of the purpose and nature of planning and by providing services (for example, collecting and analysing data, organizing meetings, writing reports) which are necessary for the

planning process to progress smoothly and with the minimum inconvenience for all those involved. Thus Seers suggests that 'perhaps the most important job of a planning office is to plan planning itself' (Seers, 1972, p. 33).

As a *coordinator* the planner has to ensure that all those individuals, organizations, or groups which have some interest or expertise in a particular field are involved in planning its activities. This may mean consulting with them, collecting information from them or on their behalf, making sure that they attend relevant meetings and are kept informed of relevant developments in related fields, and so on.

As a *negotiator* his role is to try to resolve conflicts between these various individuals and groups, in order to reach decisions which are in line with certain agreed goals and objectives, realistic in terms of prevailing conditions and resources and acceptable to those who will be responsible for approving and implementing them and those who will benefit (or suffer) from them (Eversley, 1973; Boisier, 1979). Needless to say, this is not an easy task—especially since the planner is seldom in a position to be able actually to impose his views or wishes on the others; he is a negotiator rather than an arbitrator. Nevertheless, by encouraging dialogues between the parties concerned, ensuring that all available relevant information is at hand, and analysing this information in a manner which indicates the implications of alternative courses of action, the planner can hopefully have some impact.

This concept of the planner's role has two major implications. Firstly, it suggests that the planner cannot work in isolation. He has to work very closely with all the other individuals and organizations involved in the preparation and implementation of plans, including administrative and technical staff, politicians, relevant non-government organizations and the general public. Moreover his relationship with them involves much more than just consultation; it involves coordinating and negotiating between them and plans should thus represent the outcome of this process of reconciling their different views and interests, rather than simply the personal views of the planner himself.

Secondly, it suggests that much of the work of the planner involves routine technical and administrative tasks, such as collecting and processing data, attending meetings, writing reports, and compiling and presenting information on implementation progress. Furthermore, the planner should spend a large proportion of his working hours talking to people in other organizations or agencies, not only in formal meetings but also through informal discussions. This is a very different view from that of a planner sitting all day in his own office preparing plans which indicate how he would like the world to be.

Unfortunately, as we have already indicated, many planners do not operate in this manner. Hence Leys' conclusion, discussed in Chapter 11, that the establishment of planning merely constitutes 'the introduction of a new group competing with those already in the political system' (Leys, 1972, p. 61). In order to reinforce the alternative and (in our view) preferable concept of the role of the planner, we may thus reiterate a statement made as long ago as 1967 but still relevant today:

The myth of planners being a group of specialized technicians, somewhere up in a planning department, should be destroyed and replaced by the notion of planners as people who are involved in the day-to-day activities of government. (International Union of Local Authorities, 1967)

Types of professional planner

The discussion in this chapter so far has tended to assume that professional planners are a homogeneous group. However, it should be evident from earlier chapters that this is not the case. We have pointed out on a number of occasions that the planning profession in developing countries tends to be divided into two fields, which we have called economic development planning and physical planning. However, we have also suggested that this does not provide a very useful basis for conceptualizing the different types of planning activities and the different professional skills which they require. In Chapter 3 we therefore advocated an integrated approach to development planning, which incorporates all efforts to control, direct or influence the process of development and thus draws upon the expertise or a wide range of professional staff.

This approach suggests that it is not enough simply to recognize two types of planner—the economic planner and the physical planner. There is a need for a much wider range of planning expertise, including planners trained in different disciplinary fields—such as economics, sociology, physical sciences, engineering and architecture; planners with experience of different sectoral planning activities—such as agriculture, education, transport and so on; and planners equipped to operate at different planning levels—including project planners, sectoral planners and area planners able to operate at various levels in the spatial hierarchy. This need has been recognized for some time in countries such as the United Kingdom (Eversley, 1973) and the United States (Alonso, 1971). In the Third World, however, the need for such an approach has been pointed out from time to time (for example, International Union of Local Authorities, 1967; Rosser, 1970) but, largely because of the historical separation of development planning and physical planning and the domination of the former by economists, it is taking much longer to gain widespread recognition.

The wide range of planning expertise needed in the Third World can be obtained in two main ways. One way is to develop a number of different specialized planning cadres—economic planners, social planners, architect planners, education planners, project planners, regional planners, and so on. The other is to concentrate on developing a cadre of generalist planners, who have a little knowledge of many different fields of planning and then co-opt full-time administrative or technical expertise (agriculturalists, educational administrators, professional engineers or architects) to provide the required professional input as and when required. The choice between these two approaches will depend on several factors, including the number of planners required in any particular field, the total number of professional planning staff and the availability of—and likely support from—complementary technical and administrative personnel. In practice this means that most countries adopt a

mixed approach, which includes some generalist and some specialist planners, but that the exact composition of this mixture varies considerably from one country to another and from one part of the planning machinery to another. The way in which such decisions are made will become clearer in our examination of the role of planners in different types of planning agency, to which we now turn.

Planning agencies

The organizations within which professional planners are employed can, for the purposes of this discussion, be divided into four groups: a central planning agency at the national level, planning units within functional ministries or agencies, area-based planning units and a variety of organizations which provide planners on a short-term consultancy basis. Let us look briefly at each of these.

National planning agency

Despite the ineffectiveness of central planning agencies in most less developed countries, the prevailing assumption in planning circles is that it is desirable as a first step in the planning process for every country with a mixed economy ... to establish a central planning agency. (Waterston, 1965, p. 373)

Although a number of lessons about the performance of national planning agencies have been learned since Waterston made this statement, it is still the case that the existence of such an agency is virtually unquestioned while opinions about its role, location and structure differ considerably. The central issue in the debate is the relationship between the planning agency and other institutions, which in turn is part of the problem of whether planning performs a competing role—as portrayed by Leys—or a coordinating role—as advocated here—in the process of allocating resources.

The planning agency has to relate to three different kinds of institutions. Firstly, it has to coordinate the activities of the various functional ministries and (in many cases) area-based organizations which are responsible for the detailed planning and implementation of the sectoral and areal components of the development process. This requires decisions about the division of responsibility between the planning agency and the individual sectoral and area agencies. In this respect it is necessary for the planning agency to ensure that the activities of the latter are coordinated with each other and in line with national policies and the availability of resources, without imposing too many restrictions on them and alienating them from the planning process, thereby hampering plan implementation.

Secondly, the planning agency has to work closely with the ministry of finance in order to ensure that the financial resources required to implement plans are made available. The gap between planning and budgeting, which is a problem in many countries, is often attributable, at least in part, to lack of coordination between these two institutions (Waterston, 1972; Caiden and Wildavsky, 1974).

Thirdly, the planning agency has to be closely linked to the political system, through the cabinet (or equivalent body) or the chief executive, such as the prime minister. There are two main reasons for this. One is to ensure that it is fully attuned to current government policy, which should provide the framework within which plans are prepared, and the other is to provide it with the political weight needed to coordinate and, if necessary, direct the activities of the other agencies of government.

There is no obvious or easy way of meeting all these requirements and this helps to explain the differences of opinion which arise. The location of the planning agency presents particular problems and in some countries this results in periodic shifts of the responsibility for planning from one ministry to another (Waterston, 1965, chapter 13; Griffin and Enos, 1970, chapter 12). In most cases the choice is between the ministry of finance (which is then usually known as the ministry of finance and planning, or some such title) and the office of the president, prime minister, or other chief executive. A variation of the latter sometimes occurs when the planning agency operates as a semi-autonomous body, responsible to the cabinet as a whole or to a special ministerial planning committee. Location within the office of the chief executive is perhaps the most common of these alternatives (Griffin and Enos, 1970, p. 186); but that does not mean that it is necessarily the 'best' location in all situations.

The size, composition and internal organization of the planning agency also vary considerably from one country to another. Decisions about its size must take into account the size of the country, the importance attached to planning and the way in which responsibility for planning activities is divided between the national planning agency and other parts of the government machinery. On the whole, it is probably desirable that the planning agency be as small as possible, otherwise it is likely to duplicate the activities of other agencies and thus not only waste resources but also alienate the other agencies (Gant, 1979, chapter 6). In practice, however, this is often not the case because of the inevitable tendency for any bureaucratic organization, including a planning agency, to try to expand its activities.

Conventionally, national planning agencies have been staffed by professional economists, or if sufficient economists are not available by people with a general administrative background, the latter being regarded very much as a 'second-best' solution. Although economists still tend to dominate most national planning agencies, there is now increasing support for including some staff with other skills, especially social planners (Conyers, 1982) and to a lesser extent planners conversant with natural environmental issues and with spatial or physical planning. Moreover, there is also an increasing realization that national planning staff should have some particular knowledge of administrative systems and procedures; academic qualifications alone are not enough. The approach to development planning adopted in this book strongly supports these moves in the composition of national planning agencies. Our concept of integrated planning suggests the need to broaden their scope either by employing a variety of different planning specialists in addition to economists or by employing more generalist

planners, while our concern that planners should not be isolated from 'the day-to-day activities of government' emphasizes the need for them to have practical administrative experience.

The internal organization of a national planning agency will depend to a large extent on the number and composition of its staff, although also on the nature of its activities. There are three main criteria which can be used to determine the organizational structure: professional specialization (for example, economic planning, social planning, spatial planning); sectoral responsibilities (such as agricultural planning, health planning, transport planning); and operational levels of planning activity (macro-planning, micro-planning or project planning, regional planning). Once again there is no obvious answer and many countries adopt a structure based on a mixture of two or three of the above criteria. It should, however, be mentioned that since there is often a risk of communication problems between the planning agency and other government agencies, the internal organization of the planning agency should aim to facilitate rather than hamper such communication.

Planning units in functional ministries

It is generally accepted both by national planning agencies and by the functional ministries themselves that there is a need to develop some sort of planning capacity in each functional ministry. The main questions which this raises are: firstly, what should be the division of responsibility between the national planning agency and the functional planning units; and secondly, what should be the role of the functional planning units within their ministries and who should staff them. We have already touched upon the first question in the context of the role of the national planning agency. It is only necessary at this point to add that, provided a functional planning unit is willing and able to plan its activities and to adhere to broad national policy guidelines, the national planning agency should refrain from detailed planning in that field and should focus more on coordinating its activities with those of other sectors. Perhaps the most important point to emphasize is the need for continuous and (as far as possible) amicable communication between the two organizations. The second question requires rather more discussion.

Waterston begins his chapter on functional planning units by stating that 'a programming unit in an operating ministry, department or agency is essentially a microcosm of a central planning agency' (Waterston, 1965, p. 565). We would agree that, as he goes on in the next sentence to explain, 'this is perhaps an oversimplification, but it is a basically accurate and useful analogy', since many of the issues and problems which arise are similar to those already discussed in the context of a national planning agency. Thus the most fundamental problem is probably the extent to which the planning unit should actually plan the activities of the ministry rather than merely facilitate and coordinate the activities of the various technical divisions. Once again our concept of planning suggests the latter approach, with the planning unit only becoming more directly involved in

areas where the technical divisions are unwilling or unable to plan effectively or in cases where there are conflicts between the various technical divisions or between the technical divisions and the national planning agency. It should be emphasized that such situations may arise quite frequently and so the planning unit (like the national planning agency) may often find it necessary to extend its role in this way. Nevertheless, it is useful to retain the image of the planning unit as basically a coordinating agency, in order to avoid unnecessary bureaucratic expansion and to maintain good relations between the planning unit and the technical divisions of the ministry.

The location of a functional planning unit also raises similar questions to those of a national planning agency. However, since a functional ministry is a simpler and more cohesive organization than an entire national government bureaucracy, it is easier to find an answer. The most suitable location is usually near the 'apex' of the organization, so that it has close links with the permanent secretary or other chief executive and is able to coordinate effectively the activities of the various technical divisions.

The composition of a functional planning unit will depend on its size and the availability of appropriate staff. The main need is probably to combine general planning skills with practical knowledge of the functional area for which the ministry is responsible. This may be provided either by recruiting specialized planners (such as agricultural planners in the ministry of agriculture, education planners in the ministry of education, and so on) or by employing a small team which includes both professional planners and people with experience in the appropriate functional area. Gish's guidelines for the establishment of a health planning unit (Gish, 1977, chapter 2) provide a useful model of the latter approach which could quite easily be adapted to other functional areas.

The role of physical planners

Special mention is needed at this point of the role of physical or land-use planners, who are often located in a ministry responsible for lands, urban development, settlements, local government, or some combination of these. At first sight these planners may appear to be just like any other functional planning unit—and more often than not they are regarded as such by the national planning agency. However, closer examination suggests two important reasons why they should be viewed rather differently.

The first reason is that their main role is not to plan the functional activities of the ministry to which they are attached, in the way that, say, a health planning unit is responsible for planning the activities of the health ministry. They are concerned with a more specialized form of planning, in the sense that they are particularly concerned with detailed physical or spatial planning of land-use, but a form of planning which extends beyond the confines of the ministry in which they are located. This is reflected in the fact that physical planning divisions tend to be only loosely attached to their parent ministry (usually constituting one of several functional divisions rather than, as in the case of other functional

planning units, being located at the apex of the ministry) and often transferred from one ministry to another. It is also reflected in the fact that their plans often include provisions for the location or design of activities which are the responsibility of other ministries, such as agricultural activity, schools, health services, and so on. The fact that on many occasions such plans are not implemented is, at least in part, due to the lack of any formal links between the physical planners and these other ministries.

The second reason is that, as we have emphasized in the earlier parts of this book, these physical or land-use planners are part of a long tradition of professional planning activity, which in many developed countries has extended its scope to include much more than basic 'physical' planning and to become the main or only form of planning activity. Many physical planners in developing countries have been trained in this tradition and are thus equipped to play a broader role in the overall planning process.

As with most of the organizational issues raised in this chapter, there is no easy way out of this situation. On the basis of the points made above, a good case could be made for locating physical planners within a specialized division of the national planning agency, so that their activities could complement those of the 'economic' planners and they would be able to liaise more effectively with all functional ministries. However, it can also be argued that they need to maintain close contact with the ministry (or ministries) responsible for land and urban development and with local authorities, who often have some legal control over land-use, and so would do better to stay where they are. Whatever decision is made, the important point is to recognize that the role of physical planners is not the same as those of functional planning units and to ensure that their skills are fully utilized and their activities integrated with other components of the planning process. In some countries significant progress has been made in this respect. Two examples are Tanzania and Botswana, both of which are attempting to integrate the work of economic and physical planners without actually locating them in the same ministry. However, such cases are probably the exception rather than the rule.

Area-based planning units

We have already discussed at considerable length in previous chapters the role of planning at the area level and the relationship between planning activities at different spatial levels. In this section our concern is only with the role, composition, and organization of a professional planning unit at the area level.

As we have pointed out elsewhere, area or regional planning has tended to be relatively neglected compared with sectoral and project planning, and this is reflected in the lack of professional planning staff at this level. In some cases—particularly smaller countries or those with relatively centralized political, administrative and planning systems—such staff are non-existent. Nevertheless, it is now generally agreed that this situation should be remedied, even if there are

no plans for a major decentralization of planning, and the major questions are how this can be done as quickly and effectively as possible.

The role of area-based planners raises the by now familiar question of the division of responsibility between the professional planner and the various functional agencies involved in the planning process. In this case the functional agencies are the local representatives of the various ministries represented in the area. The lack of professional planners at the area level makes our earlier argument—that the main role of the planner should be to facilitate, coordinate, and negotiate, rather than to do all the planning himself—particularly valid at this level, especially in the early stages of area-based planning. In fact, it may often be necessary simply to employ general administrative staff to perform the functions which would normally be the responsibility of a professional planner until sufficient trained planners are available.

As in the case of the national planning agency and functional planning units, planners at the area level should be located in a position where they can receive support and guidance from the chief executive authority in the area. This usually means that they should be either located in the office or department of a senior administrative official (such as the chief executive of a local government authority or the present-day equivalent of the colonial district commissioner or prefect, where such exists) or responsible directly to a decision-making body, such as a local government council or area development committee. The weaknesses of many such horizontal coordinating agencies, which we have discussed at length in previous chapters, often makes the role of the area-based planner very difficult.

What sort of planner is needed at the area level? We have already suggested that it may be necessary to utilize generalist administrative staff as planners in the short run. This may not necessarily be a problem, especially if the personnel concerned are given some basic training in appropriate planning techniques, since the concept of a generalist planner is particularly valid at this level. In Chapter 3 we pointed out that area planning represents the most obvious interface of economic development planning and physical planning, and it is also the level at which the need to integrate different sectors and disciplines becomes most important—hence our use of the term *integrated* area planning. Moreover, it is also important that the planner has practical knowledge of local administrative systems and procedures and of other aspects of the local environment, including the needs and aspirations of the local people. Such skills are often much more important than knowledge of more sophisticated planning techniques and a generalist administrator with long experience in the area is thus often preferable to a young and inexperienced economics graduate, who is often the only alternative.

However, in larger regions or in situations where the area planning process is more complex or more professional staff are available, planning needs may be better met by establishing a team of professional planners with more diverse skills. In such cases the area planning unit may, to borrow Waterston's terminology, be regarded in many respects as a 'microcosm' of a national

planning agency. However, the staff should preferably have some training in those aspects of planning particularly relevant at the area level and, as in the case of other professional planning agencies, care is needed to ensure that the planning unit does not expand unnecessarily and usurp the functions of the technical agencies.

Planning consultants

The concept of planning emphasized in this book is that of an ongoing process, not of a series of *ad hoc* exercises. Nevertheless, it is inevitable that the demand for planning activity, and particularly for certain planning skills, will be somewhat irregular. Thus from time to time it will be necessary to undertake a special planning exercise in connection with, for example, a major new project, a significant change in development policy within a particular sector or the economy as a whole, or the development of a particularly deprived area or social group. In such cases the normal planning machinery may not be adequate to perform the task, because of lack of either time or appropriate skills, and so the need to employ additional planning personnel arises. For want of a better term, we may refer to these additional personnel as planning consultants.

Planning consultants can take a variety of forms. They may come from within the country or from outside, and they may be full-time commercial consultants, people with other professions (such as university lecturers or researchers) who undertake consultancy work on a part-time basis or (in the case of foreign consultants) employees of international aid agencies.

Although the use of planning consultants is often necessary for the reasons given above, it can also present a number of fairly serious problems. The most obvious problem is the limited duration of their involvement in the planning process, which on the one hand limits their understanding of the local environment and therefore the relevance and practicality of the plans they produce and, on the other hand, results in lack of continuity between the preparation and implementation of plans. For both these reasons many plans prepared by consultants never get further than the drawing-board stage.

Another problem is that the consultants often have different ideas about the nature and role of planning and use inappropriate planning techniques. This is particularly common in the case of foreign consultants and, where such consultants are employed by international aid agencies, it is part of a much wider problem of inappropriate conditions and procedures associated with many foreign aid projects (Rondinelli, 1976). However, it may also be a problem with university staff, whose approach tends to be too 'academic', in the sense of striving for perfection rather than for practical utility. University staff may also be unfamiliar with government procedures and practices and are often notoriously bad at meeting deadlines. On the other hand, however, they are a much cheaper source of additional manpower than commercial consultants.

Such problems cannot be entirely avoided but they can be minimized. Consultants are more likely to make a useful contribution if their work is

integrated as far as possible into normal planning and administrative activities. This means that their terms of reference have to be carefully thought out and clearly stated, their activities have to be continuously monitored (for example, by attaching counterpart staff to work with them), communication between them and normal government agencies has to be actively promoted and the machinery for implementing their proposals has to be planned in detail, preferably with the consultants before their departure (Hai, 1981; United Nations, 1979).

In order to reduce the need to employ conventional planning consultants, many countries establish local planning or research organizations, financed partially or entirely by the government but outside the main government machinery, whose services can be utilized for such purposes, especially longer-term research and planning activities (Conyers, 1978). The organization of such institutions is not always easy, since they have a tendency to pursue their own research interests rather than to follow government priorities; but on the whole they offer a welcome alternative to more conventional consultants, at least for many planning purposes.

Education for planning

The discussion so far on the role of professional planners and their work in different types of planning agency has obvious implications for the education and training of planning personnel. This is a subject which, despite its importance to the profession as a whole and to the individual planner, has received relatively little attention in international debates on development planning (Zetter, 1981). This section looks briefly at four aspects of planning education: its scope, content, level and location.

Scope and direction of planning education

Perhaps the most significant characteristic of conventional approaches to the training of professional planners in developing countries is the segregation of the two main types of planner, which we have referred to here as economic development planners and physical planners. The former are generally economists whose training in planning as such tends to be confined to the study of economic planning techniques (Seers, 1972). The latter come from a wider range of disciplines and then generally attend (or aspire to attend) some sort of professional course in 'planning'. The content of such planning courses varies considerably, depending on the country and institution in which they are located and the personal specialization chosen by the individual concerned. There tends to be a bias towards detailed land-use planning, with particular reference to urban areas, in line with the work in which the planners are most likely to be engaged; but, unlike the economist, the physical planner will also study the broader principles and methods of planning. This separation of the two types of planning training is contrary to the integrated approach to planning advocated here and it has contributed to the lack of communication between the two types of planning agency, which we noted earlier.

The situation in developed countries of Western Europe and North America has been rather different because of the much broader scope of 'physical' planning (more often and accurately described in these countries as 'town and country', 'urban and regional' or even 'environmental' planning) and the related lack of any significant separate machinery for national economic planning. Consequently, most professional planners undergo a common training programme and, although there is a long history of friction between different dimensions of planning within this overall programme—especially between the social science (or policy) and the design perspectives—it has for some time been recognized that an integrated approach is necessary. On the contrary, in Third World planning there is as yet very little recognition of the need for such an approach, let alone any progress in its establishment. Only in courses on regional planning, which—as noted earlier—tends to incorporate both economic and physical planning, does one find students from both fields of planning studying together; this interaction is reflected in the content of such courses (Kuklinski, 1971). It is perhaps significant to note that the gradual realization that economic development planning must be broadened to incorporate non-economic elements has tended to result in the establishment of entirely separate courses in subjects such as social planning, rather than in an interdisciplinary approach.

Although the need for a more integrated approach to planning education in the Third World seems fairly obvious, it will not be easy to provide it. The main problem is how to provide a broad interdisciplinary approach to planning and, at the same time, train planners in the various specialized fields in which they are required to operate. This has been one of the main problems of planning education in countries such as the United States and the United Kingdom (Alonso, 1971; Eversley, 1973, chapter 11). In the Third World the dilemma is if anything even more acute because, on the one hand, the scope for planning tends to be wider but, on the other hand, the need for the generalist planner is particularly great because of the shortage of professional planning staff and the frequent movements of staff which thus occur.

The only realistic solution seems to be a combination of generalist and specialist courses. This could be achieved either by providing general planning training at an early stage in the planner's career, followed by shorter specialized courses as and when required, or by concentrating first on training personnel as specialists (economists, sociologists, architects—even general administrators) and then providing shorter courses in general planning methods and techniques later—or more likely, by a combination of these two approaches. This would probably result in a greater diversity of relatively short planning courses than at present, but with provision for all planners to have a common 'core' of basic planning education.

Content of planning courses

The content of specific planning courses will obviously depend on the type of

planning concerned. Nevertheless, it is possible to identify five broad areas of knowledge which should be included in any planner's education:

1. processes of development, including general national development policies and, in specialized courses, an understanding of the particular aspect of development concerned;
2. the nature of planning as a process and its role in helping to achieve development objectives;
3. the organizational structure and procedures of government and the role of planning agencies and professional planners in this structure, with particular emphasis in specialized courses on the organizational level at which the planner is likely to operate;
4. specific planning processes and procedures (including legislation where appropriate), focusing on those applying in the country concerned and (in specialized courses) the particular field of planning; and
5. specific planning techniques, emphasizing—especially in specialized courses—those most likely to be used by the planner in his work.

These needs may seem so obvious that they are hardly worth mentioning. Nevertheless, it is surprising how often the training which a planner receives does not cover all these areas of knowledge, or gives undue attention to one or two areas; even those directly involved in designing or teaching planning courses seldom seem to analyze their courses in this way; hence their mention here.

Level and status of planning education

Much of the debate on planning courses centres on a number of related issues—including entry requirements, length, qualifications, the relative importance attached to 'academic' and 'professional' aspects and the role of the course in both the career of the planner and the general educational system of the country—which we may broadly describe as the level and status of such courses. These are issues which arise in any discussions on education in the Third World and, in particular, in courses designed to meet specific professional needs—and there is a tendency for them to grow out of all proportion (Dore, 1976). The alleged conflict between academic and professional requirements can become a particularly heated and, at the same time, unproductive debate (Zetter, 1981).

It is not possible to discuss any of these issues in depth here. It should, however, be emphasized that two main factors have to be taken into account when trying to resolve them: the main needs in terms of professional planning manpower and the resources (including time) available to meet these needs. As Zetter suggests, this means asking questions like:

In what ways then can the desperate shortage of manpower be overcome? What sorts of education programmes will not constrain longer term innovative skills by providing a bundle of instant solutions, yet equip planners at all levels with the

confidence and knowledge to tackle immediately the range of seemingly intractable and interconnected problems? (Zetter, 1981, p. 29)

It should also be noted that this may mean some changes in conventional concepts of planning education, including the structure and content of courses and the standards by which performance is measured. It is likely to result in particular in more emphasis being placed on courses oriented more towards 'professional' needs, especially the specific professional needs of those planners on the course, and training at a more basic level, resulting in the production of general administrator-planners, 'barefoot' planners and (in the case of physical planners) planning 'technicians' (Lyddon, 1981; Zetter, 1981).

Location of planning courses

The last aspect of planning education which we shall consider here is the relative merits and demerits of sending Third World planners to developed countries for training purposes. This is a common practice at higher levels in all fields of planning. Zetter (1981, p. 24) predicted that, in the case of physical planning training, 'the demand for overseas education for professionally experienced graduates has not yet peaked' and this is probably also true in many other planning fields, despite the increasing availability of planning courses in developing countries themselves.

The most obvious reason for the continued importance of overseas education is the financial and manpower costs and the time required to establish professional planning training in the developing countries, especially in smaller countries where the demand is relatively limited. There are also some advantages of overseas education, particularly the opportunity to learn about other approaches to planning and exchange experiences with fellow students from other countries, together with the more indirect benefits derived from any form of overseas visit.

However, these advantages tend to be outweighed by major disadvantages and in many cases an overseas education is seen merely as a status symbol. The most obvious disadvantage is the dubious relevance of much of the education which the planners receive to the situation in their own countries, owing to the very different environment in which planning operates. Let us take the example of conventional British postgraduate planning courses. These courses are attended by many physical planners from developing countries and, in some cases, overseas students predominate because of the declining demand for UK planners. However, not only do such courses focus on British planning problems and procedures, required to meet British professional standards, but they also adopt a considerably broader, more interdisciplinary approach to planning than that required by most Third World physical planners. On the other hand, such courses do not include sufficient economics, especially development economics, to meet the needs of economic development planners, who thus attend separate courses in economic planning methods.

It seems fairly obvious that the main long-term objective should be to train the majority of planners in their own countries. In achieving this objective, priority should be given to those courses for which there is greatest demand, such as lower-level and generalist courses, and those which must be related most closely to the local planning environment. In the meantime, those planners who have to attend courses overseas will probably gain most by going either to other developing countries (especially to regional institutions established to serve a number of countries) or to those institutions in developed countries which offer special courses in planning for developing countries.

The planner in society

In this last section of the chapter—and of the book—we return to a broader view of planning and planners. Our main concern here is with the role of the professional planner in the society of which he is part. We look first at the functional relationships between planners, politicians, administrators, and the general public and then at the practical obstacles which these may create and, finally, the personal conflicts which the individual planner may have to face.

Planners, politicians, administrators, people

We have emphasized on numerous occasions in this chapter, and earlier in the book, that planning should be seen not as the work of planners but as a complex process which involves all sorts of individuals and organizations and we have already examined many of the organizational implications of this. At this point our concern is simply to reiterate the main characteristics of the interrelationships of planners and the various other 'actors' in this process, as a basis for demonstrating some of the broader implications for the work of the planner.

In Chapter 1 when we introduced the three interrelated concepts of policy-making, planning and implementation, we indicated that there is a tendency to associate these three activities with politicians, planners and administrators respectively. Thus in very simple terms it can be said that politicians formulate policy objectives, planners determine which programmes or projects will best achieve these objectives and administrators implement the programmes and projects. However, we then went on to suggest that this is a highly over-simplified model of reality, since there are actually many different types of communication between the three groups, particularly if planning is seen as a continuous process, involving regular monitoring of implementation progress and the feedback of the information thus obtained into the decision-making process. Figure 9 attempts to illustrate, still in a highly simplified form, some of these information flows.

Figure 9 also introduces another dimension of the process—the role of the general public. We have emphasized throughout the book the importance of public involvement in planning and we have considered various ways in which such involvement can be encouraged. Figure 9 indicates some of these ways and

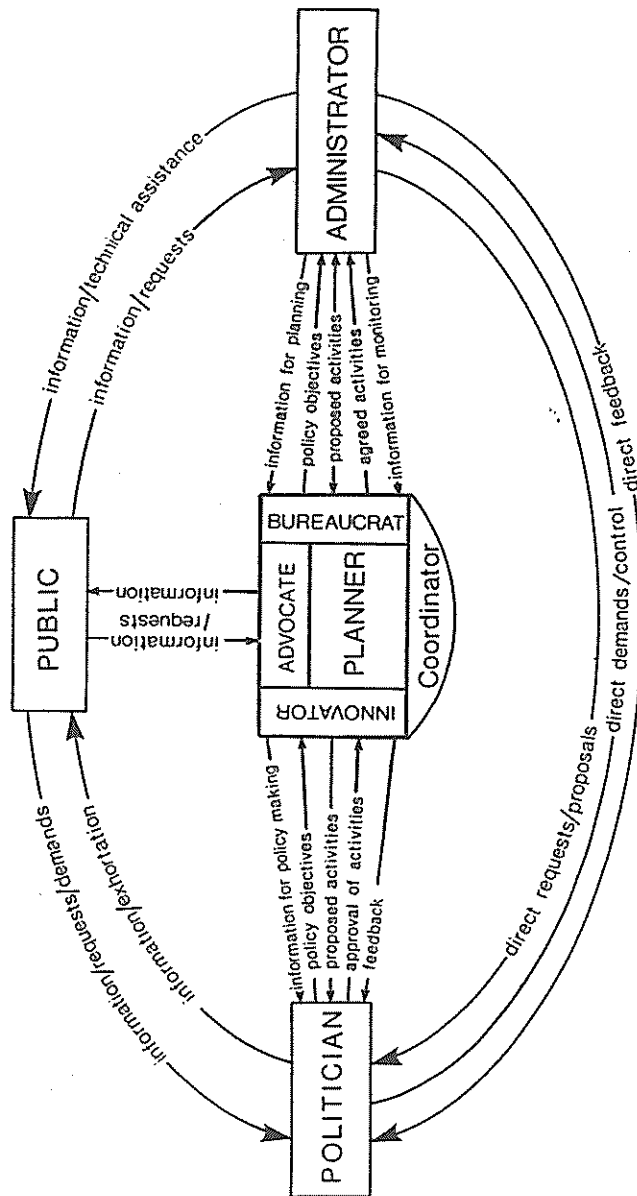


Figure 9. Interrelationships of politicians, planners, administrators, and the public

emphasizes that they involve communication between the general public and all three of the other kinds of 'actors', not just the planner, thus adding to the complexity of the model. Let us now look at the implications of this for the role of the planner.

A realistic view of planning

From a practical point of view this means that, however much the planner may try to control or influence the planning process, his efforts are constantly affected by the behaviour of the other people involved in the process—politicians, administrators and the general public. Thus the planner's attempts to determine the best way of implementing development policies are constantly hampered by such things as the absence of clear or consistent political guidelines, the failure of politicians to support plans or policies which they have previously approved, the incapacity or unwillingness of administrators to cooperate in the formulation and implementation of plans, direct communication between politicians and administrators—'bypassing' the official planning process, and inconsistent or incomplete information about people's needs and attitudes—often resulting in lack of cooperation or actual rejection of projects by the people at the time of implementation.

The situation is further complicated by two other factors. Firstly, so far we have assumed that each of the four sets of 'actors'—politicians, planners, administrators and the public—is a homogeneous group, composed of people with the same attitudes and interests. However, this is of course not the case. Opinions, attitudes, interests and behaviour differ widely within each group—including the planners themselves—and this adds to the problems of making and implementing planning decisions. Secondly, the organizational structure depicted in Figure 9 is not a 'closed' system. It is subject to all sorts of outside influences, including the vagaries of the weather, changes in international commodity markets and the political priorities of foreign aid donors. All these factors affect the planning process, often quite dramatically. Thus, for example, the extent to which India's plan targets are achieved depends as much on the volume and timing of the annual monsoon rainfall as on anything else, while the plans of most Third World countries (and also many developed nations) were disrupted in the latter half of the 1970s by the dramatic increases in world oil prices. In many countries the most obvious obstacles to any form of development activity are severe shortages of basic requirements such as fuel and spare parts for vehicles, essential inputs for agricultural, health and education services, stationery and money to pay subsistence allowances for civil servants travelling on duty.

We are pointing out all these practical problems at this stage in order to remind the reader that the planning process is not as straightforward as some of the earlier chapters may have suggested. We have attempted throughout the book to adopt a realistic approach to planning, emphasizing those techniques and organizational procedures which are most likely to be relevant and pointing out

the practical problems which may occur when trying to apply them. However, there is still a risk that we are presenting too simple a picture and underestimating the problems involved. We therefore wish to remind—or reassure—the reader that the approach to planning put forward here is intended to provide guidelines for action rather than a blueprint plan for planning.

The planner: innovator, advocate, or bureaucrat?

The other implication of the organizational structure shown in Figure 9 is that the planner tends to find himself performing, or expected to perform, several different kinds of role. To the extent that he (or she) is a member of the civil service, carrying out instructions given by politicians and working closely with administrators, he is himself an administrator or a 'bureaucrat'. To the extent that he is involved in advising and assisting the politicians, he is playing the role of a politician or an 'innovator'. When he attempts to take into account the needs and demands of the general public, he is acting in the capacity of an 'advocate'. These three types of role are indicated in the diagram.

There is a great deal of debate among those concerned with the more theoretical aspects of planning in developed countries about the relative importance which should be attached to these three roles of the planner (Faludi, 1973a, chapter 9; 1973b, Part IV). The debate focuses on the conflict between the 'bureaucratic' role of a planner and the more political roles of 'innovator' and 'advocate'. We do not need to enter into this debate here. As some readers such as Dyckman (1973) and Eversley (1973) point out, there has been a tendency to over-emphasize the significance of this distinction for practical purposes. As Dyckman says, 'the distinction between the planner—crusader and the planner—public official may be overdrawn' (Dyckman, 1973, p. 246). Moreover, it must also be remembered that this debate has been taking place within the relatively homogeneous planning environment of Western Europe and North America. The situation in the Third World is rather different, and this is where our concern lies.

In the Third World there is a much wider range of planning environments and the relative importance of each of the three roles of the planner—innovator, advocate and bureaucrat—depends to a large extent on the political structure (especially the degree of political stability, the extent and form of public participation and the relationship between the political and administrative systems), the type of development policies (especially the extent to which they are intended to benefit the majority of the population) and the position of the planning agency (or agencies) in the structure of government and its role in the implementation of development policies.

These factors determine not only the extent to which a planner or planning agency may be able to play any of the three roles but also the extent to which the individual planner may desire or feel personally compelled to play any particular role. Thus, for example, in a country where the planning process is dominated by an undemocratic political regime whose policies are designed only to maintain its

own position, the socially concerned planner is unlikely to be satisfied with the role of a 'bureaucrat' planner, implementing the policy decisions of the political elite. In such cases he may well attempt to play a more political role, either from 'inside' the system or, since that is likely to be resisted by the politicians, by leaving public employment and attempting to improve the lot of the general populace from 'outside' the system, thus becoming in the most obvious sense of the term an 'advocate' planner.

How does the individual development planner decide what his role should be, and how he should achieve it, in any particular planning environment? As always in such situations there is no easy or obvious answer. However, he can perhaps obtain some guidance by examining this environment, and the role which he can play in it, in the context of the general objectives of development planning which we discussed in Chapter 2. We thus conclude with two quotations which may help to guide the planner who has some doubts about his role.

The first quotation is from a recent study by G. S. Fields of the relationship between economic growth and equality in six countries (Fields, 1980). The study is based on the assumption that changes in poverty and inequality should be the 'principal indicators of development' (p. ix) and one of the tentative conclusions reached is that:

in the absence of a firm commitment to developing for the poor and the courage to act on that commitment, it seems only natural that economic systems will perpetuate the flow of resources to the haves with at best some trickle-down to the have-nots. More may trickle down to the poor in some cases than in others. *Commitment to developing to help the poor does not guarantee progress, but it helps a great deal.* (Fields, 1980, p. 242; emphasis added.)

In other words, Fields confirms the need for some sort of intervention in order to achieve development objectives, if development is measured in terms of reducing poverty and inequality.

What then is the role of the planner in this intervention process? We turn to an earlier comment made by David Eversley as part of the debate on the role of the planner in British society. Eversley concludes that:

The planner cannot abdicate to pure administrators administering the law as it stands. Neither can he leave the future of our cities to the legions of community action, self-help, and resistance groups, to anarchy and the threat of civil war. Nor, lastly, can he withdraw in favour of the total chaos which existed when privilege and wealth were the only determinants of the shape of cities, as these forces operated before Bentham and Chatwick. The planner is himself the creation of a new order of society which had its modest beginnings 150 years ago. The question is not whether he should turn his back on this process, but how he may best, and most speedily, guide it towards an admittedly very distant goal of equality, peace and wellbeing. But just as we shall show that planning is no longer possible for any kind of end-state, so it can be demonstrated that the judgement on our generation will not be according to whether we attained utopia or not, but whether we made more rapid progress than the last generation towards the agreed ultimate goals. (Eversley, 1973, p. 222)

Guide to further reading

Further reading on issues raised in this chapter can be divided into two main categories:

Role of professional planner

Eversley, D., *The Planner in Society* (London, Faber, 1973).
 Faludi, A. (ed.) *A Reader in Planning Theory* (Oxford, Pergamon Press, 1973), Part IV: Bureaucrats, Advocates, Innovators.
 Faber, M., and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus, 1972), chapters 1-3.
 Articles in planning journals, such as *The Planner* (Journal of the Royal Town Planning Institute), *Journal of the American Institute of Planners* and, in particular, *Third World Planning Review*.

The role of the planner advocated in this chapter is also inherent in the systems approaches to planning, as propounded in, for example: Chadwick, G., *A Systems View of Planning* (Oxford, Pergamon Press, 2nd edition, 1978), especially chapter 2; and McLoughlin, B., *Urban and Regional Planning: A Systems Approach* (London, Faber, 1969), especially chapter 12.

Organization of planners and planning agencies

Waterston, A., *Development Planning: Lessons of Experience* (Washington, DC, Johns Hopkins Press, 1965). This remains the most detailed and comprehensive work in the field.
 Griffin, K. B., and J. L. Enos, *Planning Development* (London, Addison-Wesley, 1970), chapter. 12

Most other texts on economic development planning include some material on the organization of planning agencies.

United Nations, *Administration for Development* (1971).
 Cochrane, G. *The Cultural Appraisal of Development Projects* (New York, Praeger, 1979), especially chapter 7 for the role of consultants in social planning.
 Conyers, D., *An Introduction to Social Planning in the Third World* (Chichester, Wiley, 1982), chapter 10.
 Gant, G., *Development Administration* (Madison, University of Wisconsin Press, 1979), chapter 6.

References

Note: Books and other sources of information referred to only in the guides to further reading at the end of each chapter are not listed here.

- Abel, N., and M. Stocking, 1981. 'The experience of developing countries'. In O'Riordan, T., and W. R. D. Sewell (eds), *Project Appraisal and Policy Review* (Chichester, Wiley), pp. 293-96.
 Ackoff, R. L., 1968. *Scientific Method* (New York, Wiley).
 Adelman, I. and C. T. Morris, 1978. *Economic Growth and Social Equity in Developing Countries* (Stanford, Stanford University Press).
 Allan, B. and K. Hinchliffe, 1982. *Planning, Policy Analysis and Public Expenditure: Theory and the Papua New Guinea Experience* (Farnborough, Gower).
 Alonso, W., 1971. 'Beyond the inter-disciplinary approach to planning', *Journal of the American Institute of Planners*, vol. 37, pp. 169-73.
 Apthorpe, R. (ed), 1970. *People Planning and Development Studies* (London, Frank Cass).
 Apthorpe, R., and D. Conyers, 1982. 'Decentralization, recentralization, participation and planning', *Development Studies Association, Regional Development and Planning Study Group Meeting*, University of Nottingham, March 1982 (mimeo).
 Ayeni, B., 1979. *Concepts and Techniques in Urban Analysis* (London, Croom Helm).
 Aziz, S., 1978. *Rural Development: Learning from China* (London, Macmillan).
 Ballard, J. A. (ed), 1981. *Policy-Making in a New State: Papua New Guinea 1972-77* (St. Lucia, University of Queensland Press).
 Barnett, T., and K. Hinchliffe, 1976. *A Handbook for Planning in Papua New Guinea* (Port Moresby, National Planning Office and UNDP/University of East Anglia, Overseas Development Group).
 Barrett, S., and C. Fudge, 1981. *Policy and Action* (London, Methuen).
 Baster, N. (ed), 1972. *Measuring Development* (London, Frank Cass).
 Baster, N., 1976. 'Introduction' to UNESCO, *The Use of Socio-Economic Indicators in Development* (Paris, The UNESCO Press), pp. 2-29.
 Batey, P. W. J., and M. J. Breheny (eds), 1979. *Systematic Methods in British Planning Practice*. Papers reprinted from *Town Planning Review*, vol. 49, pp. 257-318 and 445-518 (University of Liverpool, Department of Civic Design).
 Beenhakker, A., 1980. *A System for Development Planning and Budgeting* (Farnborough, Gower).
 Belshaw, D. R. G., 1982. 'Decentralization and integrated development planning: unintegrated theory and disintegrated practice', *Development Studies Association, Regional Development and Planning Study Group Meeting*, University of Nottingham, March 1982 (outline paper only).
 Belshaw, D. R. G., and R. Chambers, 1972. *PIM: A Practical Management System for Implementing Rural Development Programmes and Projects* (Nairobi, Institute of Development Studies, University of Nairobi).
 Bendavid-Val, A., 1975. 'The "Themes-strategy-projects" approach to planning for regional development'. In Bendavid-Val, A., and P. P. Waller (eds), *Action-Oriented Approaches to Regional Development Planning* (New York, Praeger), pp. 3-17.
 Boisier, S., 1979. 'Regional planning: what can we do before midnight strikes?', *CEPAL Review* (United Nations Economic Committee for Latin America), April 1979, pp. 133-65.

- Bracken, I., 1981. *Urban Planning Methods: Research and Policy Analysis* (London, Methuen).
- Brookfield, H., 1975. *Interdependent Development* (London, Methuen).
- Cacho, C. P., 1975. 'The road to plan implementation', *Finance and Development*, vol. 12, no. 4, pp. 42-5.
- Caiden, N., and A. Wildavsky, 1974. *Planning and Budgeting in Poor Countries* (New York, Wiley).
- Carley, M., 1980. *Rational Techniques in Policy Analysis* (London, Heinemann).
- Carley, M., and E. Derow, 1980. *Social Impact Assessment: A Cross-Disciplinary Guide to the Literature* (London, Policy Studies Institute).
- Casley, D. J., and D. A. Lury, 1981. *Data Collection in Developing Countries* (Oxford, Clarendon Press).
- Chadwick, G., 1978. *A Systems View of Planning* (Oxford, Pergamon Press, 2nd edition).
- Chambers, R., 1974. *Managing Rural Development* (Uppsala, Scandinavian Institute of African Studies).
- Chambers, R., 1978. 'Project selection for poverty-focused rural development', *World Development*, vol. 6, pp. 209-19.
- Chambers, R., 1981. 'Rapid rural appraisal: rationale and repertoire', *Public Administration and Development*, vol. 1, pp. 95-106.
- Clark, B. et al., 1978. 'Methods of environmental impact assessment', *Built Environment*, vol. 4, no. 2, pp. 11-121.
- Cochrane, G., 1979. *The Cultural Appraisal of Development Projects* (New York, Praeger).
- Cole, H. S. et al. (eds), 1973. *Thinking about the Future: A Critique of the Limits to Growth* (London, Chatto & Windus).
- Cole, S. and H. Lucas (eds), 1978. *Models, Planning and Basic Needs* (University of Sussex, Institute of Development Studies, Research Report).
- Conyers, D., 1977. 'Administration in China', *Journal of Administration Overseas*, vol. 16, pp. 98-113.
- Conyers, D., 1978. 'Research for regional planning with particular reference to Papua New Guinea'. In Mamak, A., and G. McCall (eds), *Paradise Postponed* (Sydney, Pergamon Press), pp. 95-109.
- Conyers, D., 1981. 'Decentralization for regional development: a comparative study of Tanzania, Zambia and Papua New Guinea', *Public Administration and Development*, vol. 1, pp. 107-20.
- Conyers, D., 1982. *An Introduction to Social Planning in the Third World* (Chichester, Wiley).
- Conyers, D., 1983. 'Decentralization: the latest fashion in development administration', *Public Administration and Development*, vol. 3, pp. 97-109.
- Cooper, C., 1981. *Economic Evaluation and the Environment* (Sevenoaks, Hodder & Stoughton).
- Curtis, D., and J. R. Watson, 1983. *Review: A Guide to Monitoring and Evaluation for District Offices* (University of Birmingham, Institute of Local Government Studies, Development Administration Group Occasional Paper 19).
- Davey, K. F., 1971. 'Local bureaucrats and politicians in East Africa', *Journal of Administration Overseas*, vol. 10, pp. 268-79.
- Dickinson, R. E., 1964. *City and Region* (London, Routledge & Kegan Paul).
- Doornkamp, J. C., 1982. 'The physical basis for planning', *Third World Planning Review*, vol. 4, pp. 11-30, 111-28, 213-46.
- Dore, R., 1976. *The Diploma Disease* (London, George Allen & Unwin).
- Drenowski, J., 1974. *On Measuring and Planning the Quality of Life* (The Hague, Mouton).
- Dyckman, J. W., 1973. 'What makes planners plan?' in Faludi, A. (ed), *A Reader in Planning Theory* (Oxford, Pergamon Press), pp. 243-50.
- Eddison, T., 1975. *Local Government Management and Corporate Planning* (Leighton Buzzard, Leonard Hill Books, 2nd edition).

- Esman, M. J., 1972. *Administration and Development in Malaysia* (Ithaca, Cornell University Press).
- Eversley, D., 1973. *The Planner in Society* (London, Faber).
- Faber, M., and D. Seers (eds), 1972. *The Crisis in Planning* (London, Chatto & Windus).
- Faltas, M., 1982. 'Decentralization and the design of planning systems', *Development Studies Association*. Regional Development and Planning Study Group meeting, University of Nottingham. March 1982 (mimeo).
- Faludi, A., 1973a. *Planning Theory* (Oxford, Pergamon Press).
- Faludi, A., 1973b. *A Reader in Planning Theory* (Oxford, Pergamon Press).
- Fields, G. S., 1980. *Poverty, Inequality and Development* (Cambridge, Cambridge University Press).
- Finsterbusch, K., 1980. *Understanding Social Impacts: Assessing the Effects of Public Projects* (London, Sage).
- Finsterbusch, K., and C. P. Wolf, 1977. *The Methodology of Social Impact Assessment* (Stroudsburg, Pa., Dowden, Hutchinson, & Ross).
- Food and Agriculture Organization (FAO), 1978. *Report on the FAO/SIDA/DSE Inter-Regional Symposium on Integrated Rural Development* (Rome, FAO).
- Forrester, J. W. 1971. *World Dynamics* (Cambridge, Mass., Wright-Allen Press).
- Foster-Carter, A., 1974. 'Neo-Marxist approaches to development and underdevelopment'. In De Kadt, E., and G. Williams (eds), *Sociology and Development* (London, Tavistock Publications), pp. 67-108.
- Freeman, C., 1973. 'Malthus with a computer'. In Cole, H. S. et al. (eds), *Thinking about the Future: A Critique of The Limits to Growth* (London, Chatto & Windus), pp. 5-13.
- Friedmann, J., 1964. 'The concept of a planning region—the evolution of an idea in the United States'. In Friedmann, J., and W. Alonso (eds), *Regional Development and Planning: A Reader* (Cambridge, Mass., MIT Press).
- Friedmann, J., 1969. 'The Guayana program in a regional perspective'. In Rodwin, L. and Associates, *Planning Urban Growth and Regional Development: The Experience of the Guayana Program of Venezuela* (Cambridge, MIT Press), chapter 7.
- Friedmann, J., and C. Weaver, 1979. *Territory and Function: The Evolution of Regional Planning* (London, Edward Arnold).
- Friend, J. K., and W. N. Jessop, 1969. *Local Government and Strategic Choice* (London, Tavistock Publications).
- Gant, G., 1979. *Development Administration* (Madison, University of Wisconsin Press).
- Gershuny, J., 1981. 'What should forecasters do? A pessimistic view'. In Baehr, P., and B. Wittrock (eds), *Policy Analysis and Policy Innovation* (London, Sage), pp. 193-208.
- Ghai, D. P., 1977. 'What is a basic needs approach to development all about?' In Ghai, D. P. et al. (eds), *The Basic Needs Approach to Development* (Geneva, International Labour Organization), chapter 1.
- Ghai, D. P. et al. (eds), 1977. *The Basic Needs Approach to Development* (Geneva, International Labour Organization).
- Ghatak, S., 1978. *Development Economics* (London, Longman).
- Gilbert, A. (ed), 1976. *Development Planning and Spatial Structure* (Chichester, Wiley).
- Gish, O., 1977. *Guidelines for Health Planners* (London, Tri-Med).
- Goodman, L. J., and R. N. Love (eds), 1979. *Management of Development Projects* (New York, Pergamon).
- Goodman, L. J., and R. N. Love (eds), 1980. *Project Planning and Management* (New York, Pergamon).
- Goulet, D., 1978. *Looking at Guinea-Bissau: A New Nation's Development Strategy* (Overseas Development Council, Occasional Paper 9).
- Green, R. H., et al., 1980. *Economic Shocks and National Policy Making: Tanzania in the 1970s* (The Hague, Institute of Social Studies, Research Report 8).
- Griffin, K., 1968. *Underdevelopment in Spanish America: An Interpretation* (London, George Allen & Unwin).
- Griffin, K. and J. Enos, 1970. *Planning Development* (London, Addison-Wesley).

- Grindle, M. (ed), 1980. *Politics and Policy Implementation in the Third World* (Princeton, Princeton University Press).
- Gurley, J. G., 1979. 'Economic development: a Marxist view'. In Jameson, K. P., and C. K. Wilber (eds), *Directions in Economic Development* (Notre Dame, University of Notre Dame Press), pp. 183-252.
- Hai, S. A., 1981. 'Planning consultancy in the developing world', *Third World Planning Review*, vol. 3, pp. 133-40.
- Hall, B. L., 1982. 'Participatory research, popular knowledge and power', *IFDA Dossier* (International Foundation for Development Alternatives, Rome), no. 31, pp. 31-42.
- Hall, P., 1970. *Theory and Practice of Regional Planning* (London, Pamberton Books).
- Hall, P., 1974. *Urban and Regional Planning* (Harmondsworth, Penguin Books).
- Hannett, L., 1974. 'Getting closer to the people', *Post-Courier* (Papua New Guinea), 5 December 1974, Arawa House Feature, p. 2.
- Hansen, A. H., 1969. *Planning and the Politicians and other essays* (London, Routledge Kegan & Paul).
- Hayter, T., 1981. *The Creation of World Poverty* (London, Pluto Press).
- Herrera, A. O. et al., 1976. *Catastrophe or New Society? A Latin American World Model* (Ottawa, International Development Research Centre).
- Hilhorst, J., 1971. *Regional Planning: A Systems Approach* (Rotterdam, Rotterdam University Press).
- Hill, M., 1968. 'A goals achievement matrix for evaluating alternative plans', *Journal of the American Institute of Planners*, vol. 34, pp. 19-29.
- Honadle, G., 1979a. 'Implementation analysis: the case for an early dose of realism in development administration'. In Honadle, G., and R. Klaus (eds), *International Development Administration: Implementation Analysis for Development Projects* (New York, Praeger Publishers), pp. 3-20.
- Honadle, G., 1979b. 'Rapid reconnaissance approaches to organizational analysis for development administration', *Conference on Rapid Rural Appraisal*, University of Sussex, Institute of Development Studies.
- Iglesias, G. U., 1976. *Implementation: The Problem of Achieving Results* (Manila, Eastern Regional Organization for Public Administration).
- Independent Commission on International Development Issues (Brandt Commission), 1980. *North-South: A Programme for Survival* (London, Pan Books).
- International Labour Organization (ILO), 1981-. Series of reports on decentralized planning, published as part of the *World Employment Programme Research Working Paper series*.
- International Union of Local Authorities, 1967. 'Plan implementation: a framework for discussion', background paper prepared for *Symposium on Urbanization in Developing Countries*, Noordwijk, The Netherlands (mimeo).
- Irvin, G., 1978. *Modern Cost-Benefit Methods* (London, Macmillan).
- Jantsch, E., 1967. *Technological Forecasting in Perspective* (Paris, Organization for Economic Cooperation and Development).
- Johns, S. and R. Riley, 1975. 'Local and district councils: should they be forgotten?', *Journal of Modern African Studies*, vol. 13, pp. 309-32.
- Joy, J. L., 1968. 'What an economist needs to know about dams'. In Rubin, N. and W. M. Warren (eds), *Dams in Africa* (London, Frank Cass), pp. 13-19.
- Kandeke, T. K., 1977. *Fundamentals of Zambian Humanism* (Lusaka, National Education Company of Zambia Ltd).
- Kaunda, K., 1974. *Humanism in Zambia and a Guide to its Implementation, Part II* (Lusaka, Government Printer).
- Killick, A., 1981. *Policy Economics: A Textbook of Applied Economics in Developing Countries* (London, Heinemann).
- Kinsey, B., 1976. 'Improving the effectiveness of evaluation in rural development projects', *Bulletin of the Institute of Development Studies* (University of Sussex), vol. 8, no. 1, pp. 3-7.

- Kozlowski, J., and J. Hughes, 1972. *Threshold Analysis: A Quantitative Planning Method* (London, Architectural Press).
- Krueckeberg, D. A., and A. L. Silvers, 1974. *Urban Planning Analysis: Methods and Models* (New York, Wiley).
- Kuklinski, A., 1971. 'Education for regional planning' in Durham, D. and J. Hilhorst (eds), *Issues in Regional Planning* (The Hague, Institute of Social Studies).
- Laar, A. van de, 1980. *The World Bank and the Poor* (The Hague, Martinus Nijhoff).
- Langmore, J. V., 1972. *A Critical Assessment of Australian Economic Policy for Papua New Guinea between 1945 and 1970* (University of Papua New Guinea, Department of Economics, Discussion Paper) (mimeo).
- Lappé, F. M. and A. Beccar-Varela, 1980. *Mozambique and Tanzania: Asking the Big Questions* (San Francisco, Institute for Food and Development Policy).
- Lele, U., 1975. *The Design of Rural Development* (Baltimore, Johns Hopkins Press).
- Leys, C., 1972. 'A new conception of planning'. In Faber, M., and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus), chapter 3.
- Lichfield, N., 1956. *Economics of Planned Development* (London, Estates Gazette).
- Lichfield, N., 1970. 'Evaluation methodology of urban and regional plans', *Regional Studies*, vol. 4, pp. 151-65.
- Lichfield, N. et al., 1975. *Evaluation in the Planning Process* (Oxford, Pergamon Press).
- Lindblom, C., 1959. 'The science of "muddling through"', *Public Administration Review*, vol. 19, pp. 79-99.
- Livingstone, I., 1979. 'On the concept of "integrated rural development planning" in less developed countries', *Journal of Agricultural Economics*, vol. 30, pp. 49-53.
- Longhurst, R. (ed), 1981. 'Rapid rural appraisal', *Bulletin of the Institute of Development Studies* (University of Sussex), vol. 12, no. 4 (whole issue).
- Lyddon, D., 1981. 'ISO-CARP conference on planning education: a report', *Third World Planning Review*, vol. 3, pp. 94-97.
- McLoughlin, J. B., 1969. *Urban and Regional Planning: A Systems Approach* (London, Faber & Faber).
- Maddick, H., 1963. *Democracy, Decentralization and Development* (Bombay, Asia Publishing House).
- Meadows, D. H. et al., 1972. *The Limits to Growth* (New York, Universe Books).
- Mehmet, O., 1978. *Economic Planning and Social Justice in Developing Countries* (London, Croom Helm).
- Mintzberg, H., 1979. *The Structuring of Organizations* (Englewood Cliffs, NJ, Prentice-Hall).
- Miro, C. A., and J. E. Potter, 1980. *Population Policy: Research Priorities in the Developing World* (London, Francis Pinter).
- Mishan, E. J., 1976. *Elements of Cost-Benefit Analysis* (London, George Allen & Unwin).
- Mohan, R., 1979. *Urban Economic and Planning Models* (Baltimore, Johns Hopkins Press).
- Moore, J. R. (ed), 1967. *The Economic Impact of the TVA* (Knoxville, University of Tennessee Press).
- Moore, M., 1981. 'Beyond the tarmac road: a guide for rural poverty workers'. In Longhurst, R. (ed), 'Rapid rural appraisal', *Bulletin of the Institute of Development Studies* (University of Sussex), vol. 12, no. 4, pp. 47-49.
- Moris, J., 1976. 'The transferability of western management concepts and programs, an East African perspective'. In Black, J. E., J. S. Coleman, and L. D. Stifel (eds), *Education and Training for Public Sector Management in Developing Countries* (New York, Rockefeller Foundation), pp. 73-83.
- Nieuwenhuijze, C. A. O. von, 1979. *Social Development—Supplement or Corrective to Economic Development?* (The Hague, Institute of Social Studies, Occasional Paper 69).
- Novick, D. (ed), 1973. *Current Practice in Program Budgeting (PPBS)* (London, Heinemann).

- Nyerere, J. K., 1968. *Freedom and Socialism: Uhuru na Ujamaa* (Nairobi, Oxford University Press).
- Nyerere, J. K. 1969. Speech to TANU Conference, 28 May 1969, reproduced in Tanzania, *Second Five-Year Plan for Social and Economic Development 1969-74* (Dar es Salaam, Government Printer), Volume I.
- Oppenheim, N., 1980. *Applied Models in Urban and Regional Analysis* (Englewood Cliffs N. J., Prentice-Hall).
- O'Riordan, T., and D. Sewell, 1981. *Project Appraisal and Policy Review* (Chichester, Wiley).
- Oxfam, 1981. *Field Directors' Handbook* (Oxford, Oxfam, revised version of 3rd edition).
- Oyugi, W. O., 1981. *Rural Development Administration: The Kenyan Experience* (Delhi, Vikas Publishing House).
- Packard, P. C., 1972. *Critical Path Analysis for Development Administration* (The Hague, Institute of Social Studies).
- Papua New Guinea, 1975. *Constitution of the Independent State of Papua New Guinea* (Port Moresby, Government Printer).
- Peil, M. et al., 1982. *Social Science Research Methods: An African Handbook* (London, Hodder & Stoughton).
- Porter, A. et al., 1980. *A Guidebook for Technology Assessment and Impact Analysis* (New York, Elsevier-North Holland).
- Pressman, J. and A. Wildavsky, 1973. *Implementation* (Berkeley, University of California Press).
- Pritchett, C. H., 1943. *The TVA* (Chapel Hill, University of North Carolina Press).
- Rakodi, C., 1982. 'The role of monitoring and evaluation in project planning, in relation to the upgrading of unauthorized housing areas', *Public Administration and Development*, vol. 2, pp. 129-46.
- Reif, B. 1973. *Models in Urban and Regional Planning* (Aylesbury, Buckinghamshire, Leonard Hill Books).
- Richardson, J. M., 1982. 'Global models: a sampler', *Development Forum*, vol. 10, no. 5, p. 7.
- Riddell, R., 1981. *Ecodevelopment* (Farnborough, Gower).
- Riggs, F. W., 1964. *Administration in Developing Countries* (Boston, Houghton Mifflin).
- Roberts, M., 1974. *An Introduction to Town Planning Techniques* (London, Hutchinson).
- Robinson, J., 1975. *Economic Management in China* (London, Anglo-Chinese Education Institute).
- Robock, S. H., 1963. *Brazil's Developing Northeast: A Study of Regional Planning and Foreign Aid* (Washington, DC, Brookings Institution).
- Rodwin, L. and Associates, 1969. *Planning Urban Growth and Regional Development: The Experience of the Guayana Program of Venezuela* (Cambridge, MIT Press).
- Roemer, M. and J. Stern, 1975. *The Appraisal of Development Projects* (New York, Praeger).
- Rondinelli, D. A., 1976. 'International requirements for project preparation: aids or obstacles to development planning?', *Journal of the American Institute of Planners*, vol. 42, pp. 314-26.
- Rondinelli, D. A., 1979. 'Designing international development projects for implementation'. In Honadle, G., and R. Klauss (eds), *International Development Administration: Implementation Analysis for Development Projects* (New York, Praeger), pp. 21-52.
- Rondinelli, D. A., 1981. 'Government decentralization in comparative perspective: theory and practice in developing countries' *International Review of Administrative Sciences*, vol. 67, pp. 133-45.
- Rosser, C., 1970. 'Action planning in Calcutta: the problem of community participation' in Apthorpe, R. (ed). *People Planning and Development Studies* (London, Frank Cass), chapter 9.

- Rostow, W. W., 1960. *The Stages of Economic Growth: A Non-Communist Manifesto* (New York, Cambridge University Press).
- Sachs, I., 1981. 'Ecodevelopment: a paradigm for strategic planning' in Strecton, P. P. and R. Jolly (eds), *Recent Issues in World Development* (Oxford, Pergamon Press), pp. 145-48.
- Seers, D., 1969. 'The meaning of development', *International Development Review*, vol. 6, December, pp. 2-6.
- Seers, D., 1972. 'The prevalence of pseudo-planning' in Faber, M. and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus), chapter 1.
- Seers, D., 1982. 'The changing world and the implications for social science teaching', unpublished address, *18th Conference of Directors of Special Courses for Overseas Students and Officials*, University of Sussex, March 1982.
- Self, P., 1981. 'Planning: rational or political?'. In Baehr, P., and B. Wittrock (eds), *Policy Analysis and Policy Innovation* (London, Sage), pp. 219-36.
- Smith, B., 1976. *Policy-Making in British Government* (Oxford, Martin Robertson).
- Stöhr, W. B. and D. R. F. Taylor (eds), 1981. *Development from Above or Below? The Dialectics of Regional Planning in Developing Countries* (Chichester, Wiley).
- Stolper, W. F., 1966. *Planning Without Facts: Lessons in Resource Allocation from Nigeria's Development* (Cambridge, Harvard University Press).
- Tinbergen, J., 1967. *Development Planning* (London, Weidenfeld & Nicolson).
- Todaro, M., 1971. *Development Planning: Models and Methods* (Nairobi, Oxford University Press).
- Todaro, M., 1981. *Economic Development in the Third World* (Harlow, Longman, 2nd edition).
- United Nations, 1961. *Handbook on Public Administration* (New York).
- United Nations, 1962. *Decentralization for National and Local Development* (New York).
- United Nations, 1972. *Guidelines for Project Evaluation* (New York).
- United Nations, 1979. *Handbook on the Improvement of Administrative Management in Public Administration* (New York).
- United Nations Environment Programme (UNEP), 1980. *Guidelines for Assessing Industrial Environmental Impact and Environmental Criteria for the Siting of Industry* (Paris, UNEP).
- United Nations Economic and Social Commission (UNESCO), 1974. *Social Indicators: Problems of Definition and Selection* (Paris, The UNESCO Press).
- United Nations Economic and Social Commission (UNESCO), 1976. *The Use of Socio-Economic Indicators in Development Planning* (Paris, the UNESCO Press).
- United Nations Industrial Development Organization (UNIDO), 1980. *Manual for Evaluation of Industrial Projects* (New York, UN).
- United Nations Research Institute for Social Development (UNRISD), 1970. *Contents and Measurement of Socio-Economic Development* (Geneva, UNRISD).
- United Nations Research Institute for Social Development (UNRISD), 1978-79. *Measurement and Analysis of Progress at the Local Level* (Geneva, UNRISD, series of three reports).
- United States Agency for International Development (USAID), 1980. *Environmental Design Considerations for Rural Development Projects* (Washington, DC, USAID).
- Waterston, A., 1965. *Development Planning: Lessons of Experience* (Baltimore, Johns Hopkins Press).
- Waterston, A., 1972. 'An operational approach to development planning' in Faber, M. and D. Seers (eds), *The Crisis in Planning* (London, Chatto & Windus), chapter 4.
- Webber, M. M., 1963. 'Comprehensive planning and social responsibility: towards an AIP consensus on the profession's roles and purposes', *Journal of the American Institute of Planners*, vol. 29, pp. 232-37.
- Wedgewood-Oppenheim, F. et al., 1975. 'An exploratory study in strategic monitoring', *Progress in Planning*, vol. 5, no. 1.

- Wilber, C. K. and K. P. Jameson, 1979. 'Paradigms of economic development and beyond' in Jameson, K. P. and C. K. Wilber (eds), *Directions in Economic Development* (Notre Dame, University of Notre Dame Press), pp. 1-41.
- Wildavsky, A., 1973. 'If planning is everything, maybe it's nothing', *Policy Sciences*, vol. 4, pp. 127-53.
- Wilson, A., 1972. *Papers in Urban and Regional Analysis* (London, Pion).
- World Bank, 1978. *Environmental Considerations for the Industrial Development Sector* (Washington, DC, World Bank).
- World Bank, 1980. *World Development Report 1980* (New York, Oxford University Press).
- World Bank, 1981. *World Development Report 1981* (New York, Oxford University Press).
- World Bank, 1982. *World Development Report 1982* (New York, Oxford University Press).
- Wu, C.-T., and D. F. Ip, 1981. 'China: rural development—alternating combinations of top-down and bottom-up strategies'. In Stöhr, W. B., and D. R. Fraser-Taylor (eds), *Development from Above or Below? The Dialectics of Regional Planning in Developing Countries* (Chichester, Wiley), chapter 6.
- Zambia, 1981. *Integrated Rural Development Programme: Annual Report 1980* (Lusaka, Ministry of Agriculture and Water Development).
- Zetter, R., 1981. 'Imported or indigenous planning education?' *Third World Planning Review*, vol. 3, pp. 21-42.

Author Index

- Abel, N., 145, 150
 Abt, C. C., 177
 Ackoff, R. L., 118
 Adelman, I., 26, 39
 Ahmed, M., 209
 Allan, B., 166, 169, 176
 Alonso, W., 233, 242
 Amin, S., 38
 Apthorpe, R. J., 28, 32, 61, 114, 221
 Ayeni, B., 121, 122, 129
 Aziz, S., 35
- Bachr, P., 86
 Ballard, J. A., 43
 Barnett, T., 136, 137
 Barney, G., 128
 Barrett, S., 155, 175
 Barrow, C. J., 209
 Baster, N., 89, 114
 Batey, P. W. J., 82, 83, 87
 Beccar-Varela, A., 33
 Beenhakker, A., 72, 86
 Belshaw, D. R. G., 164, 176, 200, 201, 203
 Bendavid-Val, A., 77, 194, 195, 207, 209, 210
 Bernstein, H., 39
 Boisier, S., 231, 232
 Bourn, J., 192
 Bracken, I., 79, 88, 89, 121, 127, 129, 140, 149
 Brandt Commission, 7, 8, 34, 35, 38
 Breheny, M. J., 82, 83, 87
 Brookfield, H., 32, 39
 Bulmer, M., 114
- Cacho, C. P., 51
 Caiden, N., 47, 61, 166, 168, 176, 195, 210, 234
 Canter, L., 150
 Carley, M., 19, 67, 68, 69, 85, 129, 136, 139, 142, 149, 150
 Carr, M., 39
 Carruthers, I., 87
 Casley, D., 100, 103, 104, 113, 114, 177
- Chadwick, G., 19, 56, 73, 86, 133, 250
 Chambers, R., 87, 103, 115, 164, 175, 176, 195, 196
 Chenery, H., 39, 129
 Chorley, R., 128
 Cochrane, G., 115, 143, 150, 158, 250
 Cohen, J. M., 227
 Cohen, S., 227
 Cole, H. S., 119
 Cole, S., 120, 128
 Connolly, T. G., 116
 Conyers, D., 28, 49, 61, 97, 134, 142, 143, 150, 158, 202, 205, 215, 216, 219, 221, 225, 227, 235, 241, 250
 Cooke, R. U., 115
 Coombs, P. H., 209
 Cooper, C., 135, 149
 Curtis, D., 171, 172, 173, 174, 175, 177
- Davey, K. J., 216
 De Kadt, E., 39
 Derow, E., 142, 150
 Deutsch, K. W., 226
 Dickinson, R. E., 212
 Doornkamp, J., 104, 115
 Dore, R., 243
 Drenowski, J., 89, 114
 Dumont, R., 39
 Dunsire, A., 192
 Dyckman, J. W., 248
- Eddison, T., 56, 167
 Encel, S., 129
 Enos, J., 43, 61, 71-72, 76, 86, 120, 124, 129, 135, 137, 208, 235, 250
 Esman, M. J., 165, 166, 176, 228
 Eversley, D., 19, 231, 232, 233, 242, 248, 249, 250
- Faber, M., 19, 47, 61, 86, 154, 176, 250
 Faltas, M., 213
 Faludi, A., 19, 86, 248, 250
 Fields, G. S., 249
 Finsterbusch, K., 142, 150