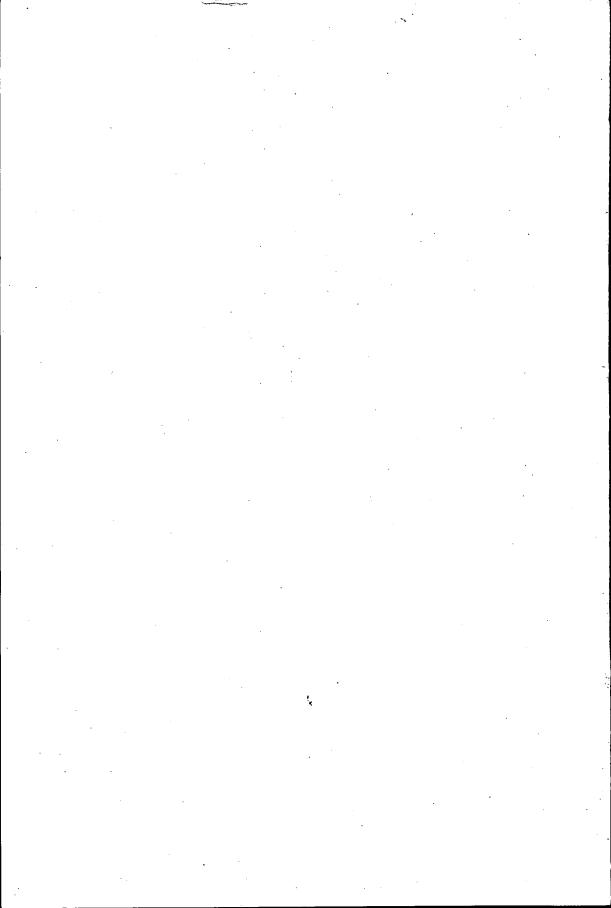
FRAMEWORK FOR REGIONAL PLANNING IN DEVELOPING COUNTRIES



FRAMEWORK FOR REGIONAL PLANNING IN DEVELOPING COUNTRIES

METHODOLOGY FOR AN INTERDISCIPLINARY APPROACH TO THE PLANNED DEVELOPMENT OF PREDOMINANTLY RURAL AREAS

Edited by
J. M. VAN STAVEREN
D. B. W. M. VAN DUSSELDORP



International Institute for Land Reclamation and Improvement/ILRI P.O. Box 45, 6700 AA Wageningen, The Netherlands 1983.

Manuscript of the Research Group for Interdisciplinary Planning in Developing Countries, Agricultural University, Wageningen, The Netherlands.

First published 1980 Second (unchanged) edition 1983

© International Institute for Land Reclamation and Improvement/ILRI. Wageningen, The Netherlands, 1980.

This book or any part thereof must not be reproduced without the written permission of ILRI.

ISBN 9070260832

Printed in The Netherlands.

	-	
		The state of the s
•		
CONTENTS		v
FOREWORD		IX
ACKNOWLEDGEMENTS		XI
MEMBERS OF THE RESEARCH GROU	P FOR INTERDISCIPLINARY	. XII
PLANNING		
1. INTRODUCTION		1
1.1 Why a framework for regional p	nlanning?	1
\$1.00 miles	Praiming.	3
1.2 For whom?		: ,
1.3 The structure of the book		4
2. THE PLACE OF REGIONAL PLA PLANNED DEVELOPMENT	NNING IN THE PROCESS OF	6
D.B.W.M. van Dusseldorp		
2.1 Planned development and plann		6
2.2 The position of the regional I	planner	9
2.3 The concept of a region		12
2.4 The relation between regional government planning	planning and other types of	: 14
2.5 Types of regional planning		18
Specific procedures • Specific	fic levels • Specific points of	
departure • Specific levels	of elaboration	
2.6 The theoretical background		21
2.7 The major activities in a reg	ional planning process	23
tures • Time horizons • Rese	tives, and targets • Future struc earch and stocktaking • drawing up e plan • Evaluation of the planni	
2.8 The introduction and implement	tation of regional planning	29
3. THE INTERDISCIPLINARY PRO	OCEDURE OF REGIONAL PLANNING	37
D.B.W.M. van Dusseldorp a	•	
3.1 Introduction		37
3.2 Disciplines and interdisciplin	narity: terminology	37
		38
3.3 Interdisciplinarity in region		
3.4 Possible impediments in teamwo		39
3.5 Qualities required in members	of interdisciplinary teams	42
3.6 The composition of the team		43
3.7 Management and responsibilities	es within the team	. 46
		V

	·	
. •	4. STAGES IN REGIONAL PLANNING	50
	J.M. van Staveren	
	4.1 The need for phasing	50
	4.2 The pre-planning phase	51
	Terms of reference • Work plan • Contracts • Plan of operations	
	4.3 Recommended stages, their sequence and duration	54
	4.4 Main activities per stage	55
	1. Preparation 2. Reconnaissance 3. Main field study 4. Additional field study 5. Preparation draft plan 6. Editing final report	
	5. REPORTING ON THE REGIONAL PLANNING STUDIES	62
	F.P. Jansen and D.B.W.M. van Dusseldorp	
	5.1 The reporting procedure	62
	5.2 The Final report	63
	Main Report • Introduction • Present situation • Potentials and constraints • Future situation • Strategies and programs of action • Economic aspects • Integrated development program • Annexes	
		, ,
	6. A SYSTEMS APPROACH TO REGIONAL PLANNING	69
	J.M. van Staveren	
	6.1 A schematic outline for the interdisciplinary organization	69.
	6.2 Network analysis of the planning process	70
	6.3 The instrumental documents developed by the Research Group	73.
	(1) Synthesized overview (2) Numbered list of identified activities (3) Functionalized relation diagram (4) Discipline's task and interdisciplinary function (5) Structured checklist of data to be collected (6) Numerical review of the activities (7) Numerical reviews of the organizational activities.	
	6.4 In conclusion	77
	ANNEX I. LIST OF INDENTIFIED ACTIVITIES	79
	ANNEX II. FUNCTIONALIZED RELATION DIAGRAMS (see back flap)	152
	Chart I (covering stages 0, 1 and 2) Chart II (covering stages 3 and 4) Chart III (covering stages 5 and 6)	
	ANNEX III. DISCIPLINE-WISE CONTRIBUTIONS TO REGIONAL PLANNING	153
	A. CLIMATE H.F. Ledeboer	155
	B. GEOLOGY J.D. de Jong	160

C. I	HYDROLOGY	H.F. Ledeboer and K. Roscher	166
D. I	LAND AND SOILS	K.J. Beek and J. Bennema	177
E. F	ECOLOGY	Chr. Geerling	183
F. (CROP PRODUCTION	M. Flach	189
G. <i>1</i>	ANIMAL PRODUCTION	G. Montsma	198
н. і	FORESTRY	E. Cellarius-Lambermont, C.P. van Goor and W. Kriek	205
J. I	FISHERIES AND AQUACULTURE	C.J.J. Richter and E.A. Huisman	213
к. м	MINING		219
	SECONDARY/TERTIARY PRODUCTION SECTORS	H.I. Pouw, R. Wirtz and P.T. Engelkamp	220
М. І	DEMOGRAPHY	D.B.W.M. van Dusseldorp	224
N. 5	SOCIOLOGY	D.B.W.M. van Dusseldorp	228
O. I	EDUCATION	D.B.W.M. van Dusseldorp	236
P. I	RURAL EXTENSION	D.B.W.M. van Dusseldorp	243
Q. I	HEALTH	R. Slooff and F.L. Pelt	248
R. I	PUBLIC ADMINISTRATION	D.B.W.M. van Dusseldorp	255
S. A	AGRICULTURAL COOPERATIVES	F.J.A. Bouman	265
т. А	AGRICULTURAL CREDIT	F.J.A. Bouman	273
. U. 1	LAND TENURE	J.W. Kroon and D.B.W.M. van Dusseldorp	281
V. 1	MACRO ECONOMY	Dasserdorb	287
. W. I	AGRICULTURAL ECONOMY	F.J. Polman	288
	ECONOMY OF NON-AGRICULTURAL PRODUCTION SECTORS	R. Wirtz, H.I. Pouw and P.T. Engelkamp	299
Y. I	PHYSICAL INFRASTRUCTURE (incl. CIVIL ENGINEERING)	D.B.W.M. van Dusseldorp and J.M. van Staveren	313
ANNEX IV	. NUMERICAL REVIEWS OF ORGANIZA	TIONAL ACTIVITIES	319
GLOSSARY		• • • • • • • • • • • • • • • • • • •	321
SELECTED	REFERENCES		335
-	,		VII -

FOREWORD

In 1968, staff members of several Departments of the Agricultural University in Wageningen, The Netherlands, became convinced that comprehensive and integrated regional development planning deserved more systematic attention in the relevant educational programs.

An informal working party was therefore established to compile a set of guidelines that could be followed for the effective preparation of regional development plans. The knowledge and experience available within the University made it advisable to limit these guidelines to regional planning for predominantly rural areas.

At the beginning, staff members of five Departments participated in the working party. Most of them had had experience in the preparation of development plans, albeit in different type of regions. When it became clear that the various experiences and views could not be integrated into one set of guidelines, it was decided to enable the participants to obtain experience together in one and the same region, and to test the ideas that had been brought forward during the discussions.

When in 1969 the Economic Planning Unit of Malaysia commissioned the University with the preparation of a development plan for the first Division in Sarawak, this was a timely coincidence that fitted nicely with the intentions of the University. A team of eleven experts was formed which, in addition to staff members of the University, included representatives of the Research Institute of Management Science/RVB, Delft, who provided expertise in the fields of macro-economics and small-scale industries. In 1971 the report was presented to the Malaysian Government.

Later - in 1972 - the Faculty of Agricultural Sciences agreed to establish a Research Group of specialists from thirteen Departments whose task it would be to produce a framework for the organization and management of an interdisciplinary approach to development planning of predominantly rural regions.

Owing to many circumstances, it has taken until 1980 before the results of their work could be published.

Developments in the field of planning during the last ten years may make

^{*} A Department is a Research and Teaching Unit.

one question the usefulness of publishing such a study. Yet, in many recent documents, development planning for rural areas is still strongly advocated; e.g. in Report on the World Food Conference (1974); Report on the World Conference on Agrarian Reform and Rural Development (1979); Agriculture Toward 2000 (1979); Report of the Presendential Commission on World Hunger (1980); North-South, A Programme for Survival (1980). What has changed in the last ten years, however, are the views on the size of the area (region, sub-region, village, and household), on the target population (rural community, rural poor, small farmers), and on the approach (integrated, unified, organic). Nevertheless, it remains obvious that the development of a rural economy - independent of scale and target population - is a complicated affair that requires endeavours of many disciplines, brought together in a concerted effort.

This book concentrates on describing how such a concerted effort can be realized, indicating the methodology thereof and the procedures to be followed. It is this description which is felt to be the main justification for the publication of this book.

Interdisciplinary cooperation is difficult, time-consuming, and frustrating if not carefully organized and managed. It is the hope of the Research Group that this Framework will contribute to a more efficient planning process in general, and to a better organized and managed preparation of regional plans for integrated rural development in particular.

The Group also believes that the annexes will prove useful checklists for specialists engaged in any other type of development planning, not only in their own specific area of competence but also in its relation to other components of that planning.

G.P. Tiggelman

Chairman

Research Group for Interdisciplinary Planning in Developing Countries.

ACKNOWLEDGEMENTS

Many people have contributed to the production of this book.

The members of the Research Group are listed on the following pages. Most of them are members of the faculty of the Agricultural University, Wageningen. The others are from the Research Institute for Management Science (RVB), Delft, the Dorschkamp Research Institute for Forestry and Landscape Planning, Wageningen, and the Ministry of Agriculture and Fisheries. The cooperation of these organizations in making these members available to participate in the Research Group is gratefully acknowledged.

Valuable comments on the preliminary draft of the manuscript (in 1977) were received from:

Dr. J.Th. Broekhuyse (Royal Tropical Institute, Amsterdam)

Mr. K. de Goede (Asian Institute of Technology, Bangkok)

Prof. Dr. J.C.M. Hilhorst (Institute of Social Studies, The Hague)

Mr. P. Mulder (Euroconsult, Arnhem)

Dr. I. Prion (Settlement Study Centre, Rehovot)

Dr. J.C. Williams (ESCAP, Bangkok)

Dr. D.R. Umali (FAO, Bangkok)

Mr. K. Zijderveld (International Agricultural Centre, Wageningen)

Temporary scientific assistants to the Secretariat of the Research Group were Messrs. J.C. Boxem, W.Th. Groot, and C.W.J. Roest.

We acknowledge the vital role played by the International Institute for Land Reclamation and Improvement (ILRI) in agreeing to publish the book.

To everyone who contributed to the production of the book - Research Group members, secretaries, translators, typists, draftsmen, correctors, and others, each in his or her own specific function - we express our gratitude.

The editors

MEMBERS OF THE RESEARCH GROUP FOR INTERDISCIPLINARY PLANNING

BEEK, K.J.	Soil Scientist, Department of Soil
	Science and Land Evaluation, International
	Institute for Land Reclamation and
	Improvement (ILRI), Wageningen.
BENNEMA, J.*	Professor of Tropical Soils, Department
	of Soil Science and Geology, Agricultural
	University, Wageningen.
BOUMAN, F.J.A.	Senior Lecturer, Department of Non-
	Western Agricultural Cooperatives and
	Finance, Agricultural University,
	Wageningen.
BRINKMAN, R.	Senior Soil Scientist, Department of
	Soil Science and Geology, Agricultural
	University, Wageningen.
CELLARIUS-LAMBERMONT, Mrs. E.	Forest Scientist, Dorschkamp Research
	Institute for Forestry and Landscape
	Planning, Wageningen.
VAN DUSSELDORP, D.B.W.M.*	Professor of Social Aspects of Development
	Planning, Department of Rural Sociology
	of the Tropics and Subtropics, Agricultural
	University, Wageningen.
ENGELKAMP, P.Th.	Agro-economist, Research Institute for
	Management Science (RVB), Delft.
FLACH, M *	Professor of Tropical Crops, Department
	of Tropical Crop Science, Agricultural
	University, Wageningen.
FRERKS, G.E.	Research Assistant, Department of Rural

Sociology of the Tropics and Subtropics, Agricultural University, Wageningen.

^{*} Key-members of the Group

GEERLING, Chr.

Research Officer Tropical Aspects,

Department of Nature Conservation,

Agricultural University, Wageningen.

VAN GOOR, C.P.

Silviculturist, Deputy Director, Dorschkamp Research Institute for Forestry and Landscape Planning, Wageningen.

HUISMAN, E.A.

Professor of Fisheries, Fish Culture and Fisheries Section, Department of Animal Production, Agricultural University, Wageningen.

JANSEN, F.P. *

Professor of Economics, Department of Development Economics, Agricultural University, Wageningen.

DE JONG, J.D.

Professor of Geology, Department of Soil Science and Geology, Agricultural University, Wageningen.

KRIEK, W.

Forest Scientist, Dorschkamp Research Institute for Forestry and Landscape Planning, Wageningen.

KROON, J.W.

Staff Member Agrarian Law, Department of Jurisprudence and Political Science of the Non-Western Countries, Agricultural University, Wageningen.

LEDEBOER, H.F. *

Senior Lecturer, Department of Land and Water use, Agricultural University, Wageningen.

LEKANNE dit DEPREZ B.E.J.C.

Senior Lecturer, Department of Rural Sociology of the Tropics and Subtropics, Agricultural University, Wageningen.

^{*} Key-members of the Group

LUNING	, H.A.
--------	--------

Senior Lecturer, Department of Development Economics, Agricultural University, Wageningen.

MONTSMA, G.

Senior Lecturer, Tropical Animal Production Section, Department of Animal Production Agricultural University, Wageningen.

MOOK, B.T.

Senior Lecturer, Department of Business Administration, Agricultural University, Wageningen.

PELT, F.L.

Lecturer, Environmental Health, Department of Public Health, Agricultural University, Wageningen.

POLMAN, F.J.

Research Officer, Department of Development Economics, Agricultural University, Wageningen.

POUW, H.I.

Regional Economist, Research Institute for Management Science (RVB), Delft.

RICHTER, C.J.J.

Lecturer, Fish culture and Fisheries Section, Department of Animal Production, Agricultural University, Wageningen.

ROSCHER, K.

Lecturer, Department of Civil Engineering and Irrigation, Agricultural University, Wageningen.

SLOOFF, R.

Lecturer, Tropical Hygiene, Department of Public Health, Agricultural University, Wageningen.

VAN STAVEREN, J.M. *

Senior Adviser, Ministry of Agriculture and Fisheries. Secretary, Research Group for Interdisciplinary planning in Developing Countries, Agricultural University, Wageningen.

[★] Key- members of the Group

TIGGELMAN, G.P. *

Director, Directorate for Agricultural
Assistance to Developing Countries,
Ministry of Agriculture and Fisheries.
Chairman, Research Group for Interdisciplinary Planning in Developing Countries.

WIRTZ, R.

Senior Regional Economist, Research Institute for Management Science (RVB), Delft.

^{*} Key-members of the Group

	Sales Colored
*	
•	
•	
A Committee of the Comm	
•	
•	
•	
· ·	

1. INTRODUCTION

1.1 Why a framework for regional planning?

Within the world of development planning, expressions that have become popular over the last decades are comprehensive and integrated rural development, area development, basic needs, and a unified approach. The reasons for the increasing use of such expressions are that

national and sectoral plans, if available at all, seldom provide a structure sufficiently detailed for the coordination and mutual adjustment of local plans and projects, and that

too little attention has been paid to the needs and ideas of the local population. As a result it has been difficult to mobilize the social potentials at the regional and local levels.

At the time this Framework was being prepared, regional planning as an instrument in planned development was receiving considerable attention. Meanwhile, this attention has shifted to a lower level of planning, such as block level, village, target group, and household planning. It has shifted from the macro, functional, 'top-down' approach (mainly directed towards economic growth) to the micro, territorial, integrated, 'bottom-up' approach focused on basic needs, equity, and popular participation. There seems to be a danger that these two approaches are seen as alternatives instead of approaches that should be complementary. It is still an open question what the optimal mixture of these approaches should be. But whatever it is, there will remain the need for a level in planned development where the approaches not only meet but are also merged.

Within the system of multilateral planning, regional planning can perform a vital function in providing this level. It can link the development potentials emerging in local plans and initiatives to the policies and resources

For specific terms and concepts used in this book, definitions are presented in the glossary.

of the national level. It can create a structure within which the various local activities can be coordinated into a development process that is be efficial to all.

The sophistication of regional planning must be adapted to the available data base and to the coordination and management capacities of the existing administrative system. If, however, regional planning is to become an effective bridge between national and sectoral planning and local initiatives, regional plans must have an internal logic. This means that they must indicate the relation between objectives and allocated resources and between the identified projects, programs, or regionalized sector plans, including their coordinated implementation and the organization thereof.

The very nature of regional plans means that they have to be prepared by multidisciplinary teams working in an interdisciplinary way. Past experiences have made clear that it is a time-consuming and costly affair to bring experts from different disciplines together to prepare, in a concerted effort, a regional plan. The following problems arise:

Team members are often not aware of the pertinent information they have to provide for the planning purpose.

Team members do not clearly formulate the type of information they need from other disciplines, nor specify at what moment in the planning period this information has to be available.

Team members often collect material and draw up their reports as if they were engaged in a specialized study for their own discipline.

This want of comprehension can lead to

misunderstanding between team members;

loss of time, because one team member has to wait for information from others;

collection of material that is neither necessary nor relevant for the regional plan, resulting in an unbalanced and costly set of data.

In this way, the preparation of regional plans becomes an unnecessarily expensive and prolonged affair. If it is to become an effective tool for integrated rural development, regional planning must be performed efficiently, and in a reasonably short period.

To gain a better understanding of the structure of a comprehensive regional planning process, our Research Group undertook a systematic survey of the distinct components of such a process, and of their interdependence. We think that the material resulting from this survey will be of some methodological help and may serve as guidelines in the programming of planning activities, particularly for those who in one way or another are newly confronted with these matters.

The Framework certainly does not profess to be a handbook for planning for each separate discipline; it is presupposed that persons involved in regional planning are in command of the theories, techniques, and methods of the discipline they are representing in the planning team. Nor does the Framework claim to introduce any spectacular new elements or concepts; it merely reflects the systematized experience of experts from different disciplines who have been involved in planning in various developing countries. It focuses on the relations between the activities that are fundamental for interdisciplinary cooperation.

The Framework is intended for regional plans at the meso-level and for regions that are predominantly rural. A region is defined as being predominantly rural when 60 per cent or more of its population is directly or indirectly involved in agriculture. This does not necessarily mean that the greater part of the regional income stems from agriculture. One of the purposes of regional plans is to broaden and diversify the economic basis of the regions and certainly not to let them remain rural for ever.

1.2 For whom?

The Framework can be of use for various groups of people:

students preparing themselves for positions that may bring them into contact with regional planning

experts preparing themselves for participation in the studies for a regional plan and who have not worked in such an exercise before

administrators and planning officers involved in the preparation, supervision, or implementation of regional plans.

As has been mentioned, experienced regional planners will find no spectacular new elements of knowledge. They may, however, find the relation diagrams

and the other annexes of this book a useful extra tool that may help them to recognize more sharply the interdependencies of the component activities of the various disciplines.

1.3 The structure of the book

Because the terms planning, region, and others have various connotations, and because the position of regional planning in the overall process of planned development may differ from place to place, these concepts are defined in Chapter 2.

In Chapter 3, the main problems that interdisciplinary studies face are discussed, along with some recommendations that could improve the performance of interdisciplinary planning teams.

Chapter 4 specifies the various stages and steps that should be distinguished in an equilibrated and detailed planning study. It should be realized, however, that not all regions are 'ripe' for regional planning in detail. This will be so, for instance, if the region's relative position within the national framework is as yet indistinct, or if essential data are lacking. In such cases, the planning process will necessarily be limited to one or two stages; this will obviously simplify the schedule of activities, which will conclude in a provisional report only.

Chapter 5 advises on reporting procedures and the structure of reports that will ensure a well-ordered presentation of the often massive and complex information obtained by the team. The information must be presented in such a way that the various levels of administrative and policy bodies, including representatives of the local population, have easy access to it.

Chapter 6 is the core of the Framework. It focuses on the 'planning of the

planning process', i.e. on the coordination and integration of the various streams of essential information. By means of a specified list of activities (Annex I) and relation diagrams (Annex II), it analyses and comments on:

which discipline(s) are to produce which information, and to which other discipline(s) it is to be submitted in what sequence the information must be available the decisions that have to be made, and by whom; and when the planning team has to consult with its principals.

Before being able to show the links between the various activities, it was first necessary to identify each separate activity. This has been done in Annex I. each activity being given a number.

The relation diagrams (Annex II) show the logical arrangement of the successive interrelated tasks. These diagrams are unavoidably at a high level of abstraction and will require adaptation when executing an actual planning exercise. At first glance, the diagrams look fairly complicated; but then, regional planning is a complicated process: to simplify it would only be misleading.

As a logical complement to Annexes I and II, which both emphasize the integrative structure of the planning process, a set of documents has been prepared for each separate discipline. Presented discipline-wise in Annex III, these documents contain:

a definition of each discipline's task and interdisciplinary function

a structured checklist of the data that each discipline has to collect

a numerical review of the activities in which each discipline must participate during the various stages of the planning process.

These documents, as a matter of fact, may prove useful also in planning exercises other than regional.