PEOPLE’S RESPONSE TO POLICY CHANGE IN AGRICULTURAL DEVELOPMENT ORGANIZATION

The Benin Case

R.C. Tossou
PROPOSITIONS

1 In similarly changing situations, social actors actively and creatively adopt a plurality of coping responses. This plurality of responses is guided by their evaluation of the costs and benefits of these responses for themselves and for other social actors (this dissertation).

2 Social actors' response to change is not only a product of their capability with respect to the performance of the expected behaviour. It depends also on their readiness or willingness to acquire capabilities pertaining to the situation (this dissertation).

3 Social actors' response to policy change is the outcome of the way they perceive the degree of countervailing power (room for manoeuvre) available to them in their attempts to perform the expected behaviour. This countervailing power may be related either to their autonomy or to the level of accountability given to them (this dissertation).

4 Interactive knowledge and information processes used as policy instruments are more likely to lead to positive responses to policy implementation than directive ones (this dissertation).

5 Material, technical, financial and social motivations are mainly used by the social actors in their calculations of the costs and benefits of a given policy change (this dissertation).

6 Directive knowledge and information processes such as regulation setting, reinforcement, control, supervision and disciplinary action are the main policy instruments used in directive, bureaucratic and top-down situations (this dissertation).

7 Knitting a new rope from an old one is a way to ensure sustainability and continuity (African saying).

8 Strangers with big eyes may not see as clearly as natives with tiny eyes (Yoruba saying).

9 Our way of behaving (physically, psychologically and spiritually) is the only source of our fortune and misfortune in this life.
Sharing difficulties with other people is the spice of life.

The completion of an MSc course or a PhD programme by African males in the Netherlands means an end to their job of cooking and washing dishes after each meal. It is a matter of culture.

Cycling is a nice sport for African students in the Netherlands, but once back in their countries, it becomes ridiculous and they prefer pretty cars or motorbikes. It is a matter of culture, but also of physical location.

Propositions presented with the doctoral dissertation

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The Benin Case

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The Benin Case
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PEOPLE'S RESPONSE TO POLICY CHANGE IN AGRICULTURAL DEVELOPMENT ORGANIZATION

The Benin case

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Proefschrift
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To my beloved father Norbert Dassoundo Tossou Dossa as a posthumous recognition of his life-long sacrifice for his relatives
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<th>Full Form</th>
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<tr>
<td>ADE</td>
<td>Aide à la Décision Economique</td>
</tr>
<tr>
<td>AKIS</td>
<td>Agricultural Knowledge and Information System</td>
</tr>
<tr>
<td>CAD</td>
<td>Centre d’Appui au Développement</td>
</tr>
<tr>
<td>CAETS</td>
<td>Coopérative Agricole et Expérimentale de Type Socialiste</td>
</tr>
<tr>
<td>CARDER</td>
<td>Centre d’Action Régional pour le Développement Rural</td>
</tr>
<tr>
<td>CATS</td>
<td>Coopérative Agricole de Type Socialiste</td>
</tr>
<tr>
<td>CETA</td>
<td>Collège d’Enseignement Technique Agricole</td>
</tr>
<tr>
<td>CLCAM</td>
<td>Caisse Locale de Crédit Agricole Mutuel</td>
</tr>
<tr>
<td>CNRA</td>
<td>Comité National de Recherche Agronomique</td>
</tr>
<tr>
<td>CPR</td>
<td>Centre de Promotion Rurale</td>
</tr>
<tr>
<td>DEO</td>
<td>District Extension Officer</td>
</tr>
<tr>
<td>DRA</td>
<td>Direction de la Recherche Agronomique</td>
</tr>
<tr>
<td>FSA</td>
<td>Faculté des Sciences Agronomiques</td>
</tr>
<tr>
<td>GRVC</td>
<td>Groupe d’Action Régionale pour le Développement Rural</td>
</tr>
<tr>
<td>GTZ</td>
<td>Gesellschaft für Technische Zusammenarbeit</td>
</tr>
<tr>
<td>GV</td>
<td>Groupe Villageois</td>
</tr>
<tr>
<td>GVC</td>
<td>Groupe à Vocation Coopérative</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>INRAB</td>
<td>Institut National des Recherches Agricoles du Bénin</td>
</tr>
<tr>
<td>KIA</td>
<td>Knowledge and Information Activity</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organization</td>
</tr>
<tr>
<td>OAU</td>
<td>Organization of African Unity</td>
</tr>
<tr>
<td>ODIA</td>
<td>Opération de Développement Intégré</td>
</tr>
<tr>
<td>PRSA</td>
<td>Projet de Restructuration des Services Agricoles</td>
</tr>
<tr>
<td>PTD</td>
<td>Participatory Technology Development</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>Research and Development</td>
</tr>
<tr>
<td>RAMR</td>
<td>Recherche Appliquée en Milieu Réel</td>
</tr>
<tr>
<td>RDR</td>
<td>Responsable du Développement Rural</td>
</tr>
<tr>
<td>SAP</td>
<td>Structural Adjustment Programme</td>
</tr>
<tr>
<td>SCM</td>
<td>Specialist in Cooperative Matters</td>
</tr>
<tr>
<td>SDI</td>
<td>Société de Distribution Intrants</td>
</tr>
<tr>
<td>SONAPRA</td>
<td>Société Nationale pour le Promotion Agricole</td>
</tr>
<tr>
<td>T&amp;V</td>
<td>Training and Visit</td>
</tr>
<tr>
<td>UCP</td>
<td>Union Communale des Producteurs</td>
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<tr>
<td>UDP</td>
<td>Union Départementale des Producteurs</td>
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<tr>
<td>USPP</td>
<td>Union Sous-Préfectorale des Producteurs</td>
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<tr>
<td>VEW</td>
<td>Village Extension Workers</td>
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<td>WB</td>
<td>World Bank</td>
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Preface and Acknowledgements

This book is meant to serve several purposes. Above all is the use of this opportunity as a way to give further definition to my identity as a social scientist in the field of policy change. Also, this dissertation serves as a fulfillment of the academic requirements to be promoted as senior lecturer in the Faculty of Agriculture at the National University of Benin. The promotion to the degree of Doctor is a requirement for becoming full lecturer at university level in Benin. The current discontinuities in agricultural development in Benin have been used to achieve this personal objective. But, in return I hope that the results in this book will help the development workers and policy makers in Benin to deal with these discontinuities. If such an objective can be achieved, I will be gratefully satisfied for having contributed to the welfare of mankind.

This book has been possible with the financial assistance of the Netherlands Organization for International Cooperation In Higher Education (NUFFIC) through a university cooperation programme between the 'Faculté des Sciences Agronomiques' (FSA) of the National University of Benin (UNB) and Wageningen Agricultural University (WAU). I am grateful to these institutions as well as to all the members of this cooperation programme, especially the members of the UNB/LUW/SVR project, for their various contributions to the completion of this endeavour and, in particular, to Jan den Ouden, Jon Daane and André Boon for their assistance through the whole process.

I owe much to Niels Röling and Wout van den Bor who helped considerably in the elaboration of the research proposal, the support of the field work and who critically read several versions of this dissertation. Their helpfulness and criticisms were crucial for the success of the whole process.

This endeavour has created a disruption in my family life. My wife, Floriane, had to suffer from the distance that exists between us every time I am in the Netherlands. She sometimes took a break from her own activities to accompany me into the field. I am very grateful to her for all these sacrifices she has made throughout this process.

My father Norbert and my mother Agbassimin were always concerned about the completion of this important scientific activity which is the ultimate return of their lifelong sacrifices. Since my primary school days my father devoted special attention to my work at school. He really believed in the importance of education in life today. It is for that reason he enrolled all his children in school despite the jokes of some of his fellow villagers. Unfortunately, he left this world some months before the completion of this book, on November 23rd 1994. He will not be able to enjoy the benefits of his sacrifices. May his soul rest in peace.

I am indebted to the extension workers and the farmers of the Borgou province with whom I worked during two years in the field, especially those of the N'Dali district.
I am very grateful to Appolinaire Monguédé, the District Extension Officer of N’Dali and all his staff for their contribution to the success of the field activities. May Etienne Houinsou, Jean Gandébagni and others friends find in this book the positive result of those months we spent together in the field.

Throughout this book, I have tried to use my intellectual freedom to search for and present the truth and findings with as few biases as possible and with courteous tolerance of the actions of others. Sometimes, I might be too critical of the current situation and behaviour in the field of agricultural development. If it is so, I would like to apologize to the development workers for whom I do have a lot of admiration for their everyday attempts to make agricultural development proceed in Benin. I am only concerned about finding ways of improving development practice on the basis of a critical situational analysis.

To the farmers who are not able to read this book, I thank them very much for their collaboration and the marvellous job that they are carrying out through their various associations. They are always the ones we, social scientists, rush to for data collection, but they rarely have direct access to the research findings. They are the victims of our social enquiries.

I am grateful to Piet Holleman for the design of the front page of this book, Jenifer Buckley for the editing, Annemarie Groot for the Dutch summary, A. Bangma-Haaima for taking care of the printing of this book, Anatole Gandébagni for his moral assistance, Martha Bloemberg for the office and coffee we shared together during my visits in the Netherlands, and to my colleagues Simplice Davo Vodouhè and Roch Lambert Mongbo for their friendship, their useful contributions to the completion of this book and for the support in the hard times we shared together in the Netherlands. Through this experience, we all have learned that sharing difficulties eases the stay abroad.
CHAPTER 1 SETTING THE SCENE: AGRICULTURAL DEVELOPMENT IN BENIN AND THE CHANGING CONDITIONS

"The farmer is able to contribute with a whole body of knowledge and know-how which are a result of his/her life experiences accumulated by hit-or-miss methods or chance observation during his attempts to react to tough environmental constraints. There is a need to understand and value this knowledge and know-how' (adapted from Tourte, 1986 quoted by Hinvi, 1990)

'We always tell farmers what to do because of our belief that we are the only experts on farming practices. We do not listen to farmers very often because of Beninese civil servant mentality that is characterized by lack of humility, reflection on one's own activities, and a high orientation towards individual interests and projects' (A Beninese extension officer, 1992)

'L'homme à l'esprit débile craint toujours le changement, il ne se sent en sécurité que dans le statu quo et la nouveauté lui inspire une peur presque morbide. Pour lui, la pire des souffrances est celle d'une idée neuve (King, quoted by a Beninese extension officer, 1992)

1.1 Introduction

This book deals with change. It looks into how individual actors and groups of actors reconstruct the world around them in changing conditions, i.e., the way they use experience to adapt to, or to cope with, these changes, and related strategies and knowledge processes. The way people face the reality in the institutions in which they work and the way they respond to change is poorly studied in the Beninese context. This field of study is rather new and interesting for empirical research. This book is only the beginning of such an endeavour. It utilizes the opportunities provided by the fundamental and rapidly changing political and socio-economic discontinuities of the Beninese system.

The book is written on the basis of empirical data gathered from institutions and organizations dealing with agricultural development in Benin. It represents a partial monitoring of the main changes introduced in the agricultural development sector following the implementation of the Structural Adjustment Programme (SAP).
As far as this book is concerned, change refers to the discontinuities\(^1\) in Benin, and their repercussions for the agricultural system (e.g., agricultural education, extension, research, farmers’ organizations and other supporting institutions) in particular. As such, it includes mainly changes in individual role performance, status of individual actors, social relationships and interaction patterns between individual actors and strategic groups, as well as the functions carried out by different actors and groups of actors in the agricultural development process.

Four cases of change were considered.

(1) professionalizing agricultural extension through a re-orientation of the Training & Visit system in the ‘Centres d’Action Régional pour le Développement Rural’ (CARDER), the Regional Action Centers for Rural Development, which are integrated agricultural development, state-owned institutions. Some of the functions formerly carried out by these institutions were being transferred to the ‘Groupement Villageois’ (GV), a form of farmers’ association;

(2) making farmers responsible for such functions as primary gathering of cotton, inputs and credit management through their associations, i.e., the GV;

(3) adapting agricultural education to the employment or work market/opportunities, i.e., the development needs in Benin; and

(4) adapting agricultural research to farmers’ needs and constraints in Benin, making research more client-oriented.

The study of these four cases started in the Borgou province in 1989, where in-depth interviews, discussions and intensive observations were undertaken. The results obtained were cross-checked with evidence obtained in 1993 in other CARDERs, mainly those of the Mono, the Atacora and the Oueme provinces, as well as in other related education and research institutions.

Results of field research showed that the forms of response adopted by various actors, be they individuals or strategic groups, in the changing situation vary a lot in a given type of agricultural institution. These forms of responses are not always similar when comparing the situation in the various case studies. Also, certain forms of responses are likely to predominate in certain institutions.

The book comprises eight (8) chapters. This first chapter, after introducing the book as a whole, gives a general overview of knowledge articulation in the agricultural

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\(^1\) A discontinuity is a change in the already existing course of action. Social discontinuity is a reshaping of existing social practice or knowledge, or an introduction of new elements that either replace or accord new meanings to already established ways of doing things (Long and van der Ploeg, 1989).
system in Benin, moves gradually to general and specific discontinuities at stake and ends with the formulation of research problem and objectives, and a justification of the study.

The second chapter begins with the formulation of an analytical framework and explains the research methodology (e.g., data collection techniques, and the analysis procedures).

Chapters 3, 4, 5 and 7 present the empirical results of the study. They start with a contextual description of various changes initiated in the four agricultural development institutions (extension, GV, education and research); attempt to identify the responses of various actors, their interpretations or definitions of changes, relevant knowledge processes, and factors which shape or facilitate these responses, interpretations and knowledge processes.

Chapter 6 is an intermezzo. It presents and discusses, in a comparative way, the main results of the analysis of actors’ responses to new policy measures in the first three cases, i.e., professionalization of extension; greater responsibility of farmers; and more relevant agricultural education. It endeavours to find out how far each of the case studies contributes to the understanding of various knowledge and information processes, on the one hand, and various coping behaviours identified on the other hand. It also seeks to highlight similarities and differences, i.e., variation between cases; and ends with a final reflection on change, which is an attempt to frame knowledge and information processes, coping behaviours, and the factors affecting them in changing situations.

The concluding chapter 8 highlights, initially, the main theoretical and practical learning points, i.e., the main conclusions and suggestions. The theoretical learning points derive from the triangulation of relationships in chapter 6 with the results of the study of the fourth case, i.e., greater client orientation in agricultural research (chapter 7).

For a thorough understanding of the way the main conclusions, knowledge claims and practical recommendations have emerged, the reader is advised to go through the whole book. But readers can also come to understand enough by reading only chapters 1, 2 (mainly section 2.1), 6 and 8.

1.2 General overview on agricultural development: Knowledge and information articulation in the agricultural system

The economy of Benin is mainly based on the primary sector (agriculture, livestock, forests, fisheries etc.) involving over 80% of its population. The percentage has diminished over the years but still remains relatively high. To illustrate, the contribution of this sector to the Gross Domestic Production was about 47% in 1970, but fell to about 38% in 1990 (Department of Rural Economics & Sociology / Faculty of Agriculture, 1992).
Agriculture was intensified after independence by the Beninese state, through its agricultural institutions, as a continuation of the colonial way of organizing agricultural development, i.e., on the basis of single crops. Emphasis will be further placed on it in chapters 3 and 7. The following statement illustrates very well the way this promotion of the agricultural sector was carried out by the state.

'... for more than 30 years, agricultural education in Benin, had as its main goal to train managerial staff for helping farmers in agricultural development. This contribution was made through assistance to farmers with extension, 'animation rurale', organization of the marketing of agricultural products, and research. But, with regard to economic limitations of the country, the recruitment of managerial staff for agricultural development has been a problem and was even suspended. Graduates of agricultural colleges are expected to start their own enterprises, either individually or in groups, in agriculture’ (Ministry of National Education, 1990).

As illustrated by this statement, the Beninese state contributes to agricultural development through its agricultural educational institutions which, in the past, provided managerial staff for extension and research institutes. Today this contribution is expected to be done, also, through training modern farmers. The institutions worked together with farmers to achieve the development of agriculture. Other public services involved in either input supply or cash credit provision also contributed to the achievement of this objective. As such, these various services acted as a system² for the promotion of agricultural development in Benin. Summarized in figure 1.1 are the human resources, services and information flow between these institutions.

The contribution of agricultural development institutions to agriculture was either directly with individual and group contacts with the farmers or indirectly through their associations. There have been some farmers’ associations for production-related activities, or for services, or for both. The biggest farmers’ associations are the GV.

Röling and Seegers (1991) proposed to call such connected institutions an Agricultural Knowledge and Information System (AKIS)³. But such a general description of articulation between various institutions involved in agricultural development in Benin does not give the real picture of how this articulation is implemented or of the results of this articulation for the promotion of agriculture in Benin.

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² A system can be defined as a construct with arbitrarily defined boundaries for discourse about complex phenomena to emphasize wholeness, inter-relationships and emergent properties (Röling, 1994).

³ An Agricultural Knowledge and Information System is the set of organizations and/or persons, and the links and interactions between them, which are engaged in such knowledge processes as the anticipation, generation, transformation, transmission, storage, retrieval, integration, diffusion, and utilization of agricultural knowledge, information and technology, and which potentially work synergistically to improve the goodness-of-fit between knowledge and environment, and/or the control provided through technology use, in agriculture or a domain thereof (Röling and Seegers, 1991:32).
A report of a meeting of the extension workers held on the ‘Projet de Restructuration des Services Agricoles’ (PRSA - Agricultural Services Restructuring Project), has this to say:

‘In Benin, the tremendous efforts of the government to promote agricultural development through its various institutions have never succeeded. Extension services have not been able to stand as near as possible to the needs of the farmers. This situation was due to insufficiency of extension personnel and mainly to their inability to define relevant services for farmers.

In addition to these factors, there is the Beninese civil servant mentality characterized by lack of humility and reflection on their own activities, by lack of ability for multi-disciplinary (group) work, and by many individuals’ projects/interests’ (CARDER of the Borgou province, 1991).

An ex-Rural Development Officer also said:

‘We are used only to talking with farmers, telling them the right things to do because we believe that we are the only experts on farming. We do not listen to farmers very often. As a result, we never take into account their real needs. Sometimes, we do not succeed in persuading them with our solutions and technologies because we do not satisfy their constraints. This behaviour is mainly based on our mentality of doing for doing, i.e., without conviction (‘il n’y a qu’à faire’)’ (CARDER of the Oueme province, 1993).

The two statements indicate that agricultural development institutions have not taken
into account farmers’ needs and constraints. In fact, for years, agricultural development in Benin, as in other Sub-saharan francophone countries, has only focussed on export crops, cotton mainly, and on improving agricultural practices through the introduction of highly improved varieties and technologies, although most of the clients are subsistence farmers who manage a more complex system of intercropping. As such, research and extension mainly have limited relationships with farmers’ needs, and are usually only directed towards big farmers who are always ready to innovate and take risks. This is a Transfer of Technology (TOT) model or a Technology Innovation Process (TIP) model (McDermott, 1987). These models assume that the latest scientific research results must be transferred, with some adaptations, to the farmer through extension. The farmer is, then, seen as an adopter of innovations developed elsewhere, and diffusion between farmers is relied upon for widespread utilization. State extension and other organizations have the role of persuading farmers to adopt the technologies and delivering the required input packages. But this approach, as it has been confirmed in the two statements above, has only limited effects. The major reason for non-adoption by farmers is the lack of fit between technology and the farming system it seeks to improve.

It has been in this context of a loose articulation between institutions and actors involved in the agricultural system that some political and socio-economic discontinuities took place in Benin with some fundamental implications for the way knowledge and information are articulated between the various actors in the agricultural system.

1.3 National discontinuities and their repercussions on the articulation of knowledge and information in the agricultural system

1.3.1 Change at national level

The present situation in Benin is one of great political and socio-economic environmental change. There is a political discontinuity hailed worldwide as a democratic reform having repercussions for all West and Central Africa.

The Republic of Benin, the former People’s Republic of Benin, was ruled by the Marxist government of one leading political party, from a 1972 revolution until the beginning of 1990. Human rights were not respected (e.g., many people were put in jail for political reasons). Private enterprises were nationalized and the state owned all the vital sectors of the economy. In fact, many state-owned enterprises were unjustifiably created and mismanaged. The agricultural sector, which provides most of foreign exchange for the country, did not receive the attention that it deserved, apart from cotton growing. The marketing of this main export crop, as well as all services leading to its production, were monopolized by the state institutions. Cotton production was especially subsidized by the government because it is the main source of foreign exchange for the country. Also, the monopoly of the production and marketing networks of this crop was handled by a state-owned enterprise. Cotton was purchased by the government at administratively controlled prices (called guaranteed prices) and was marketed at prices prevailing in international markets while the
difference was subsidized (or appropriated) by the government. Therefore, the subsidy paid by the government was compensated by the benefits the country drew from the marketing of cotton on international markets.

To put it clearly, the government dominated the political and economic landscape. The outcome of the revolutionary socialist government's policies and the mismanagement of the public sector brought dissatisfaction (e.g., the living conditions of the citizens drastically deteriorated, deficiency in the balance of payment) and led to a high financial deficit in those enterprises, and even to the disruption of the banks which were all owned by the government. The government was no longer able to pay the monthly salaries of the civil servants. The socio-economic conditions of the workers worsened severely.

Agricultural development was concentrated only on export crops. As indicated in the previous section, development interventions were top-down and farmers were only considered as recipients of technology. They were not seen as knowledgeable partners in an agricultural development process. It was the pervasive linear model in action (research elaborates technologies, extension transfers them to farmers who have to apply them). Development activities became a failure as the expected rural welfare had not been reached.

Facing this situation, the government signed a Structural Adjustment Programme (SAP) with the International Monetary Fund (IMF) and the World Bank (WB) in 1989. These financial institutions imposed on Benin some drastic conditions which they perceive as necessary for restoring the balance of payment of the country.

The main objectives of SAP are to decrease the state's expenses and increase its incomes. Austerity measures were in fact introduced. Most government-owned enterprises were privatized with, as a consequence, the retrenchment of many employees. The other public institutions underwent reorganization by transferring some of their activities to other (private or public) institutions and, of course, by sending away some of their employees.

The Marxist government effectively applied some of the austerity measures imposed by the money lenders such as:

- cuts in salary and allowances of civil servants and the freezing of the financial outcome of their administrative promotion;
- the privatization of state owned enterprises and the closing of major banks; and
- a discontinuation of the recruitment of university and college graduates as civil servants.

The imposition of these drastic conditions by the IMF and WB was used by the
opposition forces inside the country to challenge the revolutionary government. Political parties emerged, and the need for democracy and better socio-economic conditions was expressed through a series of strikes. Political and social pressures forced the former government to organize a national conference of all political tendencies in the beginning of 1990. As a result of the success of this conference, Benin moved peacefully from a single party to a multi-party and democratic political system which many politicians referred to as a ‘coup d'Etat civil’. A democratic government came into power in 1991.

People in Benin hope that this democratization process will help to improve their living conditions. Many strikes occurred after the election of the new government to unfreeze various financial benefits that had been suspended by the previous administration.

Besides these claims for financial interests, people think that the democracy gives them more room for expressing their needs and for acting according to their will. This expectation is generally satisfied in such a way that many national newspapers always remind people that democracy is not the same as anarchy.

The democratization process did not bring about discontinuity in all political arenas. The new government maintained the former Structural Adjustment measures as established by its predecessors and implemented other measures, mainly the reorganization of some government institutions, including agricultural institutions.

Apart from these changes, other already existing influences - such as population growth, destruction of the physical environment, the necessity to increase food crop production in order to meet the population growth, and the decline in price for export crops on international markets - are imposing the need for permanent solutions to the changing physical and socio-economic environment.

Briefly, the situation in Benin has the following characteristics:

- an internally-driven, evolutionary change to a more democratic system which will surely influence the way people relate to each other;
- a Structural Adjustment Programme affecting public institutions as well as social and economic conditions;
- low prices for agricultural products;
- an increase in population and an unequal access to land that leads to pressure on land and natural resources utilization, and physical environment deterioration; i.e., population growth influences the relationship between people and their physical environment;
- a drastic increase in the expected standard of living; and
- a sharp increase in the monetization of goods and services.
The recent devaluation of the regional currency, the CFA, has worsened the economic situation, mainly the people’s standard of living.

These changing conditions create discontinuities in social action and give rise to the need people feel to reconstruct and redefine the political, socio-economic and physical environment in which they live. They are not the major concern of this book, but comprise the new environmental context that facilitated the introduction of specific changes in the organization of agricultural development in Benin. As such, their description here provides knowledge on the socio-economic and political context in which the changes in the agricultural system, which are the main concerns of the book, have occurred.

1.3.2 Changing conditions and organization of agricultural development

These discontinuities at the national level have important implications for agricultural development institutions in Benin. In fact, they have heavily influenced the country’s whole agricultural development policy, as nicely reported during a meeting of the extension workers

'...the objectives of most of the farmers are to satisfy their subsistence and to ensure a revenue by minimizing risks. But, the services offered to them so far are only geared towards increasing production, mainly of cotton. The socio-economic constraints of farmers and their own strategies for improving their conditions have never received the required attention. In the actual context, it is necessary to deal with these constraints and to pay more attention to innovations generated by farmers in order to build up a new form of extension services and "animation rurale". Such a new way of organizing extension services must be based on a bottom-up approach. That is called a policy of a "développement à la base"' (A Beninese extension officer, 1992).

The major implications of such an approach for agricultural development institutions, as prescribed in the development policy, are as follows:

- professionalizing agricultural extension through re-orientation of the Training & Visit system in the CARDER, which are integrated agricultural development state-owned institutions, and the transfer of some functions previously carried out by these institutions to the GVs a form of farmers’ organizations. This new orientation has been introduced (imposed on the CARDER) by the World Bank;

- taking over of functions such as primary collection of cotton, inputs and credit management by the GV. This new form of farmers’ responsibility is directly related to the new orientation of the extension activities in the CARDER;

- adjusting agricultural education to employment or work market/opportunities in Benin. This new agricultural education policy is derived from the prevailing employment opportunities, and is based on the ‘retour à la terre’, back to land, policy of the government; and
adapting agricultural research to the development needs, i.e., to farmers’ needs, in Benin. It goes without saying that this new orientation of agricultural research also influences the way extension is delivered, and farmers’ roles in the implementation of research and extension.

The following paragraphs give more detailed information on the nature of each specific change that seeks to realize an efficient organization of agricultural development activities in Benin.

The extension institutions, the CARDERs, were considered inefficient and in need of performance improvement. To reorganize these institutions, the World Bank has imposed re-adaptation of the Training and Visit (T&V) system introduced in Benin in 1985. The Bank emphasized the need to transfer some of the activities formerly carried out by the extension institutions, such as inputs and credit supply and distribution, and the primary gathering of agricultural products (mainly cotton), to private institutions, especially to farmers’ organizations. These reorganization measures were introduced by the World Bank as the ‘sine qua non’ condition for granting further loans to Benin, as far as agricultural development support is concerned.

Implementation of these measures implies that extension institutions will be concerned only with needs assessment, relevant information supply and training. The new orientation of extension activities and the simultaneous transfer of input and credit supply to farmers is considered detrimental to extension agents at the village level (Von der Lühe, 1990).

In fact, Village Extension Workers had succeeded, in the past, in bringing farmers to adopt the recommendations on cotton cultivation (extension did not have sound technologies to propose to farmers on food crops cultivation) with the power they had over inputs and credit distribution. This power was used by extension workers to gain the compliance of farmers, as a negotiating resource that is. It was, therefore, a kind of negotiation or unspoken agreement between the farmers and the extension workers (Von der Lühe, 1990). Through this agreement, farmers had to adopt extension recommendations if they wanted to have access to credit and inputs (mainly fertilizer and pesticides) intended for use on cotton. These inputs were, in reality, partly used for food crop production (maize mainly). But only the cotton producers were in a position to get input and credit. Food crop producers do not have these opportunities.

Reduction of staff in agricultural development institutions is one of the consequences of implementation of the imposed measures of reorganization of the agricultural development institutions.

According to a World Bank report (1990) on the study of possibilities for reorganizing the agricultural development institutions, dismissing some workers of these institutions is a healthy action for efficiency development. Worth mentioning here is that all the individual actors, apart from farmers, involved in the agricultural system in Benin are civil servants since extension, research and education institutions are state-owned establishments.
The World Bank report indicated that the number of personnel working in these institutions is higher than necessary and that some farmers have accumulated enough knowledge and know-how on agricultural production (mainly cotton growing) so that there is no need for so many extension workers. Findings in the report have been challenged by personnel of agricultural development institutions. However, the findings in the report regarding farmers’ knowledge is partly true for two reasons:

1. Farmers in cotton production areas have accumulated by experience, and with the help of extension workers, a body of knowledge on growing cotton. This knowledge may be used without further intervention in the current situation. Still, knowledge improvement is desirable with respect to other technologies related to cotton production; and

2. Extension workers, for years, disseminated the same technologies and information in such a way that farmers became bored with them and do not want to hear the same things anymore. Extension workers are not seen anymore as capable of improving farmers’ knowledge. They are seen as stuck in a routine.

These views are only relevant in this particular context in which extension is still considered as transferring technologies for cotton production to the farmers. Of course, this perspective is a classic and obsolete view of extension. If attempts are made to use extension to respond to the felt needs of the clients, such opinions of the relevance of extension workers will be irrelevant.

The reorganization plan of the World Bank recommended the retrenchment of 4,000 employees, nearly 60% of the personnel of the Ministry of Rural Development (World Bank, 1990). This retrenchment is a necessary condition for these development institutions to have access to further loans from the World Bank.

Actually, some of the measures of this reorganization process have already been implemented at the various levels of the Ministry of Rural Development. One such implementation at the farmers’ level is the transfer of inputs distribution and recovery, as well as all the activities related to the primary collection of cotton to farmers’ organizations. These activities were formerly carried out by a government institution, the ‘Société Nationale pour la Promotion Agricole’ (SONAPRA) with the help of the agricultural development institutions (CARDER). The CARDERs made money from this collection activity. In fact, as intermediate institutions in the cotton marketing process, the CARDERs got from SONAPRA 3,750 FCFA per ton of cotton collected as a commission. These revenues were used mainly for the reimbursement of transportation facilities for extension workers, where external financial aid did and should not have existed, and for supplementary allowances for field agents and members of the administrative council of the CARDERs. So, individually and collectively, extension workers had an interest in carrying out primary gathering of cotton.
Another very important measure has been to base extension programmes on relevant and accurate needs assessment with regard to farmers’ constraints, problems and opportunities for agricultural development.

The farmers’ organizations called GV will take over inputs and credit distribution as well as primary gathering of cotton at district, sub-district and village levels. Such transfer of vital activities in cotton production will empower the farmers who now become more independent from the extension workers for these activities. As such, they can have more power to influence extension activities in a suitable way. But, the farmers do not yet have the knowledge and know-how required for carrying out such activities. This in itself may provide new leverage for extension workers in their interactions with farmers (my own experience in the course of the research).

In fact, the creation of GV since 1970 was an initiative of agricultural development institutions in order to disseminate their ‘innovations’. These organizations are imposed on farmers by extension workers. Thus, the majority of farmers do not seem to be concerned by the development and management of the organizations. They always regard them as institutions of the CARDER, as most extension workers do. This is due to the fact that, until recently, farmers were not considered as partners in such initiatives in the agricultural research and extension process.

A successful transfer of these activities needs the contribution of the extension institutions, the CARDERs, for training farmers in order to help them acquire the required knowledge and know-how. It also calls for extension and research to go beyond the traditional interest in cotton production and to work towards the real needs of farmers such as food crop production, risk avoidance and taking, uncertainty and scarce resource management.

The agricultural education colleges and faculty have to adjust their training programmes to the fact that employment opportunities are mainly limited to the private sector, considering the discontinuation of civil servants recruitment. This private sector so far has not been well developed and organized. The needs of this sector are not similar to those of the public sector.

For years agricultural education has been provided only through colleges. Agricultural education centers have been very few. Education in agricultural colleges and the University was organized in such a way as to respond to the State’s needs for agricultural development workers. Thus, all graduates from these colleges and the university were automatically employed mainly by the Ministry of Rural Development. From 1987 onwards this automatic recruitment of graduates as civil servants ceased as a result of implementing the recommendations of the Structural Adjustment Programme (SAP), thereby making training objectives unsuitable for the new employment market.

In such a situation, planners and managers of agricultural education as well as teachers, students and their parents are all concerned with finding desirable alternative training in agricultural colleges and in the faculty. Their views on this alternative training are certain to diverge since they do not have the same objectives for alternative training.
Training students to become farmers is the goal that educational planners entrusted to agricultural colleges in Benin, beginning in 1987, and agricultural education now seeks to put more emphasis on practical training than before. To be successful, such a training strategy needs the support of all actors involved in the process of educational planning and implementation, and also the support of the society as a whole which is the environment in which graduates will work after the completion of their education. Facilities for such a training are also crucial constraining factors. There is no guarantee for the acquisition of these facilities, but all the actors are conscious of the need to introduce a change to cope with the situation.

The general seminar (*Etats Généraux de l'Education*) organized in 1990 discussed this issue and made some recommendations that are basic requirements for any implementation of a coping strategy. This seminar reinforced the need to train students to become farmers. Little attention had been given to the training of farmers in agricultural education centers to improve their knowledge and skills.

At the university level, the Faculty of Agricultural Sciences is also confronted with the same problem. Discussion of the issue has also begun and there seem to be differences in perception between the various groups of actors (*groupes d'intérêts*) with regard to the optimal coping strategy. The general consensus is to give more attention to practical work and to give enough tools to students in order to enable them to be self-employed after graduation (see also Schamhart and van den Bor, 1994).

For many years, agricultural research has focussed on the transfer of technologies (e.g., new high-yielding varieties, and improved agricultural practices) that have proven their performance in research stations. But, results of such an approach amount to non-adoption or partial adoption of the innovations introduced. These technologies did not really respond to the needs of the farmers. One of the challenges for agricultural research in Benin nowadays is to be more problem-oriented in order to respond to the felt needs of agricultural development. That is why many projects in farming systems research, on-farm research, or *recherche-développement*, are going on, even though the efforts and the various institutional actors involved are not yet well articulated. To reach such articulation, some structural adjustments are necessary (e.g., the enhancement of existing linkage mechanisms between researchers, extension workers, farmers, trainers and donors). Individual researchers also need to change the perception of their roles and the participation of farmers in the research process. These are the main challenges for agricultural research in Benin. To overcome these challenges, new objectives and structures have been assigned to agricultural research through the *Institut National des Recherches Agricoles du Bénin* (*INRAB* (*Décret No. 92-182 du 6 Juillet, 1992*).

People are not passive with respect to the implications of national-level discontinuities for their institutions. Formal and theoretical discourse concerning greater client-orientation and accountability in agricultural development is in vogue and now need to be translated and integrated into the daily practices of the actors.
1.4 Formulation of the research problem, objectives and relevance

1.4.1 Research problem

The political and socio-economic environment in Benin has changed very much recently. This discontinuity also has repercussions on various institutions and their policies in the country, the agricultural development sector included. The agricultural development system is now:

(1) going through a process of improving the balance between the power of the formal institutions and the countervailing power of the farmers and their organizations (checks and balances);

(2) moving towards a greater client-orientation and accountability; and

(3) moving towards a greater interest in end results, and a greater focus on efficiency.

Various abstract discontinuities and their implications for agricultural development institutions have been described in the previous sections. In such a new situation, the relationship between the actors involved in the agricultural development system must be redefined formally in the institutions, and practically by the individuals or groups of actors. The relationships - that is the articulation between the various agricultural institutions must be reviewed as well. This will certainly give rise to a new configuration of the institutions involved in agricultural development. This creates a historically unique situation of induced, external and rapid change. Institutional adaptation to change and the reactions of individual actors to this change process are of interest. The present study will concentrate mainly on the actors’ adaptation, be they individuals or (strategic) groups, and responses to the changing conditions.

As such, the central question of this book is how actors, be they individuals or (strategic) groups, involved in the agricultural knowledge system in Benin, reconstruct the new agricultural development policy orientations in order to build relevant strategies to translate them into practice, i.e., how actors actively and creatively adapt to changed circumstances. Extension services, national research organization, farmers’ organizations (GVs), and agricultural education institutions in Benin, will serve as cases for answering this central question.

The specific questions that this study seeks to answer are:

- what are the main changes introduced, i.e., what are the actual formal formulations of the policy intentions?

- how are these formulations perceived and interpreted by the individuals or groups of individuals, i.e., the actors involved in the institutions?

- what are the reactions of these actors to institutional change?
1.4.2 Research objectives

The central objective of this book is the identification of various responses of actors, be they individuals or groups, to the new policy orientations in the agricultural system in Benin and the related knowledge processes. This main objective is operationalized into seven specific objectives:

(1) to understand the formal definitions of the changing conditions in each of the cases studied and the rationales supporting them;

(2) to identify the way actors, be they individuals or groups, deal with these formal or abstract definitions, i.e., how they define the situation for themselves;

(3) to understand the factors that facilitate or shape each response to the change conditions;

(4) to translate these responses to change, in terms of relevant knowledge and information processes and coping behaviour;

(5) to see if knowledge processes may vary according to changing conditions, i.e., the context in which they may occur;

(6) to use the experience gained through the study to enrich theory;

(7) to see how far these knowledge processes in each changing condition really contribute to the development of agriculture in Benin; and

(8) to make recommendations for development practice.

1.4.3 Relevance of the study

This study, as expected, will help to generate theoretical conclusions about the way people respond to changing conditions by identifying and contextualizing the related knowledge processes. The present situation in Benin is a unique one. Up to now only a few scientists have been working in the field of knowledge and information processes in changing conditions. It is not the intention of this book to deal with all the relevant aspects in such a situation. This study is only one of the starting points around which knowledge about responses of actors to change might be built. As such, the results of this study need to be improved by further empirical research. On the
scientific level, it might however contribute to the existing body of knowledge about interpretation, adaptation, action and human agency. Thus, it might contribute to sociological theory on rural development.

Also, among the main omissions and limitations in socio-psychological studies, Eagly and Chaiken (1993) cite the insufficient consideration of the social context of attitudes (responses), and the domination of the socio-psychological research by laboratory experimentation. In such a context, this empirical research on response to change may usefully contribute to the development of socio-psychological theory by providing empirical, real life evidence.

Also, the ultimate practical discourse concerning the various changes is based on the assumption that these changes in the agricultural system in Benin will make development interventions more geared to the need for efficiency in the agricultural sector. The discontinuities were related to new approaches (e.g., increase in the countervailing power of the farmers, greater client-orientation for agricultural research, extension and education). The new approaches or perspectives have been operationalized in various objectives and activities according to institutions (e.g., greater accountability for farmers, gearing agricultural education to job opportunities, making extension and research more professional).

This study seeks to be a partial assessment of the whole process. As such, its results should help to determine whether various changes induced by external forces are relevant for the promotion of agricultural development in Benin. Of course, it is too early to speak about their success or failure but the analysis of the way various actors are dealing with them might help to envisage the outcome and to make relevant and practical suggestions for reaching a higher development impact.
CHAPTER 2  RESEARCH CONCEPTUALIZATION

'Human beings act towards things on the basis of the meanings that the things have for them; these meanings are a product of social interaction in human society; and these meanings are modified and handled through an interpretative process that is used by each person in dealing with the things he/she encounters' (Meltzer, 1975:54)

2.1 Analytical framework

2.1.1 Introduction

In this book, we are concerned with the way in which social actors, be they individuals or groups, involved in the agricultural development of Benin, reconstruct for themselves the new policy context in order to build relevant strategies to translate the policy measures into practical objectives and operational actions; that is, their responses to the new policy context. Benin still has a relatively undifferentiated social structure in which the government, and hence policy and officials, play a dominant role when it comes to shaping the life of farmers, traders, and even extension workers, researchers, teachers and others in the government system. In that respect, the Beninese situation is heavily determined by the historical position of government in rural development. The analytical framework which is proposed in this book takes this into account. The author is, therefore, aware that the context of study is quite specific. But he has deliberately chosen to do this and does not pretend to offer a universally valid theory or perspective.

As indicated in chapter 1, major changes in Benin with regard to government policy in agricultural development involvement are:

(1) much concern for increasing balance between the power of the formal institutions and the countervailing power of the farmers and their organizations (checks and balances);

(2) greater client-orientation and responsibility; and
greater interest in end results and a greater focus on efficiency.

These changes have been translated into various policy measures in the field of extension, research and farmers' organizations as well as agricultural education while implementation of these policy measures involves individuals, or (strategic) groups who play the role of officials, subordinates or the so-called 'beneficiaries' of the policy measures.

A strategic group is any one in which members share the same interests in the policy measures. Policy measures, in this book, refer to a set of instruments by which the government through the rural development institutions, wields its power over the behaviour of development workers in line with the general development policy of the country. Policy measures are implemented through regulations¹ (e.g., rules, orders, norms, directives, standards), incentives and facilities (material or financial resources), and sets of knowledge, ideas and skills.

Officials have designed ways to reach the policy objectives and measures (directives, standards, orders, facilities, provision of information, knowledge and skills). But farmers, extensionists, researchers and students as human beings have to make rational (from their point of view) use of the information derived from the policy measures. This information may be related to new regulations, tasks, roles, incentives or actions to be carried out or skills to be acquired and applied. As such, this study is concerned with the interface between government interventions², government officials and other social actors, be they subordinates or beneficiaries. Thus, based on the definition of policy measures previously formulated, we are concerned with changes imposed on people by the government. An analysis of such processes of change will be done with the social actor perspective of Long (1984; 1992) and the reasoned action perspective of Ajzen et al. (1980). The social actor perspective may be distinguished from the planners’ perspective, i.e., the formal way of constructing and planning government interventions.

The planners’ perspective and policy measures

Planners are civil servants who hold decision making power regardless of the level at which they operate by taking or initiating action. They will design formal strategies

¹ A regulation is any attempt by the government to control the behaviour of citizens, corporations, or sections of governments. It is nothing more than the government effort to limit the choices available to individuals within society (or institutions) (Vedung, 1991).

² Intervention, in this book, refers to institutional forms of coordinated programmes related either to extension, agricultural education, farmers' organizations or agricultural research, set up by the government as a way of implementing its policies with respect to rural development. Less direct forms of intervention, such as the use of price and taxation mechanisms, or other fiscal and legal measures are not concerned. Rural development may be defined either in terms of increases in productivity or levels of production, income redistribution, increased equity or general welfare, the assault on poverty, or as a political process whereby 'disadvantaged' groups attempt to improve their life-opportunities. It depends on what the government choose to do (Long and van der Ploeg, 1989).
to reach the objectives. The implementation process might be planned formally in two main actions:

- the organization of relevant knowledge and information activities which will lead, according to them, to prescribed tasks, roles or actions to be taken by individuals or (strategic) groups in their daily work; and

- the efficient performance of these prescribed tasks, roles and actions by the actors at the operational level.

Van Woerkum (1994), when modeling the planning process in extension, distinguished three levels of planning: specialists from different disciplines work together to coordinate actions to tackle a perceived problem; extension scientists (officials) work on a strategic plan; and extension workers (subordinates) organize individual extension activities. As such, various actors, with various roles and positions, participate in the process and keep close contacts. From the policy planners’ perspective, these relations must be strong and every actor must accomplish his/her activities as expected and planned.

Many policy instruments are used by the government for intervention in order to change behaviour or opinion: laws or regulations; facilities; control, incentives and sanctions; money; persuasion and argumentation; that is a variety of knowledge and information activities. This process is summarized in figure 2.1 on page 21.

In practice, this normative, ideal-typical, rather mechanistic and linear construction of the planning process does not work as expected. Social scientists such as Long and van der Ploeg (1989) argue for need to deconstruct and demythologize such a perspective. They conceptualize government intervention as a ‘multiple reality’ made up of differing cultural perceptions and social interests, and constituted by the ongoing social and political struggles that take place between the social actors involved. Such a perspective is completely different from the one described above. Thus, there is a need to look at subordinates, officials, and the so-called beneficiaries as social actors.

**Social actors** and policy measures

In this section, we are interested in understanding what actually happens when action is taken according to the planners’ perspective as in figure 2.1. To reach such an understanding, we shall use sociological and socio-psychological theories. From the sociologists we borrow the social actor perspective (Long, 1984; 1987;

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3 The concept of social actor is a social construction rather than simply a synonym for the individual or a member of *homo sapiens*. Social actors are not simply seen as disembodied social categories (based on class or some other classificatory criteria) or passive recipients of intervention, but they are active participants who process information and strategize in their dealings with various local actors as well as with outside institutions and personnel (Long *et al.*, 1992).
The main concepts in the social actor perspective are reality construction, intention and agency. Human beings are quite rational and knowledgeable and make systematic use of the information or resources available to them. They consider the implications of their action before they decide whether or not to engage in a given, expected behaviour. They are able to process social experience and to devise ways of coping with new changes in their social context. They attempt to solve problems, learn to intervene in the flow of social events around them and monitor continuously their own actions, observing how others react to their behaviour (Long, 1989).

Thus the regulations, the various knowledge and information activities and the prescribed tools, actions and roles are mainly a social context or environment for the action of the actors and groups involved in the implementation of the various policy measures. They can thus formulate their own interpretations of this context, formulate decisions, make choices, judge and evaluate the appropriateness of their decisions and act on the basis of all these interpretations and calculations, regardless of the strategies devised by the officials to affect and control these actions.

The way actors interpret or reconstruct the world around them depends on how they perceive the actual world. Perception is influenced by the actor's frame of reference, i.e., the whole of values, norms, convictions and assumptions on the basis of which he imagines, judges or acts. It is influenced by the social group to which he belongs and/or the ones to which he would like to belong (Van den Ban and Hawkins, 1988). Individual experiences play a great role in this frame of reference which is continuously enriched with the new experiences acquired by an individual. As such, the world is continually interpreted using the accumulated social experiences and culturally acquired dispositions whose source is ultimately the perceived world in a process of mutual creation (Checkland and Scholes, 1990; Leeuwis et al., 1990). In total, perception is influenced by the past experiences, the present or future desires, motivations and projects of the actors; and their power in terms of capabilities (skills, access to financial and material resources) and autonomy, i.e., the possibility for them to adopt an expected behaviour or to do otherwise.

As a subjective process, perception may lead to knowledge, the character and content of which varies from one actor to another. The outcome of the process is the basis on which actors build their intentions about expected behaviour, and thus adopt a coping behaviour.

The coping behaviour of the actors may influence the prescribed tasks, roles and actions since people do not wear them as a straitjacket but may modify them in one way or another. This influence of the new tools, roles and actions through the processes of interpretation and the adoption of the relevant coping behaviour may shape the various forms of interaction and the relationships between the actors involved in the implementation of the policy measures. As such, the social system in which the new tools, roles and actions will be used may be influenced by the practices of the social actors. Thus, social systems are not constituted by roles or
Figure 2.1: The process of policy planning viewed from a planners' perspective
tasks but by reproduced practices. Practices are the ‘points of articulation’ between the actors and the institution or structure (Giddens, 1990). As such, the social actors are embedded within, and are constituting elements of, these policy measures.

From the socio-psychologists, we borrow the theory of reasoned action. According to the theory of reasoned action (Ajzen et al., 1980), behaviour is based on intentions. These intentions are influenced by the actor’s attitude towards the expected behaviour and the subjective norms of the social context in which he is expected to adopt the given behaviour.

This social context may be an institution or the local structure of a rural community. As such the institutional or local culture and the material resources available or provided have a great influence on these subjective norms. The attitude towards the expected behaviour is based on the way the person perceives this behaviour in terms of outcomes and in terms of its consequence ('good or bad') for him. The person’s own interests and projects are crucial determinants in this attitude.

The subjective norms are the whole of perceived social pressures which are placed on people in a social system. As such, subjective norms are made up of the social motivation and sanction systems and any other values and norms which are set to guide the actions and behaviour of people in the social system. These subjective norms are used by people in their calculations, i.e., in their evaluation of the consequences of the adoption or non-adoption of the expected behaviour. These norms also influence the perception of the outcomes of the adoption of the expected behaviour, i.e., the benefits from such behaviour. The evaluation of these benefits is based on people’s interests and projects. As such, people’s perception of the outcomes of the expected behaviour also influences how they perceive the subjective norms.

For the translation of intentions into visible (expected) behaviour, people need to have the opportunity or the capability to do so in terms of required skills and availability of relevant material or financial resources. Ajzen (1988) labelled this as perceived behavioral control. It is the perceived efficacy of human agency.

Intention is a state of mind that is closely linked to volitional action (Ajzen, 1988).

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4 Attitude is a psychological tendency that is expressed by evaluating a particular entity (situation and opinion) with some degree of favor or disfavor. Attitude is not directly observable. It can only be inferred from overt responses or indicators (Eagly and Chaiken, 1993:1).

5 The (institutional or local) culture is the whole of values, norms and power relations in a given institution or community. This culture includes also the motivation and sanction systems, i.e., the structures set to reward and stimulate good performances and punish wrong performances in the institution.

6 The notion of human agency attributes to the social actor (whether an individual or a particular social group or network of persons) the capacity to process social experience and to devise ways of coping, both cognitively and organizationally, with everyday life-situations and with problematic choices (Long and van der Ploeg, 1989).
From intention one may predict the action or behaviour that a given actor will take. But, this is not always the case in practice since intention can change over time. Unforeseen events may occur and disrupt the relationships between intention and behaviour. This means that in the short run, intention can be used to predict behaviour, but since the likelihood of unforeseen events will tend to increase as time passes, this strong relationship may be disrupted (Ajzen, 1988).

In the case of the study of the responses of actors to the implementation of the various policy measures, intentions can be used to predict coping behaviour since the duration of the study is rather short. Therefore, intention can be assessed through opinions or attitudes towards the expected behaviour. But, there is no guarantee that such correlation will still be valid after many years since emphasis on policies quickly changes in Benin according to the rural development perspectives or ideologies (orientations) of the key decision makers (ministers mainly). Maybe the democratization process will bring more stability to policies.

Intention is based on perceived social pressures, sanctions and motivation on the one hand, and perceived outcomes and consequences of one’s adoption of the expected behaviour on the other (see figure 2.2 on page 25). As such, perception is the determining factor on which intention, and thus behaviour, is based.

Perception may be seen as the knowledge that results from the process of redefinition, reconstruction, or interpretation of the new policy context by the actors, be they individuals or (strategic) groups, i.e., the process of establishing a relation between the given reality and the knowing subject (Brand, 1990).

The reasoned action in the implementation of the policy measures is summarized in figure 2.2.

In conclusion, with respect to the implementation of the prescribed tasks, roles and actions by the social actors, from our point of view, which is in fact a combination of the theory of reasoned action and the actor perspective, three main theoretical conclusions can be formulated:

- the social actors (individuals or strategic groups) will adopt a coping behaviour which is based on their intentions to comply or not to comply with the prescribed tasks, roles and actions, and their capability to effectively and efficiently do so. This capability may be drawn from the skills based on experience, or acquired through the various knowledge and information activities initiated by officials, and/or on the basis of the material resources provided. This means that the official knowledge and information activities must be distinguished from the social construction and accommodation processes of the social actors;

- actors’ intentions are influenced by their perceptions of the social context (e.g., institutions, organizations) in which they are supposed to apply the prescribed tasks, roles, actions and so on, in terms of social pressures, motivating and sanctioning factors which are part of the institutional culture.
That is social accommodation to agreed and acceptable behaviour. But also, the relevance of the prescribed actions, tasks and roles, in terms of the degree to which they help actors to satisfy their own interests or achieve their projects, i.e., the social construction of facts and their evaluation by the social actors, has an important influence on actors' intentions. Sometimes, the provided material resources may positively influence the perception of the actors; and

- the social norms are embedded in concrete social systems (institutions and local structures). Thus, the attitudes of the social actors (extensionists, farmers, and researchers) might be shaped in social interactions within these institutional or local structures. But, the actions taken by the social actors may also influence these structures. So, the coping behaviour adopted by the social actors influences the way the prescribed tasks, roles and actions are substantiated and, thus, the implementation of the policy objectives. This implies that policy may influence people but people also influence policy. There is a mutual influence between policy objectives and social actors, be they individuals or strategic groups. This clearly means that the prescribed actions and roles may be different from the actual outcome, i.e., the coping behaviour or the current practice.

The foregoing theoretical analysis of the change process with respect to the implementation of the new policy objectives or measures in the agricultural system in Benin may be summarized in figure 2.3 (see page 27) in terms of the relationships between the various factors which intervene in the implementation of new policy measures.

From this analytical framework three main concepts seem to be important for the understanding of the case studies researched; other concepts are factors that influence these main concepts. As such, they deserve further elaboration. These are: the policy measures; the knowledge and information activities; and coping behaviour.

2.1.2 Defining policy measures

The policy measures are the sets of instruments or procedures by which public authorities wield their power in an attempt to affect social change. Power, in this context, means the ability to induce or influence people in society to carry out the directives or any other norms the government supports, i.e., to influence or reduce their autonomy. Vedung (1991 in quoting Etzioni, 1975) has distinguished three types of power according to the means employed to make the subjects comply. These are the coercive, the remunerative and the normative powers.
Institutional culture

Material resources available

Perceived social or institutional pressures; sanctions & motivating factors

Capability

Perceived outcomes (interests, projects effects of behaviour)

Intentions

Coping behaviour

Current practice

Figure 2.2: Reasoned action in the implementation process of the policy measures

(Adapted from Ajzen et al., 1980)

--- > One-way influence (direction of the influence)

--- = Two-way influence
The coercive power concerns the application of physical sanctions such as inflicting pain, deformity or death; or the generation of frustration (penalties, sanctions, etc.). As far as the remunerative power is concerned, it is based on the control over material resources and rewards through the allocation of salaries and wages, allowances, commissions, services and commodities (incentives) while the normative power is based on the allocation and manipulation of symbolic rewards and deprivations through employment of leaders, manipulation of mass media, allocation of esteem and prestige symbols (Vedung, 1991).

Such a precise definition of sources of power does not cover all aspects related to the matter, e.g., power of information, argumentation and conviction. Collins (1970 in quoting French & Raven, 1959; Raven, 1965; and Collins & Raven, 1969) distinguished more sources of power that encompassed the weaknesses of the distinction used by Vedung: coercive, reward, informational, legitimate, referent and expert power. According to this author, coercive power stems from the ability of the change agent to mediate punishment for the influence while reward power is related to the ability to mediate rewards. Informational power is a source of power which is dependent on the content of the message (degree of conviction or persuasion), no matter what or who the change agent is. It is a socially independent power. Legitimate power stems from the internalized values which dictate that the change agent has a legitimate right to influence. The source of power on the basis of which a person uses another person or group as a ‘frame of reference’, as a background, or as a yardstick against which he evaluates some aspects of himself is the referent power. Finally, expert power is based on a person’s belief that the change agent has knowledge, relevant for the issue at stake, i.e., he is knowledgeable and credible.

The intervention policy of the Beninese government is based on coercive power, remunerative or reward power, as well as normative power. Legitimate and referent power are also perceived as relevant by some subordinates. However, expert power is not commonly applied in the Beninese situation. This power is carefully selected according to the actors. In most of the agricultural institutions, government power is exerted on development workers as sanctions, allocations of salaries, allocation or suspension of additional allowances, and the provision of in-service training opportunities. But, with the farmers and their organizations, the government power is based on the allocation of commissions, the provision of various services (training, subsidies, credit in cash or in kind), the allocation of esteem and prestige symbols for big farmers and the promotion of local leaders. The only coercive power the government institutions use on the farmers is related to the judgment of the quality of the cotton produced by the farmers. Quality controllers have the power to disqualify the cotton of farmers on the market place. As such, the policy measures set by the government or its institutions in the field of agricultural development may by implemented by regulations (rules, orders, directives, norms and standards), incentives and facilities, as well as by relevant services related to knowledge and information activities. A regulation is the attempt of the government through its institutions to control the behaviour mainly of the civil servants and sometimes the behaviour of the farmers. It is nothing more than the government effort to limit the choices available to the individual civil servant within the development institutions, or to the farmers, i.e., to reduce their autonomy. The implementation of these policy measures is done through various knowledge and
Figure 2.3: The factors involved in the implementation of policy measures
information activities. These information activities may be carried out through interpersonal communication or through mass media. That is what has been called in this book the planners' perspective. But, as has been demonstrated through the social actor perspective and the reasoned action theory, these regulations, as well as incentives and facilities, are the social context that the various social actors have to take into account in their coping behaviour.

2.1.3 Policy measures and the relevant Knowledge and Information Activities (KIA)

The theoretical analysis of the KIA relevant for the efficient implementation of the policy measures will take into account the three main discontinuities introduced recently in the agricultural system in Benin. These are greater client-orientation, greater responsibility to farmers, and relevant educational programme planning. The KIA are those interactive activities or processes initiated by the officials or groups of actors in order to reach a common understanding through exchange of information, ideas and know-how. They are adaptive interactive instruments used for policy implementation. Other information activities may be used apart from the interpersonal ones, such as directives, standards and norms which are given through various information papers (e.g., minutes and decreta) in institutions. These processes of information exchange about regulations, incentives and sanctions are also forms of KIA. They have been taken into account in this study, as far as they give rise to interpersonal interactive processes. Thus, KIA related to mass communication, although they may shape people's behaviour, have not been taken into account in this study since they are not considered as an interaction instrument at the interface between government intervention and social actors.

Greater client-orientation in the agricultural system, the related knowledge and information activities

The greater client-orientation in the agricultural system in Benin concerns researchers, extensionists and farmers. Extension and research have, for many years, only focussed on technologies that they think are relevant to farmers' conditions. These technologies were generated by research based on anticipation of farmers' needs, and transferred to them through extension. Actually, there is a need for new approaches and methodologies in order to orient research and extension towards farmers' needs.

An analysis of this policy measure in a knowledge system perspective (to be discussed) needs to understand the processes through which the general scientific knowledge of extensionists and researchers might be articulated with the empirical knowledge of farmers, i.e., local knowledge (Brouwers, 1993). Such knowledge articulation calls for professional researchers and extensionists, and the creation of

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7 The local knowledge in a given group of a community, also called knowledge of rural people, is the product of a long succession of experimenting to resolve agricultural, environmental, and social problems in a particular agro-ecological and socio-cultural context (Brouwers, 1993:29).
relevant linkage mechanisms through which information, ideas and know-how will be exchanged and shared.

Professional action which is client-oriented requires the acceptance of the existence of multiple realities; the use of participatory methods; the enabling and empowerment of the client through dialogue; joint analyses and negotiation; working with a multi-disciplinary perspective; joint priority setting; the perception of the client as central concern in objectives setting instead of technology; and acting as a facilitator and the acceptance of errors (Chambers & Pretty, 1992; Cornwall et. al., 1992).

The relevant linkage mechanisms for achieving client-orientation may be concerned with joint problem diagnosis; joint priority setting; formal collaboration in trials, diagnosis and dissemination activities; regular joint field visits; sharing responsibilities and tasks; joint training activities; and the selection of internal prime movers (Merrill-Sands et al., 1992). Such processes may be carried out consciously or unconsciously.

The main KIA that can be derived from the above mentioned requirements for an efficient client-orientation in the agricultural soft system are joint learning/training; negotiation; joint decision-making; and facilitation.

**Joint learning** is the process through which various actors (individuals and strategic groups) come to know more about each other's conditions and knowledge and to exchange experiences and know-how. Such a process is necessary for reaching a common understanding of the policy measures, related objectives, activities and taking common action.

**Negotiation** is the process by which actors arrive at an agreement or reach consensus either about concepts, or about the relevant actions to be taken to improve the situation identified through joint learning.

**Joint decision-making** refers to the process by which various actors plan activities to be carried out in the frame of negotiated actions, and decide about resource allocation and responsibility sharing.

**Facilitation** is a catalyst role played by individual actors to coordinate activities planned, to speed or slow the change process. That is the role of the (external and

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8 Systems approaches in agricultural development involve taking a broad view, including all parts of the agricultural development, and concentrating on interactions between these different parts. 'Hard' and 'soft' refers to how the functions and organization of the system are perceived. Hard systems are conceptualized as having non-problematic and transparent functions, causes and purposes, while soft systems approaches recognize that systems are social constructions with normative boundaries (Checkland, 1981). Soft system theorists do not attribute purpose to entities but only to individuals who make up these entities. Actors participating in these systems have different viewpoints and the task of the system is negotiation of these different viewpoints. The system only emerges as a result of negotiation, accommodation, agreement, compromise and/or reformulation (Röling, 1994).
internal) prime movers. For example, during training sessions, professional researchers or extension workers might see themselves as facilitators and as learners.

The success of such knowledge activities depends on the motivation of the actors to adopt such behaviour. But also, various institutions or contexts in which they are acting may greatly influence these knowledge activities. For example, a village extensionist may not be formally able to use negotiation as a KIA in the CARDER since special tasks have been assigned to him. But, in practice such negotiation has informally occurred between farmers and extension workers as an individual response of extension agents to meet the requirements of the top-down approach that was prevailing in these institutions. Some of the institutional factors that can facilitate such knowledge processes are decentralization, flexibility for action, rapid and realistic feedback flow for adaptation action; existence of a continuous dialogue and participation.

Giving more responsibility to farmers, related knowledge and information activities

Responsibility to farmers may be achieved through many local institutions as various objectives have been assigned to them (Uphoff, 1992a, b; Cernea, 1987, 1991; Curtis, 1991; Norton, 1992). Responsibility to farmers' associations, the GV's, in the Beninese situation concerns functions such as the mobilization of material resources to help farmers to produce more (e.g., credit, inputs); distribution of these material resources according to individual needs; recovery of loans; primary gathering of cotton production and transportation to industries; promotion of a framework for a cooperative action; improvement of access of all the farmers to information about their associations; and management of refunds to the associations for construction of social infrastructures at local level.

Farmers, actually, have little knowledge about the formal organization of such activities. Informal organization of management, information exchange and accounting does exist within small groups of farmers for their daily activities and informal networks management. But for the actual policy measures, larger groups are concerned and also until recently extension services were heavily involved in the process. Therefore, formalization of all of the activities is necessary.

As such, farmers need to have access to essential knowledge. In such situations, joint learning/training, joint decision-making, information exchange between GV's are important knowledge activities. The influence of the state institutions on the farmers' associations in Benin is very great. If such influence persists it will affect farmers' flexibility in decision-making and initiative-taking. Initiative-taking is a crucial KIA which can enable farmers to learn mainly by doing. Such process must be facilitated by extension services. Facilitation is essential to a policy of giving more responsibility to farmers.

New problems always arise during the growth of groups. In fact, large groups can make possible hierarchies which are supposed to facilitate activities, but in reality have a tendency to dominate other farmers (Pretty and Chambers, 1992 in quoting
Huby, 1990). New ‘elites’ may emerge amongst farmers and might take over from the civil servants and so exploit other farmers. Thus, there is a need for role exchange (e.g., the committees must be regularly reoriented to give other farmers the opportunity to experience different roles) in the associations. Such action may help to build a countervailing power within the associations; otherwise leaders may take for themselves the opportunity given to the associations.

Relevant educational programmes, knowledge and information processes

Building relevant educational programmes to fit the change in the socio-economic environment in Benin requires the establishment of new curricula; the adaptation of course contents; the utilization of more participatory and active teaching methods; and the introduction of more practicals. Agricultural university teaching needs to diversify what it offers, i.e., not to concentrate only on teaching but also on other development activities such as development-oriented research and studies; and outdoor training for development workers. Agricultural colleges may also plan field training for their alumni in order to update their knowledge. That is, as is often said, to make agricultural education more professional.

Actors in the education system might have a different interpretation of the concept ‘professional’. The knowledge they acquire from the concept will depend on the meanings they attach to it. Thus, ‘giving meaning’ will be an important knowledge process in such a situation at individual level.

The meaning actors attribute to the concept will be influenced by their individual objectives. Actors will try to interpret the concept according to what they think is desirable for themselves or the interests of their institutions. In such a situation, there is room for negotiation about the concept, and the search for consensus will guide the whole process during encounters.

Academics (lecturers at university level) are very slow to adopt innovative ideas, methods and staff development activities since they are free with respect to the ways they deliver their teaching. As such, they are more conservative than the teachers in the agricultural colleges where teaching is formally monitored and evaluated and promotion is often linked to the quality of teaching. Therefore, adopting participatory teaching methods and developing new course contents will not be easy in the agricultural faculties. Teaching staff will tend to control the situation. As such, there is a need for prime movers to coordinate the whole process.

In the agricultural colleges the room for such control will be limited. Thus, they may try to adapt themselves to the situation. But, the availability of teaching materials may be the crucial limitation for such an adaptation process. The culture of the institution, the availability of relevant resources are important factors that can influence the process of curriculum adaptation.

Students often have little power in the process. But, if education is to be more professional they need to have more power. First, there is a need for them to acquire more independence in working and to take more initiatives. Second, there is a need
to develop their *countervailing power* by giving them more room for demanding relevant training from their teachers. Once more, the institutional culture also needs to be changed if any such power is to be given to students.

In conclusion, from the theoretical analysis of the way the various policy measures may be implemented, i.e., the communication instruments to be used, the following KIA seem relevant for an efficient implementation of these policy measures:

| joint learning | training |
| joint decision making | consensus building |
| coordination | facilitation |
| analysis | initiative taking |
| information exchange | diagnosis |
| joint decision making | countervailing power building |

These KIA can be translated into four main related knowledge and information processes on the basis of objectives of each KIA. For example, learning, training, analysis and diagnosis have the objective to share, transfer or acquire knowledge and know-how. They are, thus, grouped as joint-learning in the perspective of interactive communication. Also, information exchange, coordination, initiative taking and countervailing power building have the objective to facilitate the change process and to ensure sustainability. Therefore, they are grouped as facilitation.

The results of this translation are (see summary in figure 2.4 about the conceptualization of the KIA on page 33):

| joint learning | joint decision making |
| negotiation or consensus building | facilitation |

All of these KIA and knowledge and information processes are theoretical conceptualizations of communication processes which should be used as policy instruments during the implementation of the policy measures. As it appears, all these knowledge and information processes are conceived as interactive, two-way processes. This has been done on purpose because of the way the author perceives development communication. But, in reality directive and top-down communication processes mainly occur in bureaucratic situations. Giving this, these knowledge and information processes can be used as theoretical concepts for a diagnostic analysis of the actual and historical situation in Benin. As such, this conceptualization of the KIA will be a diagnostic framework which will be used to study what is actually happening in each of the cases with respect to the implementation of the various policy measures. But, as the methodological approach of the study is partially based on the grounded theory approach (to be discussed), the communication processes which emerge from the cases may not be that interactive.
DISCONTINUITIES EMERGING FROM THE POLICY MEASURES

Greater accountability to farmers

Greater client-orientation in research and extension

Relevant educational programmes

KNOWLEDGE AND INFORMATION ACTIVITIES

Learning
  - Training
  - Analysis, diagnosis
  - Decision making

Joint learning

Joint decision making

Search for consensus

Negotiation/consensus building

Information exchange

Facilitation

Co-ordination

Initiative taking

Countervailing power building

KNOWLEDGE AND INFORMATION PROCESSES

Figure 2.4: Conceptualization of the relevant KIA into knowledge and information processes
Many factors may influence these knowledge and information processes in the present case of Benin. Some of these factors are the culture in various institutions (e.g., decentralization, flexibility, possibility for dialogue, participation and effective role changing and existence of internal and/or external prime movers) and the availability of the necessary resources (see figure 2.3).

2.1.4 Policy measures and actors' coping behaviour

The concept of coping is complex and has been defined in various ways (Corbett, 1988; Foeken et al., 1988). In this book, coping is the process through which people make relevant adaptations to the environment or social context as they perceive it. It is a way of establishing continuity even in a situation of change. Thus, coping behaviour is the outcome of the process of mutual interplay between people and change in their social system. This interplay, which is a coping response, may be passive, active or even creative.

Such a definition of the concept of coping behaviour is similar to the one used by food and nutrition scientists in various studies about people's response to food insecurity. For these scientists, coping behaviour includes mostly the following: adaptation of cropping patterns, management of food stocks, diversification of income sources, exploitation of social networks, reliance on wild food and adaptation to new food patterns (Liere, 1993). Thus, social actors' coping behaviour is more than a passive response. It is an active, creative and adaptive response to new circumstances, a way to make a better use of new situations in order to achieve desired objectives.

People adapt to changing circumstances. But adaptation has two aspects: (1) adapt results to objectives, i.e., adapt 'gets' to 'wants' or (2) adapt the objectives to the results, i.e., adapt the 'wants' to the 'gets'. In the first case one can speak of innovation, while in the second case it often concerns frustration. Coping covers both these two aspects of adaptation. According to Long (1989), actors try to realize their projects and enlist other people in them. So, he sees people as struggling in the arena to realize their projects. People can also have joint projects; they can organize to achieve common objectives mainly through strategic groups. This means that coping behaviour may be an individual action or a collective, joint action. Joint actions might, sometimes, be strategic, i.e., individuals use such actions in order to reach their own objectives. But, sometimes, joint actions might really be interactive. In that case, actors take joint actions in order to reach common objectives.

Behaviour is generally defined as the response of people to perceived changes in their environment. Coping behaviour, thus, is the adaptation process of the individual to the perceived changes in his/her social, physical and/or political environment. In this book, it refers to adaptive responses of the actors (individuals or groups), involved in agricultural development in Benin, to new policy measures introduced by the government in the frame of the actual agricultural development policy. As such, coping behaviour may be the adoption (or rejection) of an expected action, and/or an expected opinion about given actions, regulations or other policy instruments. Coping
behaviour may be, thus, conceived in terms of acceptance or rejection, i.e., in terms of a bipolar dimensional representation as social judgement theorists describe (Sherif & Nebergall, 1965; Sherif & Hovland, 1961). This bipolar representation of the adaptive response is elaborated in detail in chapter 6.

This acceptance may be public or private. Such a conception of the coping behaviour does not help us to understand fully why the expected behaviour is accepted or rejected. Thus, it is more worthwhile to understand the reasons why a new behaviour is adopted or not, i.e., the different motivations and orientations of the coping behaviour. Behavioural change may be voluntary or compulsory. Compulsory behaviour change is enforced by laws or by police. In this book, we are concerned with development policy implementation in which, although there are rules and norms, actors will be guided by their own logic or agenda in dealing with these norms and rules. As such, we are concerned with reasoned behavioural change.

Kelman (1970) has used such a perspective to analyze the way people change their opinion and the related reasons. He has distinguished three processes of opinion change: compliance or conformity; identification; and internalization. Such a distinction is mainly based on the source of power valued by the actors concerned with each of this process (see section 2.1.2)

Compliance is the process of opinion change based on the expectation of achieving a favorable reaction from the change agent or to avoid sanctions, i.e., a behaviour change based on social and external pressures. Identification is the process through which people adopt new behaviour in order to satisfy a self-defined relationship with the change agent. Internalization is the process of influence acceptance based on the fact that the induced behaviour is congruent with the value system of the actor concerned. It is an internally motivated behaviour change, whereas the two others are externally motivated. Such internalized behaviour must be easily and publicly expressed. In this book, we speak about internalized acceptance or rejection. Two important comments should be made on this conceptualization of the coping behaviour:

- an actor may adopt a given behaviour because he/she needs some of the opportunities available in the social system in order to reach his/her own objectives. These opportunities may not only be social but also material and financial (e.g., facilities, money). Thus, the concept of opportunity grasping is broader and includes the identification process as described by Kelman; and

- the rejection of an influence and reasons related to it are also important to know from a social actor point of view since this may help taking corrective action as far as policy measures are concerned. This rejection, according to the situation and the actors present, may be expressed openly because the expected behaviour is not congruent with the actor's value system or past experiences and the concerned actor has sound reasons to justify his/her attitude. But, rejection can also be hidden because the actor is not motivated to adopt the expected behaviour, but he/she does not have sound reasons against it and does not want the change agent to be aware of this attitude. In
such a situation, the concerned actor designs strategies to demonstrate to the
change agent that he/she is adopting the expected behaviour but in the field
he/she does not perform it. An experienced extension official may easily
discover such behaviour if he compares discourse with practice. This means
that he needs to go into the field. It is a kind of ‘skimping’.

The coping behaviour is a purposive self-interested attitude. It is based on
calculations (see the figure 2.3 about the reasoned action in dealing with policy
change). Its adoption by a given actor might be influenced by his/her power position
and relations as well as his/her motivation/interests. According to Giddens,

the use of power in interaction can be understood in terms of the facilities that participants
bring to and mobilize as elements of the production of that interaction, thereby influencing
its course. Social systems are constituted as regular practices: power in social systems can
thus be treated as involving reproduced relations of autonomy and dependence in social inte-
raction (Giddens, 1979:93).

The use of the concept of power, as resources actors bring to interaction, implies the
importance of resources in changing situations. Resources may be derived from an
access to information, money, labor, agricultural inputs, and technologies, or
immaterial assets such as status and motivation. Power also refers to the capability
or likelihood of actors to apply the policy measures or to do otherwise. If they can
do otherwise, they have a kind of autonomy. As such, the coping behaviour to be
adopted will depend on the balance between the intervention power of the change
agent or institution and the countervailing power of the actors, be they individuals or
strategic groups (Röling & Engel, 1990).

Power may be derived from the roles or the positions that the actors play or occupy
in a given situation (e.g., Village Extension Workers and District Extension
Officers).

Motivation (or desire) are the basis of interests. The possibility of realizing this
desire in a given situation guides human action (Giddens, 1979). As such, if the
policy measures do not offer this possibility to actors involved or if they do, but not
in a sense conducive to the formal objectives of the change, the coping behaviour of
the actors may be oriented towards the rejection of the situation either through
skimping when the institutional pressures are too coercive or open rejection when
they have enough autonomy. New policies, therefore, have to take into account the
desires of the actors involved. But, when the policy measures satisfy the interests of
the actors, even partly, their behaviour may be oriented towards internalized
acceptance or opportunity grasping. Individuals and groups have different
(conflicting) interests. This makes it difficult for any policy change to take into
account all these interests. Nevertheless, attempts must be made to adapt policies to
the needs or interests of the majority of the actors concerned. Thus, there is a need
for joint priority setting by the actors themselves.
2.1.5 Conclusion: towards a parsimonious and comprehensive conceptual framework

In conclusion, it appears that many factors influence the process of the implementation of the new policy measures by the actors, be they individuals or strategic groups. These factors are mainly the past experiences, the desires and projects, the capability and the autonomy of actors in their actions. The way the policy context and the expected behaviour are constructed may lead to various forms of coping behaviour.

The knowledge and information processes derived from various interactive activities organized by officials or groups of actors play a great role in the empowerment of actors, i.e., in providing them with the relevant capabilities and autonomy. These interactive activities and knowledge processes are influenced by institutional culture and available resources, and also influence coping behaviour. Also, the directives, standards, norms related to, and the facilities offered by, the policy measures influence the coping behaviour of the actors. The adopted behaviour may, in turn, influence policy measures.

All this may be summarized in a more parsimonious and comprehensive way as in figure 2.5.

In the study, the current behaviour of the actors as well as the various knowledge and information processes that have taken place as responses to the new policy measures will be explored. Such an exploration will be guided by this parsimonious and comprehensive conceptualization of the relationships between various concepts relevant for the study of the actors’ responses to policy measures, as well as by the factors that affect these relationships (see figure 2.4). As such, the theory developed in this section 2.1, is used as a theoretical perspective for the present study. But, the results of the analysis of the data collected through various cases studied will help to improve it and to tune it to the specific conditions and realities of Benin. In fact, various forms of coping behaviour will be derived from the cases studied in the context of this book. The way actors actually respond to the policy measures will be, first of all, looked at through the first three cases. Then, a specific formulation of actors’ responses in terms of patterns of coping behaviour and
knowledge and information processes will be provided. These emergent patterns and related relationships will be cross-checked through a fourth case, i.e., through a process of triangulation.

The specific responses of actors in the process of policy implementation will be explored in each of the case studies, i.e., chapters 3, 4 and 5, across the following lines:

- historical description of the way agricultural policies were implemented;
- description and analysis of the policy measures in line with the formal justifications or discourses for supporting them;
- description of individual and collective responses of actors, be they individuals or groups, to policy measures;
- analysis of these responses in terms of knowledge and information processes as well as coping behaviour, and factors that influence them; and
- as a conclusion, to see how far these various responses may potentially contribute to an effective development intervention.

In chapter 6, a comparison between various specific responses of actors, be they individuals or strategic groups, found in the first three cases, (i.e., professional extension; giving more responsibility to farmers’ organizations; and relevant agricultural education) will be done in order to:

(1) see if the type of responses vary from one case to another; and

(2) explain these variations if they do exist.

This comparative analysis may lead to a modeling of people’s responses, i.e., a pattern of responses to policy change in the Beninese situation. Such a ‘perspective’ or ‘framework’ will be developed by establishing the emergent relationships between knowledge and information processes, coping behaviour and the factors that influence them.

In chapter 8 these main emergent relationships will be cross-checked with the results of analysis in chapter 7 which deals with the greater client-orientation in agricultural research. This triangulation seeks to see whether the relationships that have emerged from the first three cases still hold in the fourth case.

These cross-checked relationships will lead to theoretical ‘perspectives’ with respect to people’s responses to policy change.


2.2. Research methodology

2.2.1 Introduction: general methodological orientation of the study

In this research, we are concerned with understanding the way farmers, extensionists, researchers and agricultural educators respond to the new policy measures set at national level in the frame of the Structural Adjustment Programme in Benin. This understanding will lead to a typology of the actors’ responses to policy change, i.e., a theory which is grounded in the realities of agricultural development in Benin. Thus, the grounded theory approach will be partially\(^9\) used. According to Strauss and Corbin,

\[
\text{the grounded theory approach is a qualitative research method that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon. The research findings constitute a theoretical formulation of the reality under investigation, rather than consisting of a set of numbers, or a group of loosely related themes. The purpose of grounded theory method is, of course, to build theory that is faithful to and illuminates the area under study... (Strauss and Corbin, 1990:24).}
\]

In order to reach an understanding of the responses of the social actors to the implementation of the new policy measures, we have, thus, chosen the social actor perspective and the reasoned action theory as an analytical framework for the study. With such a conception of the study we have to try to see through the eyes of the social actors involved in the implementation of the policy measures. Qualitative methods are appropriate for such a study in which we are concerned with understanding or discovering unknown individual and collective responses, when even the actors involved cannot predict the outcomes/results.

In fact, qualitative methods are used to: (Strauss and Corbin, 1990)

- uncover the nature of individuals’ experiences with a situation;
- uncover and understand what lies behind any situation about which little is yet known;
- gain novel and fresh slants on things about which quite a bit is already known;
- give the intricate details of situations that are difficult to convey with quantitative methods;

\(^9\) In fact, the research process is a combination of theory verification and theory grounding approaches. It is a kind of theory verification since an analytical framework has been elaborated on the basis of a theoretical analysis of the research situation. But, no hypotheses have been formulated at the beginning of the research. Rather, they have emerged from the case studies and labelled as knowledge claims. In that sense, the grounded theory approach is used since the concerned knowledge claims have emerged from the analyses of the case studies.
- help to give an (honest) account with little interpretation, in such a way that the researchers' biases and presence in the data is limited; and

- give an accurate description of the findings (interpretations for a more detached conceptualization of the reality) that can help to explain the reality and provide a framework for action.

We are mainly concerned with understanding responses and with identifying relevant concepts that can explain them, but also with factors that facilitate or limit the incidence of these responses. It is a kind of contextualized concepts generation. In fact, concept generation is a step in the process of theory generation. Theoretical sampling methods seem to be appropriate for such an endeavor.

According to Glaser and Strauss, theoretical sampling is the process of data collection for generating theory whereby the analyst collects data, codes, and analyzes his/her data and decides what data to collect next and where to find it, in order to develop his/her theory as it emerges. The basic questions the researcher always asks himself are: what groups or subgroups does one turn to next in data collection? And for what theoretical purpose (Glaser and Strauss, 1967)?

When using theoretical sampling, incidents are sampled, and not persons per se. The main interest is to gather data about what people do and do not do in terms of action and interaction; the range of conditions that give rise to action and interaction and its variations; how conditions change or stay the same over time and with what impact; and the consequences of either achieved or failed action and interaction (Strauss and Corbin, 1990). Also, sampling and analysis occur simultaneously, with the analysis guiding the data collection.

As it is not yet clear which concepts are theoretically relevant, the researcher may not know at the beginning the most opportune places, people, or documents to go to for evidence that will support the concepts. The investigator is open to all possibilities and it is this openness, rather than a specificity, that guides initial sampling choices.

Later on, sampling focuses on uncovering and cross-checking the relationships discovered previously, i.e., finding out in the field if the proposed relationships hold up. To achieve this, the researcher chooses the sites, the people and documents that maximize the opportunities for verifying the relationships between phenomena and filling in the poorly explained phenomena.

The choice for partial use of the grounded theory approach has consequences for the methodology to be used in studying the actors' responses to the various policy measures with a combination of actor-oriented and reasoned actions perspectives. These are:

(1) theoretical sampling, though it will not concern people per se directly, must be done purposefully (directed towards the understanding of the various phenomena), systematically (by taking into account all the actors involved), and fortuitously (open to unexpected but relevant phenomena that seem
important or crucial for the understanding of the various strategies identified).

(2) the meanings of the collected data must be derived, as much as possible, from the actors, i.e., the meanings they attribute to their actions or strategies. As such, observation and participant-observation must go hand in hand with informal and unstructured interviews in order to understand why people react the way they do or do not react at all. Also the various strategies or responses identified must be related to their context and conditions in which they occur, and related to the consequences of the strategies for the changes.

(3) nothing must be taken for granted. Each assumption or conclusion derived from the data must be verified by other evidence in the field.

(4) concepts and theoretical conclusions must emerge on their own from the data without being forced.

(5) emphasis must be put mainly on what is happening at the operational level, i.e., at micro-level where actions are taken and coping strategies are developed by actors. This does not mean that the macro-level is neglected, since action and micro-strategies are responses to formal macro-strategies. Doing so would deny the duality between action and structure and between people and changes.

In all, the study is developed through a process of continuous confrontation of theory and empirical data. This interplay between theory and practice (empirical data) is executed through six steps.

Step 1: (practice)

The research problem has been identified on the basis of the knowledge the author has about agricultural development in Benin. This knowledge has been drawn from his former research for the degree of ingenieur, on one hand, and the MSc degree on the other, and also from his experiences as Junior lecturer in the Faculty of Agriculture. This knowledge contributes to the first chapter which is, thus, based on daily practices and empirical knowledge.

Step 2: (theory)

In order to understand the research problem, a theoretical perspective was drawn up in chapter 2. This is the first attempt toward a theoretical analysis of the research problem. This first attempt is still very broad and general.

Step 3: (practice)

Three cases have been studied in chapters 3, 4 and 5. This (second) set of empirical chapters is based on the data collected through the field research in the extension institutions, the agricultural education colleges and Faculty and
the farmers' associations. These cases were analyzed by using the theoretical perspective or framework developed in chapter 2.

**Step 4:** (theory)

A comparative analysis of the three cases is carried out in chapter 6. This leads to some provisional and more specific theoretical frameworks which are more grounded in the realities of the Beninese situation. These theoretical frameworks are more tuned to specific conditions of agricultural development intervention in Benin.

**Step 5:** (practice)

The theoretical frameworks that emerged from the comparative analysis of the first three cases were checked and verified with a fourth case study (chapter 7). This case is related to a greater client-orientation in agricultural research. The research is, thus, based on theoretical frameworks that emerged in chapter 6.

**Step 6:** (theory)

On the basis of the empirical chapter 7, the emergent theoretical frameworks are better tuned, and practical and theoretical lessons are drawn in chapter 8.

All this is summarized in figure 2.6 which shows the process, i.e., the various steps, of the present study.

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**Figure 2.6:** The process of theoretical claims generation about people's responses to change in Benin.
2.2.2 Selection of sites for field study

The field research started at a time when the application of some of the policy measures had already started in the organization of agricultural development intervention in Benin. These changes, in one way or another, affected the social conditions or roles of various individual or groups of actors involved in the agricultural development process. The cases have been identified on the basis of the induced policy measures. But, these cases are linked together in the Benin situation since all of them are derived from the coercive policy context of attaining greater efficiency and relevant end results for agricultural development. The four cases are related to extension activities, farmers' organizations, agricultural education and agricultural research (see chapter 1 for details).

It started in the Borgou province in the Northern part of the country (see map 1 about the provinces, CARDERs, and research locations). This choice was determined by two main reasons:

(1) the Faculty of Agriculture already has many contacts with the agricultural development agencies in the southern part of the country where other colleagues are currently doing research. But the northern part, mainly because of its distance, has been somewhat neglected. In order to diversify the sources of knowledge the Faculty in general and our Department in particular have about agricultural development in Benin, the choice of Borgou province was made.

(2) the Borgou province is among the first provinces in which the initiative of farmers' organizations, the 'Groupements Villageois' began in Benin. Currently, they are the most organized in the whole country. This level of organization had been possible because of the importance of cotton production in this province. In fact, the Borgou province is the largest producer of cotton in Benin, and to facilitate the production of this crop, farmers' organizations were established by (political and technical) officials.

The district of N’dali, about 60 km from the capital of the Borgou province (Parakou), is the operational site where most of the data have been collected. This region was chosen because at the time the research started, many problems were going on in this district as far as the management of the farmers' organizations was concerned. Also, this district is not too far from one of the two lower agricultural colleges, a regional agricultural training center and a regional research station in Benin (about 12 km away from N’dali): the 'Collège d’Enseignement Technique Agricole' (former 'Complexe Polytechnique Agricole Niveau I'), the 'centre de formation rurale' and the research station of Ina. Some of the data collection concerned coping behaviour of actors involved in the policy measure that related agricultural education adaptation to limited employment opportunities. This data collection concentrated on these colleges and the centres. Also there is an agricultural research station in Ina which concentrates its activity on food crops (mainly maize) and an agricultural research station in Parakou which deals with cotton and fiber
crops production. As such, a study of changes (if any) in the organization of agricultural research is possible.

The concentration of the data collection in such a region where the four cases (research, extension, education and farmers’ organizations) identified are all represented has the advantage of minimizing the research costs.

The field research, in the case of transferring activities to farmers and the reorganization of the CARDERs, concentrated at the village level where the daily management of extension activities by Village Extension Workers (VEW) and the inputs and credits by farmers organizations is occurring. The concentration on this level gives opportunities to see how the VEWs and the farmers cope with the new situation and to analyze the new form of interaction between them. As such, GV committees, individual farmers and their extension workers (a village is covered by one extension worker) are the focus of research. The first step of the research concentrated on seven villages in this district (see map 2 of the various sites for intensive research): Sirarou, Ouénou, Tamarou, Wobakarou, Suanin, Komi-guea and Sakarou, and six Village Extension Workers (Suanin and Sakarou have the same VEW). Sirarou has two GVs, thus the research was concentrated on eight GVs. Recently, three of these GVs were chosen to be ‘pilot-GVs’ to experiment with full accountability of the GV for primary gathering and marketing of cotton production. As such, they have to deal directly with the SONAPRA, the official marketing board for cotton, instead of dealing with this society through the CARDER. Interviews and various observations are held either with the members of the GV committees or with other GV members and with the Village Extension Workers. Nevertheless, some relevant linkage mechanisms at sub-district, district and sub-regional levels (mainly training sessions and staff meetings) are also studied in order to understand the formal meanings or content given to policy measures and their implementation at each of these levels. Also, extension officers at different levels are sometimes interviewed according to the information needed.

As far as the adaptation process of agricultural education to the limited employment opportunities in Benin is concerned, the field research concentrated on the college level. Students, administrative staff of the college and teachers were the main target of the research. The adaptation process is (officially) suspended in the agricultural colleges as a result of student protests to the objective of this curriculum reform. Such protest has provided opportunities to study the responses of the students to the curriculum reform in their colleges.

After sufficient comprehension of various cases in the research sites, additional evidence was collected in another district in the CARDER of the Borgou province (Tchaourou), and four other CARDERs (Atacora, Zou, Mono and Ouémé) and in the Faculty of Agriculture. This additional step was necessary to see whether there were variations in CARDERs or educational institutions with respect to actors’ responses to the implementation of policy measures.

The case of greater client-orientation in agricultural research was used to cross-check the theoretical conclusions derived from the comparative analysis of the first three
cases (extension, farmers' organizations and agricultural education). For this case study, two R&D teams of researchers were interviewed and observed during their daily work, as well as farmers collaborating in the R&D programmes of the concerned teams.

2.2.3 Data collection methods and techniques

In this section, initiation of the data collection phase and the field techniques used will be described.

Getting the field research started

The research started in a crisis situation in late 1989. In fact, during my first stay in the field, there were a lot of ill-structured situations going on.

In some 'Groupements Villageois (GV)', most of the farmers were not paid for the cotton that was sold. This was due to the fact that loans and inputs were given to some farmers who could not repay them because of low production, but also these loans and inputs were attributed to (fictitious) farmers not living in the concerned villages, i.e., who were not members of the GV. Some of these villages (Suanin, Wobakarou) were the focus of this research (see the previous section on the selection of the sites for the field study).

In the agricultural education colleges, students went on strike because they were protesting the objective of training them to become farmers, an objective that was drafted in 1986 and implemented beginning in 1987.

The Training & Visit system, which was the extension approach used in the CARDER-Borgou, was evaluated in terms of the way it was planned and used by the extension workers, mainly at field level. This evaluation pointed out that none of the basic principles of the approach were applied in the field, and extension workers were still following their former methods of delivering extension services (a World Bank expert labelled this as an 'embryonic T & V system'). In that situation new recommendations and prescriptions were made to improve the application of the approach. It was at the beginning of the training for this purpose that the research started.

It is this situation of crisis that motivated me to identify these cases as an entrance or starting point for the study of social change. The other policy measures (transfer of inputs and credit distribution, primary collection of cotton by farmers; concentration of extension activities on information, education and persuasion; the dismissal of some of the extension agents; reorganizing agricultural research) occurred later on as an implementation of other requirements of the Structural Adjustment Programme in Benin. These new policy measures in agricultural development have reinforced the relevance of the research.

During the research, attempts were made to convince the extension workers, mainly the VEWs, that the researcher had no link with the CARDER. In this respect, the
final purpose of the research, the fulfillment of the requirements for Ph.D., was frequently explained to VEWs. The objectives of the research were never fully explained to the extension officers or the VEWs since it had to do with their behaviour. Behavioural assessment is a quite sensitive endeavour in the Beninese situation since the results may be used by the officials in their assessment of their subordinates. I only pointed out that the research concerned communication in extension. This attitude was adopted to limit the influence of the ritualistic behaviour of extension workers, i.e., to minimize the consciously biased behaviour expressed by extension workers to avoid ‘loosing face’ in front of their superiors or outsiders, on the results. Informal visits on weekends proved to be a good way to enter the informal life of extension workers and to avoid formal interaction.

Field techniques
The main research techniques used for data collection were: interviews, observation and participant observation.

Interviews were used for many purposes and in various situations. Since the crisis started before the research, at the beginning of the study, unstructured interviews were used with some key informants (e.g., extension workers at different levels, farmers, members of GV committees, students and their teachers) in order to have an insight in the way the situations unfolded. During the research, informal interviews were also used to collect information mainly about the things that observation and participant observation were not able to find out, mainly why certain attitudes were adopted by actors. These interviews took place in informal atmospheres such as weekends, during meals or around drinks, when helping VEWs do their work either in the field or at home and after formal meetings. Most of the time, these interviews were carried out as an informal discussion without taking notes. Notes were recorded afterwards.

Observations were used to collect data on the way changes were implemented by various actors and the kind of interaction between actors in their encounters. In this respect, observations were used:

- to follow the work of the VEWs in the field;
- during various meetings and training sessions relevant for the implementation of the changes. The contents of these encounters and the opinion of the various interests groups of actors were recorded. The recommendations that were made, i.e., the translation of the policy measures into practical actions, were also recorded and their implementation was monitored, but not supervised, in the field afterward.

Participant observation was used during meetings, training sessions or field visits in which the researcher was asked to participate by giving advice or by helping for organization. That was, for example, the case for seminars organized at national, regional and district levels to evaluate the way the recommendations for the application of the T & V system were applied in the field. Sometimes, the researcher was asked to participate in some technical discussions at sub-regional level. Such
participation, although it would be risky for the researcher if he was not careful to remember his/her role, is important in gaining the confidence of the extension officers and to enter more in their 'own world'.

Observations and participant observations were mainly used with the intention of discovering relevant areas for study or to assess an area discovered before, and interviews were mainly used for the assessment of these areas but can also generate new areas for investigation or find out the meanings attached to various actions or strategies by the actors. As such, when attending these meetings and training sessions the researcher did not know exactly what he was supposed to find. He only had in mind the aim of the research and some points for which he needed clarification. Therefore, he was open to new areas and hoped to discover them. This was of consequence for the use of research assistants during the data collection since discovery was the aim of the interaction between the researcher and the actors. What exactly to discover may not be clear for a research assistant. Thus, no real permanent research assistant was used, but only interpreters and particular informants.

2.2.4 Reflection on the research process

This study is about discovering the responses of actors to the implementation of the new policy measures related to agricultural development in Benin. It was originally concerned with building a theory pertaining to this new situation. As such, the theory to be developed about the responses of the social actors would be the result of the interpretation of the data collected during the field study, i.e., would be generated from, grounded in or would emerge from the realities studied. That is the reason why it was not based on a-priori hypotheses. But, in chapter 2, logical frameworks are elaborated on the basis of the knowledge the author has about agricultural development in Benin and some theoretical notions (see figures 2.3. and 2.4). These frameworks influence, in one way or another, the interpretation of the data in the empirical chapters. As such, these logical ways of looking at the reality in Benin have been imposed on the data collected. In one way or another, they have been the point of view from which the researcher has interpreted his data. Thus, one may argue that the main knowledge claims that come out from this study have not been grounded in the data. But, to assess the impact of these logical frameworks on the interpretation of the data, it is important to situate the design of these frameworks in the research process. In fact, they have been elaborated after the data collection in the first three case studies. Thus, the experience gained by the researcher during this data collection has already influenced these frameworks which, definitely, did not influence the data collection based on qualitative and unstructured procedures (see sections 2.2.1, 2.2.2 and 2.2.3). As such, this research is a mixture of grounded theory and verification approaches. Thus, the reader may find in the book some concepts used when grounding theory. But, it is not a pure grounded theory procedure. The data collection is more oriented towards the grounded theory approach, i.e., towards discovering concepts and relationships which pertain to the realities studied, than the final data interpretation. It is a weakness in the research methodology.
Another concern in this reflection on the research process is how far the findings in this book reflect the real data and situation in Benin. Four criteria are usually used by conventional researchers to persuade the reader that their findings can be trusted: the internal and external validity, the reliability, and the objectivity (Pretty and Vodouhe, 1994).

The external validity is concerned with the degree to which the findings can be applied to other contexts or to other groups of people. This research did not aim at finding concepts and relationships usable in all situations. Since the grounded theory approach has been partly used, the main objective has not been to extend the results of this study to other situations. The knowledge claims that are generated may not be universal. It will mainly be of value in the Beninese situation. But, it may be usable in other francophone developing countries that have similar histories of public intervention.

But, the internal validity of the findings has been of great concern in this research. In fact, a variety of data collection procedures has been used during the field work: unstructured interviews, observation and, sometimes, participant observation (see section 2.2.3). Interviews have been used as a way to cross-check the data obtained from the (participant) observation. This triangulation increases the internal validity of the findings (Sanday, 1983). Also, the provisional knowledge claims derived from the comparative analysis of the empirical results of the first three case studies have been cross-checked against a fourth case study in order to increase their validity in the Beninese situation.

Also, two years of intensive interaction and visits with extensionists, farmers, teachers and students have been used to learn about the various policy measures drafted in the field of agricultural development in Benin. Such a long stay in the field may have helped to grasp the complexity of the situation and the commitment and feeling of the social actors about it and the dynamism of this perception.

Finally, in addition to the cross-checking of the data, obtained by means of observation, through interviews, the various meetings, seminars and consultancies the researcher has attended were other opportunities used to increase the internal validity of the study.

The coping behaviours were assessed through observing the actual action. But, the expressed opinion or intention of people was also used to predict behaviour. In fact, intention is closely linked with action. But, sometimes, the expressed intentions are not really what people feel. The presence of the researcher and the way he is perceived by the social actors may shape the expressed intention or opinion. As such, such a definition of the role of the researcher by the actors may influence opinions and actions taken in his presence.

Also, unforeseen events may intervene and disrupt the correspondence between intention and the predicted behaviour. This means that intention or opinion can only be used to predict behaviour in the short run, but since the likelihood of unforeseen
events will tend to increase as time passes, this strong relationship may change with time.

Thus, the prediction of coping behaviour from the opinions expressed still has some limitations. These limitations increase as time passes. Therefore, the actual coping behaviour may change over time and there is no guarantee that it will persist after many years since emphasis on policies quickly changes in Benin according to the rural development feelings (orientations) of the key decision makers (ministers mainly). Maybe the democratic renewal will bring more stability in policies. All these situations present some limitations for the reliability of the study.

Deriving coping behaviour from the actual action or opinion of the social actors also raises the problem of objectivity, i.e., the degree to which these coping behaviours have been determined by the subjects and the context of the inquiry rather than the biases, motivations and perspectives of the investigator (Pretty and Vodouhe, 1994). The interpretation of the opinion and actions of the social actors gives meaning to them in the context studied. But, this context is not already given once and for all. In such a situation ‘there are numerous possible contexts, each with validity, but also generating its own meaning out of the event. In this setting, the researcher has to choose the frame or frames to be used and the choice will shape the meanings that will be infused into the event(s) examined’ (Smith, 1988:139).

In fact, in these interpretations, I have tried to put the statements and opinions of actors in a context that derives from the kind of responses to which they pertain. By doing this I certainly imposed on these opinions the various frameworks elaborated before and my own perception of the situation studied. There is no objectivity in such an endeavour. The meanings given to the data reflect the perspective chosen for the study. It is one of the weaknesses of social research. How have such weaknesses been dealt with in this study in order to derive rich meanings from the data? As argued by Smith, ‘the richness of the meanings of the data we are working with depends almost entirely on our capacity to see/hear/sense/intuit that which is beyond the manifest and then to make these into frames that will give us multiple descriptions to make into the fibre from which the fabric of our theories is constructed’ (Smith, 1988:141). That is what I have tried to do through this exercise and I hope I have truly succeeded in minimizing my own ‘subjectivity’.
CHAPTER 3  MAKING AGRICULTURAL EXTENSION MORE PROFESSIONAL

‘When the learning environment remains top-down, formal, and based on detailed manuals, even though there is institutional support, field methods may not become truly participatory: this problem is indicated where training takes extended periods in classroom rather that the field. When participatory methods are not known or practiced, reinforcement through popular enthusiasm does not occur .....’ (Pretty & Chambers, 1992)

3.1 Introduction

Agricultural extension is only one of the elements that can help to promote agricultural development. According to Adams (1982), the other elements are agricultural research, marketing, production, supply of inputs and credit, and regulation related to agricultural development. In his framework, Adams emphasizes the interconnection between these six elements, i.e., no element can perform very well without an effective performance of the others.

Haverkort and Röling (1987) have also fully recognized Adam’s ‘mix’. But, they have tried to extend this ‘mix’ to other elements such as availability of transport facilities, and access to water and land. According to these authors, the services that are derived from the main elements of the agricultural development system may be carried out either by public institutions or by private organizations (e.g., Non Government Organizations, Farmers’ Associations).

Röling (1990), in modeling the Agricultural Knowledge and Information System
(AKIS), has tried to focus on some of the main elements of this ‘mix’. In his model, agricultural extension is one of the sub-systems. The others (depending on the situation) are agricultural research subsystem, and the farmers/utilizers sub-system. Later on this model was improved and, thus, Agricultural Knowledge and Information System has been conceptualized by Röling (1992) in terms of institutional configuration, innovation, and knowledge and information processes. The actual actors who make up the AKIS differ according to the situation.

In contrast with the first model, which deals with functions to be carried out for the success of the agricultural development system, the Agricultural Knowledge and Information System model deals with knowledge and information. The functions of regulation, marketing and inputs and credit supply are not specifically mentioned here. But, in practice, they are also very important for effective agricultural development. Therefore, extension alone is not a powerful element for the promotion of agriculture. It needs the contribution of the other elements, or sub-systems. There are two possibilities for agricultural extension institutions to maintain and guarantee this interdependence with other elements:

1. to establish strong linkage mechanisms with the other sub-systems, i.e., with institutions that are in charge of providing the other functions necessary for agricultural development;

2. to concentrate within the extension institution all or most of the main functions important for agricultural development.

Agricultural extension in Benin followed the second alternative for years through various forms of intervention. As such, the extension institutions in Benin carried out the functions of extension, marketing, input and credit supply, testing of new technologies, regulation and sometimes even production. In fact, this form of intervention may not be seen as extension in the ‘modern’ sense.

But, now there is a move towards the first alternative. That is called ‘professionalization’. The professionalization of extension activities means that:

- extension workers and their institutions will concentrate their activities only on information, persuasion, training and the application of regulations, leaving to other institutions the functions of marketing, input and credit supply; and

- extension has to be problem-oriented. As such, the extension institutions have to establish a strong link with farmers and research through a continuous diagnosis of farmers problems and regular meetings with researchers.

But do extension workers\(^1\) respond positively to this new orientation? The answer to

\(^1\) The concept of extension workers as it is used here is general and can mean field extension workers or officials, i.e., people occupying any position in the extension delivering activity. But when it is necessary for the sake of the analysis we will distinguish between extension officials and field extension workers. The
this question varies according to the position of the actors in the institutions, their interests as well as past experiences in extension.

This chapter seeks to analyze the way extension workers, at different levels, respond to the new form of extension organization, the factors affecting these responses and their impact on the effectiveness of the implementation of the new form of extension. To reach this objective, the chapter will start with a historical overview of extension organization in Benin. Then, the policy of professionalization of extension activities will be described and analyzed. The third part of this chapter will be a description of the responses of the various actors involved in the professionalization process. The fourth part will analyze these responses in terms of knowledge and information processes and coping behaviour.

The basic materials used to build up this chapter were collected through four years of close contact with extension workers. The field work started in the CARDER of the Borgou province and was extended later to other CARDERs.

The field work in the CARDER-Borgou was quite intensive. Village Extension Workers were followed during their daily routine and frequent home visits were paid to them. Fortnightly meetings at sub-district and monthly meetings at district and regional levels were regularly followed. Observation, sometimes participation, and informal interviews were the main research techniques used during the first phase of the field study.

The research was extended to other CARDERs through various seminars and discussions with the various technicians at the headquarters and also through the various documents available in the CARDERs.

3.2 Historical overview of agricultural extension organization in Benin

Agricultural extension activities started in Benin in the colonial period. But its organization, objectives, target group and extension offers have varied from period to period. Two main periods can be distinguished as far as the historical overview of agricultural extension in Benin is concerned: the period before the establishment of the CARDER2, i.e., the pre-CARDER; and the CARDER period.

extension officials are those working at headquarters, i.e., at regional level. Their role is to train, supervise and control field extension workers. The field extension workers are people who are more in contact with farmers. They are the people working at the district, sub-district and village levels.

2 The CARDER, 'Centre d’Action Régionale pour le Développement Rural' is the regional center for rural development. Its activities cover a province. Up to now, there are six administrative departments in Benin, hence, six CARDERs in the country. As a regional development center, the CARDERs have been and remain more than agricultural extension institutions. They carry out some of the other functions necessary for an effective and integrated agricultural development. More information will be given later on in this part of the chapter.
3.2.1 Agricultural extension organization during the pre-CARDER period

The results in this part are mainly based on my own research carried out in 1984 as partial fulfillment of the requirements for the degree of ‘ingénieur agronome’ and partly based on additional data collected in the field for this case study.

Before the creation of the CARDER two foreign/French collaborating agencies namely the ‘Compagnie Française pour le Développement des fibres et Textiles’ (CFDT) and the ‘Société d’Aide Technique et de Coopération’ (SATEC) were in charge of agricultural extension. These two collaborating agencies were mainly interested in cotton production in order to feed French textile industries with raw materials at moderate costs. To reach this objective, they set up an extension organization with the following characteristics:

- strong links with research institutions, mainly with the ‘Institut de Recherche du Coton et des Textiles exotiques’ (IRCT) for experiments and research results, and the ‘Office de la Recherche Scientifique et Technique d’Outre Mer’ (ORSTOM) for soil analysis;

- extension activities mainly concentrated on cotton production and during the intensification period of their intervention also on maize. For cotton, inputs and credit were provided and the cotton collection was done by these collaborating agencies;

- the main extension approach used by these collaborating agencies was based on the observation of traditional agricultural practices, understanding them, introduction of some improvements through field trials and dissemination of new practices. Dissemination of practices occurred through village information meetings, demonstration meetings (12 to 15 farmers) and learning meetings (5 to 6 farmers). As such, group training was the main dissemination method used but these agencies were not initially interested in any form of farmers’ organization.

Apart from these groups that were cotton-oriented, there are other institutions interested in other crops. For example, the ‘Compagnie Agricole et Industrielle du Tabac’ (CAITA) has focussed on tobacco production and marketing. But all these intervention societies are privately owned. Work performance was the only criteria to judge the extension agents who were not highly trained.

3 The CFDT started its activities with a less productive variety of cotton. For this variety no inputs were provided. It is only with the introduction of a new improved and more productive variety in Benin in 1964 that the CFDT (in the Borgou administrative Department) and the SATEC (in the Zou administrative Department) started providing inputs and credit to cotton producers. That is the intensification of their intervention in cotton cultivation.

4 This situation was confirmed by some of the Village Extension Workers I encountered during my field research. They formerly worked with those foreign intervention societies and are currently working in the CARDER.
In 1972 and with the decision of the revolutionary government to take over all vital sectors of the national economy, all the foreign collaborating agencies stopped their activities in Benin and the nationals took over agricultural intervention organizations. One transitional form of intervention, ‘Opération de Développement Intégré’ (ODI), was established by the nationals. The objectives of this form of intervention in agriculture were to increase agricultural production (crops production, forestry, animal production); to promote food crops (maize, sorghum and rice); to concentrate not only on cotton production as a cash crop but also on peanuts; to promote farmers’ organizations; and to intensify the functional literacy programme in the areas in which cotton is produced. These ODIs are public services. It is on the basis of their objectives that the first CARDER was created in 1975.

3.2.2 Agricultural extension organization in the CARDER

The first CARDER, a regional development institution, was established in 1975 in the Mono province and the idea was extended gradually to the other regions.

The CARDERs were created as public, industrial and commercial institutions with financial autonomy. They are the only institutions that provide services to farmers apart from the marketing of food crops that is done by private traders. The objectives of the CARDERs are similar to the ones of the ODIs but include also:

- the organization of the farmers into pre-cooperatives and co-operatives;
- the supply of farmers with inputs;
- the organization (directly or indirectly) of the primary collection of agricultural products until the farmers’ organizations are capable of doing; and
- the (contribution to the) provision of credit facilities to farmers.

As such, contrary to the French collaborating agencies described above, and more in line with the ODIs, the CARDERs are interested in rural development as a whole. Thus, all crops are (theoretically) promoted, although in practice more emphasis is placed on cotton production than on food crops. Also, farmers are organized into cooperatives for production and service (e.g., ‘Groupement Villageois, Groupement Révolutionnaire à Vocation coopérative, Coopérative Agricole et Expérientielle de Type Socialiste’). The CARDERs also carry out the functions of collecting agricultural products (marketing), of supplying and recovering input and credit for agricultural production, the application of the regulations related to agricultural development, and on-farm tests of the technologies proposed by the researchers. That is the integrated rural development approach in extension.

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5 More information is given about these farmers’ organizations in chapter 4 which deals with the attempts to organize farmers in order to make them participate to rural development.
The Village Extension Worker who is the representative of the CARDER at village level is in charge of the operational implementation of all these functions. He is also in charge of the collection of agricultural statistics, and of some administrative and political responsibilities at village, sub-district and even district level.

The results of this integrated rural development are positive as well as negative. As positive results we can name the increase in cotton production mainly and the creation of the ‘Groupement Villageois’ (GV). These farmers’ associations are supposed to provide some services to their members. There are differences between the CARDERs as far as these positive results are concerned. Some CARDERs have succeeded better than others. The CARDER of the Borgou administrative department is the one with the most successful results. In general, success is more apparent (production, number of viable farmers’ organizations) in the CARDERs in which cotton production is highly promoted with credit in kind and in cash. In fact, my own experience in the field has shown that this success in areas where cotton production is developed is mostly due to the power the Village Extension Workers (VEWs) have over the supply of inputs and credit and over cotton collection\(^6\). These functions carried out by the VEWs are a means of negotiating with farmers and in a way a means of coercion of farmers to comply with the recommendations of extension, i.e., to adopt technologies or innovations promoted by the VEWs (see also Von der Luhe, 1990). A kind of unspoken agreement was established between the VEWs and the farmers. By this agreement, the VEWs supply the farmers with loans in kind and in cash, and collects the production, but the farmers have to adopt their recommendations.

The negative results can be summarized as a dilution of the efforts of VEWs. Individual visits to farmers were the main diffusion method and many other non-extension activities were also carried out. According to extension officials, the VEWs are everywhere and nowhere at the same time. Also, they devote more time to activities which can provide themselves more additional (financial, moral or political) advantages than the extension activities.

From 1985, the Training and Visit (T & V) system has been introduced in the CARDERs in order to reorganize the activities of the VEWs. The T & V system is a management tool. Its main characteristics are (see Benor et al., 1984):

- a systematic, periodic and regular training of extension workers;
- frequent field visits to farmers. During these field visits, farmers are trained by VEWs, their problems are identified and available solutions are given. When no solution is available, VEWs refer to the Subject Matter Specialists;

\(^6\) Cotton production is the only channel through which farmers can have access to credit in kind (inputs) and in cash. It is also the only crop for which marketing is ensured. So, if a farmer needs to guarantee an annual cash income he has to produce cotton.
- a rigorous, even rigid planning of activities of extension workers, mainly field extension workers;

- VEWs concentrate their activities only on extension (training and visits). As such, the other functions necessary for agricultural development as described in the introduction are transferred to relevant institutions;

- the existence of one line of command at the technical and administrative level; and

- a strong link between extension and research.

In the Beninese T & V system, which the experts of the World Bank used to call an 'embryonic T&V system', emphasis is placed only on the first four characteristics. The last two points have been neglected. Moreover, the characteristics considered are not really applied in the field during the first five years of introduction. In practice, the application of the T & V system in Benin has been limited to the training of farmers for taking over cotton collection and the organization of regular training sessions for extension workers (monthly at sub-regional level and fortnightly at subdistrict level). This will be discussed in detail later in this chapter. But, part of the speech of an extension officer during the opening session of the evaluation of the application of the T & V system in the CARDER of the Borgou province is presented here as illustration:

Extension workers! The T & V system introduced in our CARDER some years ago has not, according to me, reached its objectives. That is why new supportive tools were chosen. These new tools are: the extension notebooks of the VEWs, fortnightly visits to farmers, new training methods for demonstration plots, etc...

The implementation of these new tools started this year. Many training sessions were organized by the officials for the field extension workers in general, and by the Supervisors for the VEW especially, in order to transfer the knowledge and skills required for an effective and efficient implementation of these tools. Also, these training activities were reinforced in the field by the frequent supervisory visits of the officials.

Our meeting of today is meant as a mid-term evaluation of our experiences with the implementation of the tools and directives in order to look for ways of improvement....

(25/07/90).

3.3 The new policy for extension organization: professional extension

3.3.1 Description of the policy

On the basis of the negative results of application of the T & V system during the first years of its introduction, some supportive tools and new directives were introduced in 1990 in order to improve the situation. These are visits to farmers on a set day, the concentration of the extension activities of a VEW on eight groups of
farmers, called ‘Unité de Suivi’

These new supportive tools and directives were reinforced by the objectives of the project for restructuring the CARDERs, which is a part of a broader project named ‘Projet de Restructuration des Services Agricoles’ (PRSA). This project has been prepared and supported by many donors through the Structural Adjustment Programme signed by the Beninese government. The main objectives of this PRSA are (World Bank, 1991):

- to help the state to master rural development activities in order to control the balance between supply and demand of agricultural products highly influenced by an increasing urbanization, the degradation of natural resources and the national market;

- to help the state improve the quality and the relevance of the services provided to farmers;

- to bring agricultural development services to be more oriented towards food crops and animal production;

- to bring the public agricultural development services to increasingly concentrate their activities on those formally devoted to public institutions such as extension activities, training of farmers, planning and control of regulations with regard to natural resources management. The other activities such as input and credit supply, collection of agricultural products, animal vaccination, rural road building and well digging would be transferred to relevant private and functional organizations;

- to interest agricultural extension more in helping farmers to improve their decision making capacities, and bring their farming systems into line with the local and international socio-economic environment;

- to provide services and demonstrations that are relevant to farmers’ objectives and constraints and to ensure equal access to these services for both men and women, rich and poor farmers; and

- to reduce the personnel working in agricultural development institutions as their activities are reduced.

These new supportive tools for the application of the T & V system and objectives of the PRSA can potentially improve the relevance and organization of development

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A ‘Unité de Suivi’ is a group of 25 to 30 farmers who gather fortnightly on a fixed day on a plot for training. The name given to these groups of farmers varies among CARDERs. Some of the names include ‘Unité de Suivi’ and ‘Unité Villageoise de Vulgarisation’. Since the national seminar on extension in September 1992, these groups have been called ‘Groupes de Contact (GC)’ in all the CARDERs, and their size was reduced to 8-12 farmers.
activities in Benin. But, they also give a new orientation to extension activities.

3.3.2 Analysis of the relevance of a professional extension

The main reasons given by donors and some officials to establish the importance of professionalization of extension and an effective use of the T & V system in giving better agricultural services to farmers are: the non-relevance of the current extension services given to farmers; the present concentration of Village Extension Workers on many activities, with the consequent problems of controlling the work of the Village Extension Workers, their low performance and low effectiveness; and the idea that industrial and commercial activities (input and credit distribution, animal vaccination, road building) are better carried out by private or functional organizations than public and bureaucratic institutions.

According to donors, this process of professionalization will lead progressively to the withdrawal of the state and thus, to an empowering of farmers’ organization in order to take over extension activities.

The opinions of other extension officials and field workers concerning this justification are contextual. During the informal discussions that I had in the field, this justification was quite accepted by field extension workers and some officials. One day, during a discussion with an extension official, and this after two years of field research, i.e., of informal and formal contacts with him, he expressed this opinion of the prevailing extension organization:

... the first days I started working in this CARDER, I noticed some weaknesses in the way the field extension workers carried out their activities. When I reported it to my boss, he told me not to mention it because they had a contract with the donors and it was no use to show that things were not working. So, you have to try to force extension workers to do better, but you are not allowed to mention these weaknesses in any report. Thus, even though I am convinced that extension activities were not organized in the best way, I did my best to support them.

This opinion was confirmed by many field extension workers and officials I met in informal situations and alone.

But in formal situations (in the office with peers, during meetings and seminars), their opinions concerning the justification of the need for professionalization quickly changed and they justified their 'raison d'être' in the field. In such a context, they always argued that the services they provide to farmers are based on the problems that have been identified by the Village Extension Workers in the field.

Apart from this contextual behaviour vis-à-vis the justification of professionalization, other extension officials do not support this view. Most of the officials, who participated in the creation of the CARDER as an institution that carries out most of the functions and services relevant for agricultural development, do not agree with the need to transfer industrial and commercial activities to private enterprises. They regard it as an imposition by donors. They think that there are not yet any relevant
private and functional enterprises capable of taking over the activities to be transferred.

In sum, the need to make the extension services more relevant to farmers’ objectives, constraints and felt needs is real and there is a consensus from various actors about this justification of the professionalization. But as to whether the functions of inputs and credit supply and/or distribution, the collection of agricultural products, animal health and other functions such as rural road construction and rural well digging must be transferred, there are contrasting views (see chapter 4). The success of the professionalization will depend on some pre-conditions such as:

- the willingness of extension workers and officials to implement the new methods of intervention and to cooperate with other potential private or functional groups that can take over the targeted activities;

- the availability and capabilities of private and professional enterprises to carry out input and credit supply and distribution, and the collection of agricultural products;

- the availability of researchers who cooperate and work out relevant solutions to problems identified in agricultural research;

- the training of farmers in order to make them able to express their needs and prompt the extension workers to give better and/or more relevant services; and

- the introduction of enough flexibility in the training and training planning in order to leave more room for initiative by the field extension workers. Such training planning at field level must take into account the specific problems encountered by farmers in their areas than the rigid training planning can do.

The behaviour of extension agents in general towards the implementation of the extension professionalization will be discussed later in this chapter. The policy of activity transfer will be discussed in chapter 4.

3.4 Individual and collective responses of actors to the professionalization of extension activities

3.4.1 Introduction: the main actors involved in the implementation of the new policy

The aspect of professionalization of extension activities that is analyzed in this section is the implementation of the Training & Visit system. The analysis of the main actors involved in the extension delivery system is based on my own experience in the field. But to make it more clear, I will base it on an incident I witnessed in the field:

After the end of the national seminar on extension in September 1992, it was decided that there would be a debriefing of results to other extension workers in each CARDER by the
participants. During this debriefing in one of the districts a disagreement arose between the field extension workers and the extension officials in charge of this activity on the number of contact groups a Village Extension Worker could reasonably work with in line with the recommendations of the T & V system.

The field extension workers after consultation in sub-groups and on the basis of their experiences with the farmers, decided that one VEW can work with only one contact group a day. He would, then, train members of this contact group and visit 4 farmers for additional information if necessary.

The extension officials, in charge of the debriefing, argued that a VEW could work with two contact groups a day, and in defense, they argued that they also have experience with farmers' availability for extension work in the field.

After an hour of discussion and argument, and even after consultation among extension workers, they finally accepted the quota of 2 contact groups per day per VEW. But they emphasized the fact that this was imposed on them and is a situation they have to cope with. So, they are not at all convinced of the suitability of this decision to the realities in the field.

But the paradox in this incident is that the extension official who was leading has himself argued that only one contact group can be reasonably recommended to a VEW a day. Unfortunately he was in the minority during the seminar. Even after the seminar he was still not convinced of the possibility of a VEW to train and visit two contact groups a day.

When I asked him the reasons why he changed his opinion about the situation he declared: "First, I was deceived yesterday by the field extension workers of a nearby district during the debriefing. They decided that only one contact group could be trained and visited a day by a VEW. But, after the intervention of the representative of the World Bank, they accepted the quota of two contact groups and recognized its feasibility. Second, as the World Bank, which is the main donor, recommended two contact groups for a VEW per day, I can't say otherwise. And finally, while the field extension workers were still debating the case, this extension official told me that whatever they decide, he will force them to comply with the recommendations of the donors and the national seminar on extension.

As it appears from this story, the main actors involved in the extension delivery process through the T & V system can be put into three categories - donors, extension officials at department level, field extension workers at district, subdistrict and village levels. The farmers, members of the contact groups are the fourth category of actors.

The Donors support financially and technically the CARDERs in Benin. Before the Agricultural Services Restructuring Project (PRSA), each CARDER had its own donor which financed its development project. Donors recruit foreign experts to

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8 For the seminar, each CARDER was represented by a team of 5 to 8 extension workers. These people were either officials from the headquarters of the CARDER (general directors, technical directors) or field extension workers at district, subdistrict or even village levels. In a way the team was representative of the extension workers in the CARDERs. The Faculty of Agricultural Science was represented by me. There are also representatives of the agricultural research institutions in Benin.

9 A contact group is composed of 8 to 12 farmers who meet fortnightly to be trained on a demonstration plot. After the demonstration some of them are visited by the Village Extension Worker in their field.

10 The number of contact groups recommended by the seminar for an VEW per day is 2 to 3.

11 Most of the extension officials have once worked at district or subdistrict level as a field extension worker. One of the officials in this particular case had worked for months as Village Extension Worker.
control and support the financial and technical execution of the project. The technical tools for extension delivery activities are ‘suggested\textsuperscript{12}’ by these experts. The compliance with the suggestion of the donors is the precondition for getting their financial support. The counterparts and other extension officials have to do their best to implement the technical tools on the basis of which the project has been financed. Modifications are possible only at the end of the project period.

The extension officials at department level are responsible for training the field extension workers in the main tools to be used; to support them in implementing these tools; and finally to control the way they use them and if necessary to give sanctions to field extension workers performing poorly.

The field extension workers at district, subdistrict and village levels are in charge of the operational implementation of the new tools and directives which are to:

- create contact groups according to the norms\textsuperscript{13} fixed by extension officials and donors;
- set up demonstration plots for each contact group;
- train and visit the members of these contact groups on the basis of a fixed date. Members of the contact groups are trained by the Village Extension Workers on demonstration plots and some of them are visited by the VEWs for further information and training.
- report the information about each contact group visited in activity notebooks. This report is done on the basis of the activities carried out with the group; and
- concentrate on extension activities rather than combine it with inputs and credit distribution.

Field extension workers formally have less influence on the definition of the tools. They only participate in their implementation and evaluation. But during evaluation, they do not report the true situation in the field or their reports are not taken into account. This situation will be analyzed later in the next section.

Among the farmers, members of the contact groups are the ones who are in direct contact with the VEWs. They are supposed to come to the training sessions on the demonstration plots on fixed days and for given periods. And after the training, they

\textsuperscript{12} The term ‘suggestion’ is used here in quotation marks because most of the time counterparts of these experts are usually associated with the elaboration of the main tools but they have less power to make decisions or to influence them.

\textsuperscript{13} The creation of eight contact groups was the norm recommended by the T & V system but now this norm is 16 to 24 contact groups per VEW. For the CARDER of the Borgou province this norm is 16 contact groups per VEW.
are supposed to apply the techniques they have learned on their individual farms. The other farmers may be reached through the members of the contact groups or through the GV committees.

3.4.2 Individual and collective responses of actors to the professionalization of extension

In this section, the behaviour of the extension workers (extension officials and field extension workers) will be described. But particular attention will be given to extension officials working at department level, and VEWs. The former are the ones who train all field extension workers on the contents of the tools and how to use them and who control the way tools are used in the field. The latter are in charge of the implementation of the tools. The other field extension workers reinforce the training and the supervision of the VEWs.

**Extension officials**

Extension officials adopted two main patterns of response to the implementation of the professionalization of extension.

*Regular training of field extension workers on tools and also on technical aspects related to agricultural production.* These training sessions are done indoors and take place once a month for technical aspects and three times a year (beginning, middle and at the end of the agricultural campaign) for the use of the main organizational tools for the T & V system. Little time is devoted to training activities *per se* during these sessions because the training subjects are assumed to be familiar to all the participants. Only a review is given. More attention is given to statistics collection and other general administrative information. This situation has improved a lot with the PRSA project because training sessions and administrative meetings are now organized separately.

*Continuously supporting, monitoring and controlling the work of field extension workers in general and Village Extension Workers in particular.* These activities are done during the supervisory missions organized by the extension officials. During these supervisory missions, extension officials, Rural Development Officers¹⁴ and Supervisors are supposed to assess the level of application of the tools and other directives and, more importantly, to give advice to Village Extension Workers on how they can better carry out their activities. But, in reality and according to the opinion of the field extension workers, extension officials at department level after the training are more interested in controlling than supporting them. Extension officials justify this behaviour with the fact that the field extension workers are not honest and sincere in their declaration and thus, they cannot rely on what they are saying or what they are writing. For illustration, extension officials gave me many

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¹⁴ Rural Development Officers, usually called 'Responsables de Développement Rural (RDR)' are District Extension Officers. They are in charge of the operational management of extension activities at district level. Supervisors are Sub-district Extension Officers in charge of one or more community.
stories about the behaviour of field extension workers that may justify the necessity of control.

I went once on a supervisory mission. After visiting some VEWs, I went to another village where there was a VEW. I went to his house and checked his activity board\textsuperscript{15}. He planned to visit the contact group X of the village Z. I went to this village and asked farmers where to find this contact group in order to see my VEW. The farmers told me that this year the VEW did not install any contact group in the village and they had not seen him for months. I went back to see his Supervisor and District Extension Officer to tell them the story. We all returned to the village and waited until the VEW returned around 8 p.m. We discussed with him his programme of the day. He insisted on the fact that he had visited the contact group X in village Z. I put him in my car and we all returned to this village. The farmers we met were not the same as in the morning and told the same story as the ones I met before. It was only now that my VEW acknowledged the fact and started begging my pardon...

My own experiences in the field have also shown that the information given by VEWs is not always reliable. These experiences are fully discussed later when dealing with the behaviour of field extension workers in general and VEWs in particular.

**Field extension workers**

There are three categories of field extension workers: the District Extension Officers, the Supervisors (at subdistrict level) and the Village Extension Workers.

*The District Extension Officers (DEOs) and the Supervisors* back-up their VEWs technically. Also, they aim to increase the consciousness of their VEWs for an effective implementation of the T & V tools and sometimes use threatening arguments. For illustration, Supervisors and DEOs always told their VEWs:

You can motivate farmers to increase their acreage of cotton with a good yield, but you will be judged only on basis of the level of application of the recommendations of the T & V system, basically the number of contact groups created, the number of training sessions organized on demonstration plots, the way you fill in your activity notebooks with respect to these contact groups, etc...

These threats are effective instruments for making extension workers comply with the recommendations. My experiences during the field work showed that in changing situations, people are usually assessed on the basis of the level of application of the change. Application of change is more valued than the effectiveness of this application.

**Example:** Consider two VEWs; the first one creates eight contact groups which do not work effectively and the other one only five, but all these contact groups are regular and dynamic. The first VEW will be better rated than the second one since he/she meets norms and

\textsuperscript{15} A board is fixed on the wall of the VEWs' house. On this board VEWs list the contact groups and villages where they are working for the day. There is also a map on the wall of the house. This map may guide the supervisor. Activity boards are more common than maps. When there is no map the visitors may ask other farmers where to find the village. Most of the time extension officers and Supervisors are easily able to find the villages indicated on the boards.
recommendations. The other will be labelled as a lazy VEW and will be subjected to frequent supervisory visits.

So, effectiveness receives less attention in the assessment of the VEWs. But, when these threats do not work, Supervisors and DEOs use disciplinary actions such as cuts in monthly allowances and the decision to report VEWs performing poorly to extension officials at the department level. Such actions are justified by the fact that Supervisors and DEOs are accountable for poor performance by extension officials, who sometimes also give sanctions to them.

The Village Extension Workers respond differently to the implementation of the tools recommended in the frame of the T & V system. At the beginning of the introduction of the new tools and directives, VEWs openly continued to work as they did before. In fact, some VEWs still participated in the distribution of inputs and credit with the collaboration of the GV committees; they did not plan their work according to what was actually prescribed by the T & V system or even if they planned it they did not execute this plan; their extension activities were usually limited to visits to many farmers a day without organizing training on demonstration plots.

To legitimize their behaviour, they argued that farmers were reluctant to participate in the training sessions on demonstration plots. VEWs also justified their participation in the distribution of inputs by the fact that the GV committees are not yet capable of carrying out these activities, although at the same time the VEWs did not take any action to train these committees. There are other factors that justified this behaviour. Informal discussions with VEWs and Supervisors showed that distribution of inputs was a way to mobilize farmers and to motivate them (or better to force them to comply with extension recommendations once they decided to take inputs). The following assessment of the input distribution opportunities by a VEW confirms this claim:

Input distribution is an opportunity for us to provide training to farmers. In fact, in my area, it is always difficult to group the farmers on demonstration plots. Only a few of them come regularly to such training sessions. But, all the farmers are present for the distribution of the inputs. Thus, I use the opportunity offered by the distribution of the inputs to demonstrate various techniques related to the application of the inputs they receive.

This continuation of the former practice is also due to the fact that the VEWs did not find the new directives important. To explain this disinterest a VEW declared to me during an informal discussion in a bar

... all these new things are only for a short time. Things are changing nearly every year, and according to the decision of extension officials. Last year it was the installation of integrated farming that was promoted. This year it is contact groups and demonstration plots. Next year, it will be something else. So why waste time on these new things. During my career I have experienced many of these changes which didn't last more than two years...

As, after a year of implementation, emphasis remains on the same directives, some VEWs built new strategies to cope with the new situation. They organized their work in such a way to trick their Supervisors, DEOs and even the extension officials from the headquarters of the CARDER. In order to avoid pressure from the Supervisors,
VEWs planned various training sessions in the contact groups in their fortnightly plan of activities. But in the field, from the discussions I had with the officials and from my own experiences when observing the VEWs at work, it appeared that they had not organized any training and nicely continued to visit their farmers as they used to before. They fill in their activity notebooks daily on the contact groups they have planned with fictitious information. Sometimes, the contact groups planned did not exist. Thus, they did not even go into the field before filling these activity notebooks.

But apart from these various forms of daily resistance to the implementation of the new directives, there were some VEWs who did understand, master and apply all the recommendations according to the norms prescribed by the T & V system and who did not take part in input distribution anymore. For these VEWs, the new tools are compatible with their past experiences and they found them relevant.

3.5 Analysis of the actors' responses to the professionalization of extension

3.5.1 Information and knowledge processes

The main information and knowledge processes that occur during professionalized extension delivery can be categorized as needs anticipation or regulation setting; training or regulation reinforcement; and regulation control.

Needs anticipation or regulation setting
In the context of the extension institutions in Benin, needs anticipation is the process through which the most powerful and knowledgeable actors define for the less knowledgeable actors their training and extension needs. There are two main groups of actors who manage the process (the donors and the extension officials), and anticipation may have two aspects depending on the groups of actors considered.

In fact, the present case shows that the main tools to be used as ways of improving the T & V system have been forced on the extension workers by the experts of the World Bank. These experts anticipate needs based on experiences in other countries. Little effort is made to adapt the tools to the Beninese context. Also, the tools are viewed as black boxes that extension officials and field extension workers must use. There is no room for modification. As such they may be seen as regulations or directives. Thus, such a process of setting directives may be seen as regulation setting.

In the field, the extension officials are expected to transfer these tools to the field extension officers. Also, they organize other training activities in order to increase the knowledge of, or better, to maintain the level of field extension workers. These training processes will be discussed in the next section. For the training programmes of VEWs, extension officials anticipate the needs of the field extension workers for each month of the year. This anticipation is based on the experience of previous years and on the agricultural calendar. Thus, anticipation in the CARDEEs is more institution-oriented, technical subject-oriented and sometimes crop-oriented. Therefore, in reality, these training sessions do not always correspond with the needs.
of the field extension workers which should be based on the problems that the
farmers encounter. This way of training planning is also transferred to the field in
such a way that field extension workers use the same training subjects for their
activities on the demonstration plots.

These various ways of setting up training programmes may not be able to make
extension activities more professional in the way intended by the current policy in
agricultural development. Recently, as part of the Agricultural Services Restructuring
Project (PRSA), training sessions have been organized for field extension workers on
relevant methods for assessing farmers' needs. These methods are more participatory
and aim at helping VEWs to tune their extension activities to the real needs of the
farmers they have to serve. As such, the VEWs need more relevant technical training
in order to be able to satisfy the identified needs. Such training may improve the
process of anticipation, only if the extension officials become aware of the fact that
they also have to adapt their training schedule to the actual needs of the field
extension workers. Otherwise, their anticipation process will be mismatched with the
one of the field extension workers. Such a mismatching may induce some limitations
in the effective application of the acquired diagnostic methods by the field extension
workers.

Training or regulation reinforcement
As has been stated in the last session, there are two types of training in the extension
institutions: the training for maintaining the level of field extension workers and the
training concerning the new tools, or directives related to the implementation of the
T & V system.

Training for maintaining the level of field extension workers is done monthly at
district level and fortnightly at sub-district level. The extension workers do not devote
much attention to this kind of training since they look on them as repetitious. But,
repetitious though it may be, most of the VEWs do not master the subjects discussed
during the training sessions, as we have seen.

As far as training sessions on tools and directives related to the application of the T
& V system are concerned, these only aim at transferring to the field extension
workers the directives that the extension officials have received as regulations. Also,
field extension workers are taught how to go about these directives. Such training
may be seen only as a reinforcement of the regulations. That is called regulation
reinforcement.

The training is top-down with a low level of participation. Field extension workers
are seen as learners and the extension officials are the teachers. During these training
sessions, the experiences of the field extension workers and weaknesses in the way
the tools are used are not taken into account for further training or modification of
the tools. Also, other problems such as non-participation of the members of the
contact groups are not really analyzed since they relate to the whole organizational
system. But, as I said before, it is a black box that cannot be opened until the end of
the project that recommends the tools.
Regulation control

The concept of regulation control is used in this case to refer to the process of monitoring the utilization of the regulations by the field extension workers. In fact, extension officials, and now and then the representatives of the World Bank, organize regular visits to the field extension workers in general, and the VEWs in particular. These field visits are meant to take a close look at how the extension workers are implementing the tools and other directives (e.g., the work planning and execution, the training on the demonstration plots, and the correct recording of the activities carried out) in order to give additional advice and/or planned additional relevant training, i.e., facilitate implementation. In fact, the VEWs who do not behave according to directives are seen as lazy and are disciplined for such behaviour. Such discipline may be in the form of frequent supervisory visits or suspension of monthly additional allowances.

Field extension workers design many strategies to cope with such regulation control. Additional information about these strategies is also given in the description of the coping behaviour of the extension workers (see rejection in section 3.5.2).

The use of regulation control has not been much appreciated by the VEWs who expect more from the extension officials. This is one of the factors that influence the coping behaviour of the VEWs.

3.5.2 Coping behaviour

Coping is the process through which people try to deal with their physical, social, political and/or economic environment as they perceive it. Coping is the outcome of the mutual interplay between people and change in their environment (see section 2.1.4 for detailed information). Here, coping behaviour refers specifically to responses of extension workers to the implementation of the new tools and directives. From the responses of the actors involved in extension professionalization and the implementation of new tools and directives as described above, behaviour of actors may be broadly classified in terms of rejection or acceptance. On the basis of this acceptance or rejection more specific distinctions will be made with respect to this coping behaviour.

(Partial) rejection of the policy

The analyses of the responses of VEWs to the implementation of the new tools and directives related to the T & V system and also to the transfer of input distribution to the GV committees showed that some VEWs have, implicitly, rejected the policy. In fact, in order to avoid the consequences of poor application of the tools and directives, these VEWs adopted a form of passive resistance. They have not accepted these tools and directives despite the pressures of their Supervisors, DEOs and extension officials, and the system of discipline which has been established.

The most important way of expressing the rejection of the tools and directives may be summarized as follows: there are some VEWs who do understand and master all the contents of the tools but they do not want to make the effort necessary to implement these tools. They always use the unwillingness of the farmers to
participate in the training sessions as the main reason for their behaviour, but in reality, it is because they do not want to make the effort. For example, it happens many times that at the end of the fortnightly training sessions about the tools and directives that I have attended, such VEWs planned their work according to the directives. They have even helped other VEWs to do it in the right way. But, in the field, they never executed these plans. The reluctance of the farmers to attend training is always used to legitimize this behaviour. But, cross-checking with farmers and with the owners of the demonstration plots has shown that they are not informed about the planning of the training sessions, and sometimes, not even about the existence of the demonstration plots. This category of VEW resistance was relatively important at the beginning. But after many supervisory visits and even suspension of monthly allowances, some of them changed their strategy and moved to the category of VEWs who understand and apply correctly the new tools. The VEWs who did not change their strategy are no longer afraid of control and pressures. They are used to them and claim that they are civil servants and therefore, will get their salaries at the end of the month. They do not care that much if their monthly additional allowances are suspended. At any time, that is what they told me. Others devised strategies to trick extension officials by giving inaccurate information.

All these forms of rejection are skimping of implementation of the tools and directives. In fact, skimping is the coping behaviour through which extension workers reject the tools and directives, but do not openly express this because they do not want to face the consequences. The skimping of the new tools and directives by VEWs has a negative result on their implementation and prevents reaching the desired objectives.

(Partial) acceptance of the policy
As far as the acceptance of the new tools and directives is concerned, two categories of extension workers may be distinguished. This distinction is based on reasons underlying various attempts of extension to really use the tools.

There are some VEWs who do not master all the contents of the new tools but pretend to do so. They want to avoid pressures from supervisors and frequent checks of the DEOs and the extension officials from the headquarters of the CARDER. Such VEWs seem to comply with the new recommendations but in practice many weaknesses are apparent. They never express their needs for more information and training and do not want to show their weaknesses, but these weaknesses are observed in practice. Thus, with the intensive reinforcement of directives, i.e., various forms of supervision and sanctions, they finally succeed in applying some of the directives, mostly the ones which may be easily discovered by extension officials. But, they have not been convinced of the usefulness of the directives. They perceive them as ephemeral or short-lived regulations to which they do not need to devote much time.

Also, some officials are not convinced of the relevance of the directives. But, they do accept and support them only in order to guarantee the financial assistance of the donors. Such extension officials, individually, do not have access to any particular
facilities. But, they have simply complied to the decision of their authorities, e.g., directors or ministers.

All these forms of acceptance of directives and tools by extension workers may be seen as a **compliant acceptance**. It does not guarantee any success in the change process since the extension officials are not able to give intensive supervision to all these extension workers who constitute the majority among the field extension workers and even among the extension officials themselves. It is quite incredible when a person who is not convinced about something, pressures others to make them comply with it. It looks like a game.

A few other VEWs are convinced of the new directives and they use them according to the prescriptions. All of them have worked with foreign/French collaborating agencies which used similar extension methods (e.g., the group training). This form of adoption may be seen as an **internalized acceptance**. The transfer of activities to the GVs as discussed in chapter 4 has offered more opportunities to these VEWs and has reinforced their internalized acceptance of the new tools.

### 3.5.3 Factors affecting the responses of the actors to the professionalization of extension

For the sake of analysis, the main factors affecting the responses of actors to the professionalization of extension is divided into two categories: factors related to individuals and to institutions. Some may be at the same time related to both categories. They will be discussed only in the category for which they seem crucial.

**Factors related to individual actors**

From the analysis of knowledge and information processes, and reasons that underly the various described coping behaviours, three main individual factors may be identified as crucial in the actual change process in the extension institutions. These are the past experiences of field extension workers, level of education of the VEWs and motivation of extension workers in general and VEWs in particular.

The past experiences of VEWs have an influence on their attitude towards the new tools and directives. Two aspects of these experiences are relevant in this case study: knowledge about tools and traditional or classic relations between extension workers and farmers. The following assessment of the system by a VEW illustrates the influence of the past experiences:

> the new system of visits of five to seven farms a day after training on demonstration plots will make motivated VEWs more lazy. In fact, from my almost 20 years experience in extension activities, I am convinced that a well-performing VEW is able to visit more than 10 farmers a day since he only needs to devote 10 to 15 minutes to each of them. Thus, the former method of visits is better than the new one. It enables VEWs to reach more farmers a day in such a way that a given farmer may be visited twice a week instead of the fortnightly visits as prescribed in the new directives. Such intensive visits allow the extension worker to be in close contact with the farmers.
Thus, the previous knowledge of the VEWs of visits and training may confuse them and not allow them to grasp the real content of these activities as they have been conceived in the new tools and directives related to the T & V system.

As far as visits are concerned, there seems to be a difference between field extension workers and extension officials, especially with regard to the content of a visit, i.e., activities to be carried out during a visit and its duration. For field extension workers, a visit to a farmer consists of going to the farm and seeing how the farmer applies techniques. If he does it well, no problem, but if the application is wrong, the VEW needs to make corrections and then moves on to the next farmer. But, for the extension officials, the visit means more and implies observation as well, identification of farmers’ problems in order to translate them into training subjects and collection of statistics about the farm visited. In fact, before the national seminar on extension, individual farm visits were the main extension methods used by the field extension workers. No precise tasks were planned for these visits and the extension workers went from farm to farm. Farmers might not have expected them that day. I have witnessed many such visits with the VEWs during the field study. Many farms were visited and only a few farmers could be seen in their farms since the VEWs had not made appointments. Such visits seemed too short, tiring and a waste of time. Many farms were visited each day but no real work was done. After the seminar, the ideas about the duration of a visit changed since special tasks were prescribed for farm visits. Farm visits were to be preceded by group training. But, such a change has been difficult to translate into practice partly because of those past practices. Till now, there seems to have been no difference between training sessions and visits; VEWs have not organized group training regularly although this is an important tool for professionalization.

The influence of past experience on the behaviour of VEWs is also evident in the fact that VEWs who started working in extension with the foreign collaborating agencies are more innovative than others.

Most of the VEWs claim they did not succeed in applying the new tools because of the reluctance of the farmers to participate in the training organized on demonstration plots. But the farmers interviewed claimed not to have been informed about the creation of such demonstration plots, the training programme or planning. As such, farmers serve as the ‘scape goat’ that the VEWs use to legitimize their attitude towards the new tools and directives. Such a form of legitimization by the VEWs is based on the previous perception of farmers as students of VEWs. In fact, the control that the VEWs formerly had on input distribution gave them a kind of power. Farmers complied with their recommendations in order to have access to these inputs. It was the VEWs who anticipated farmers’ needs without always contacting them. But, nowadays input distribution is transferred to the GV committees.

Finally, past experience of the VEWs is also related to the lack of continuity in development interventions. This lack of continuity is crucial since things are continuously changing in the CAR DERs. For example, every Minister of Agriculture focusses on what he thinks is important for agricultural development. Thus, foci change according to minister. This situation was due to the fact that there was no
agricultural development policy. Recently, in 1991 an agricultural development policy was prepared but its application is not yet effective.

Most of the VEWs have a poor education. They had only nine months of training after primary school. Most of the knowledge they have is derived from field experience. Most of them are not even able to express themselves in French during training sessions. Such an education level leads to some difficulties for VEWs to take notes, memorize and understand written materials as well as theoretical and practical concepts. These difficulties can be observed through an inability of taking notes, and inability in rebriefing main practical implications of the points discussed during the training sessions (see also Leonard, 1977). Even when they receive technical leaflets after the training it is difficult for them to translate the theoretical concepts into practical activities. Finally the confusion observed about certain concepts such as training, visits to farmers and demonstration.

These difficulties are mainly due to the low level of formal training of these VEWs. It negatively influences the performance of the VEWs and will be a main constraint for the success of the professionalization process. Also, some of the big farmers do not perceive their VEW as knowledgeable, especially in the field of cotton cultivation. In fact, a recent evaluation of the level of farmers and VEWs in the CARDER of Borgou province has shown that these two categories of actors have actually the same level with regard to techniques of cotton cultivation. Some of these farmers have said openly they can continue cotton production without VEWs. Such a situation is due to the fact that in-service training was rarely organized to increase the basic education of the VEWs. Instead, all the training sessions aimed at maintaining the level of the VEWs.

Motivation is another factor that influences responses of VEWs to the process of change. In fact, the effective application of new tools by VEWs requires much time for training preparation and execution, collection of information on visited farms and filling of activity notebooks. VEWs see themselves as overloaded by all these activities. Also, these activities require that the VEWs learn new methods. But, most of them already have more than eighteen years in the extension services. They are also rather old and do not see learning as their primary objective. Incentives for such effort are limited. In fact, according to the VEWs, all these new activities do not give them any additional material return.

Motivation of extension workers in the CARDERs is through monthly allowances. These allowances are distributed according to certificates, i.e., the level of formal instruction, and not according to the amount of activities assigned to and executed by each extension agent performance. As such, extension officials and technicians working at the headquarters of the CARDER who have a higher level of education receive a relatively higher monthly allowance than the VEWs who are supposed to carry out operational activities necessary for the implementation of tools and directives. These technicians and extension officials sometimes get daily subsistence allowances when they go on a supervisory mission. Field extension workers perceive this system of motivation as not interesting for them. This is also one of the factors that explain the various forms of passive resistance observed in the field. VEWs think
that the system of allowance distribution favors extension officials and other field extension workers who do not carry out the greater part of the work.

In conclusion, although the factors related to individual actors have been dealt with separately, they do interrelate and influence each other. In fact, the level of basic education is part of the past experiences of extension workers. Also, past experiences can motivate people to take certain actions or not. For example, a sufficient level of education may motivate people to upgrade their status since they can then have easy access to many written sources of information. Highly educated people sometimes have more open minds and are more innovative than the less educated ones. In this chapter, it is demonstrated that past experiences of VEWs have played a major role in their motivation for the implementation of new tools and directives. This demonstration of the relationships between past experiences and motivation was reinforced by the fact that VEWs who internalized the implementation of tools already have some experience in that matter.

Finally, as the material motivation system in the extension institutions has shown, a higher level of education for VEWs, in that context, may increase their monthly additional allowances, and in principle, their motivation to do better work.

Apart from this material motivation, extension workers in general do not have internal or inner motivation, i.e., strong self-determination, self-confidence and belief that their work will contribute to agricultural development. They do not believe in their capability to transform the lives of the rural people or that their position as extension workers is an opportunity offered to them to contribute to such a purpose. Rather, they perceive or conceptualize their work as a formality for access to guaranteed salaries, and are not really concerned about end results of their actions. Thus they work in a routine fashion.

Such a behaviour is not particular to extension institutions but to all public institutions in Benin. This lack of inner motivation is partly due to the colonial legacy in the conception of the public institutions and the roles of civil servants in such institutions. The so-called ‘functionnaires’ or ‘Agents Permanents de l’Etat (APEy) do not always make the realistic connection between salaries or wages and work. There is a well-known capitalist saying referring to such a connection: ‘No work, no salaries’. But in Benin, we usually behave as if the involvement in the public institutions is only equated with salaries but not with effective and efficient work. It is a question of ‘morality’ and ‘ethics’.

Factors related to institutions
A close look at the observations and the context in which they were made helps demonstrate that the main institutional factor that affects actors’ response is related to the bureaucratic administration of the extension institutions. It is the lack of autonomy of actors involved in the professionalization of extension. It negatively influences the effective implementation of any change in the CARDEEs. This lack of autonomy might be due to three main characteristics in the institutions. These are the lack of flexibility; the information management patterns and power relations. All these characteristics are also interrelated. In fact, lack of flexibility and information
management patterns are results of power relations in institutions. But, for the sake of analysis, a distinction is made between them.

In the present organizational structure of the CARDER, lack of flexibility may relate to the way training subjects are selected and the heavy focus on cotton cultivation in the detriment of other crops. Flexibility in the CARDERs also implies a broader conception of change. Effective change in extension institutions is not only a matter of field extension workers. Extension officials and their staff, as well as other specialists who are supposed to facilitate or to back-up the activities of field extension workers are to be taken into account in the change process. The field methods used by the extension workers will hardly change if their learning and working environment does not change. In fact, the CARDERs have set certain organizational and administrative arrangements in which activities, roles and role-relations between various extension workers were identified and internalized by the workers. The extension professionalization process defines new tasks and roles for field extension workers. But the tasks and roles of extension officials and their subordinates, as well as the role-relations between them and field extension workers have not been formally reformulated and, thus, did not change in practice. Things go on as if the behavioural change of the field extension workers is sufficient for a successful implementation of the tools and directives. The technical staff of extension officials at provincial level and other specialists do not receive any formal information, training in the tools and, in particular, in the required behavioural change for the success of the re-orientation. The former behaviour and attitude towards the field extension workers persists.

The information management patterns also influence the responses of field extension workers to new situations. These information management patterns may be illustrated by the reporting procedures in the CARDERs and the speed of the information exchange in these institutions.

In fact, the administrative procedure for reporting in the institution did not change. For example, officials responsible for input distribution at the headquarters continue to ask VEWs to mention in their reports statistics about input distribution despite the fact they are informed that VEWs were formally supposed not to carry out this activity anymore. In that respect, VEWs said when I asked them why they still participated in the distribution:

We follow the distribution informally, despite the fact that this activity is supposed to be transferred to the GV committee and is formally forbidden by the bosses, because we have to report the stock movement to the headquarters. None of the GV committees are yet able to give us this movement. Also, when part of the inputs are stolen we are always asked to explain. For these reasons, our supervisor and even the District Extension Officer advised us to keep our eyes on this distribution. But, when they see us participating in this activity they shout at us.

This confusing situation will be corrected from 1995 on since most of the GVs will
be promoted as GV-tests\(^\text{16}\). Thus, they will deal directly with input supply institutions. As such, VEWs will be completely relieved of reporting such activities. Also, the staff of the extension officials and other specialists at provincial level, sometimes used to send messages to field extension workers mainly for requesting information that has to be sent to the headquarters within a few days. This information is mainly related to statistics on various activities for which field extension workers are not directly accountable. Thus, they are supposed to collect this information from the GVs or other local institutions. The requests for such information are not sent to the field as soon as possible, but rather late. As such, messages do not reach the field extension workers on time. Many such messages (up to five) may reach field extension workers at the same time because of the delay in information exchange. The answers to these messages are expected as soon as possible at the provincial level since the technicians at provincial level have to use them for replying to messages that come from the Ministry of Agriculture. Thus, to be on time, the field extension workers have to rush to contact farmers and the GV committee to collect the required information, leaving out the activities they have planned for this period. Sometimes, the required information is available in former reports sent to technical services by field extension workers. As such, if these reports are rationally consulted, most of the messages can be answered without referring to the field staff. But, as information is not efficiently exchanged between services of the CARDERs and reports are not consciously read, time is not saved for field extension workers.

Power relations, in this case study, refer to the degree to which the pressures exercised by one group of actors on the others influence latter’s responses to change and/or to the degree that the countervailing forces of the latter are controlled by the first group of actors (see also Villarreal, 1994). These power relations are significant at two levels in the process of professional extension implementation: between donors and officials in the CARDERs (and even in the Ministry of Agriculture); and between extension officials and field extension workers. The way supervision is organized by control instead of technical back-up is another example illustrating power relations in extension institutions. Such control modifies the working schedule of field extension workers since extension officials, mostly ask to see things which are not planned for the day by the extension worker.

Such supervisory visits reinforce or establish a kind of biased interaction at the interface between extension officials and field extension workers. Such encounters take a form of theater or a drama in which extension workers play symbolic roles. The supportive role is only assumed by the subject matter specialists at district level. In such a strong power relation situation, there is mutual solidarity between field extension workers. In a district, our experiences in the field show that field extension workers mutually support each other. In fact, in practice Supervisors and DEOs never or rarely report the weaknesses of their VEWs to extension officials and outsiders.

\(^{16}\) The GV-tests are self-managed GVs. In such GVs, all activities related to cotton production and marketing are carried out by farmers through the GV committees. More information about the GV-tests is given in chapter 4.
unless the officials discover it themselves. They always write nice reports about their personnel despite the various forms of passive resistance they encounter in the field (see also Leonard, 1977:16). It is up to outsiders and extension officials to discover these weaknesses. This is a strategy of field extension workers to show the nice side of their activities but such an attitude does not allow extension officials to identify real training needs in order to design a relevant anticipation. Supervisors and DEOs avoid, with this attitude, taking the responsibility of sanctions that may be attributed to their VEWs as a result of their report on their performance.

From the foregoing, it appears that lack of flexibility, information management patterns and power relations between various actors create a top-down environment which does not allow actors to take initiatives, even when these initiatives are worthwhile. Field extension workers always ask for permission for any actions they want to take. As such, some actions are taken very late and are no longer relevant but, also, field extension workers do not feel all that responsible for their actions since they were taken only with the agreement of the officials.

3.6 Conclusion

The analysis of the responses of the actors to the implementation of the tools and directives regarding the implementation of the professionalization of extension in the CARDERs has shown that there is no fundamental change in the way extension activities are designed and carried out despite the various attempts designed to reach such an objective.

The main knowledge and information processes used in the extension institutions are: regulation setting based on anticipation; regulation reinforcement by training activities; and regulation control by frequent supervisory visits. All these knowledge and information processes are directive and do not give enough possibilities for less powerful actors which are the field extension workers and farmers to influence directly extension organization and planning.

But, in practice the field extension workers design various ways to indirectly influence extension activities. This influence is derived from the various forms of coping behaviour adopted by these actors. In fact, most of the field extension workers adopted as coping strategies skimping and compliant adoption. Only few VEWs proved to have internally accepted the new tools and directives. As such, any change actually observed in the extension services is not yet fundamental enough in order to be sustainable.

From these conclusions, it appears that directive knowledge and information processes cannot easily lead to sustainable and fundamental behavioural change. The main factors that seem to shape the actual responses of actors are: the level of education of the VEWs; the past experiences of the VEWs; the motivation of the field extension workers; the lack of flexibility in the extension institutions; the information management patterns; and the power relations between the various actors in the extension institutions.
Finally, the interactions in the extension institutions look like a drama, a theater, a ritualistic system in which all actors seem to be aware of the lack of efficiency and effectiveness of their activities. Still, little fundamental action has been taken, in practice, to improve the situation even with the PRSA project. The management supportive tools are only the tip of a big iceberg. A more thorough institutional and structural change is needed, and thus, many personal interests must be subordinated to the interests of the country. There is a need to change the whole value system of the civil servants in Benin.

Extension officials have to shift more to a back-up role in order to give a good example of extension as a profession to field extension workers. In this way encounters will take the form of meetings between professionals. Initiatives rather than bureaucratic and administrative behaviour will then be encouraged and reinforced.

The facilitation of open criticism and self-criticism will greatly improve the situation. But to attain such a level, extension officers have to motivate field extension workers to do so, and not only look for ways to punish poor performance.
CHAPTER 4 

THE POLICY OF GIVING MORE RESPONSIBILITY TO FARMERS
IN RURAL DEVELOPMENT

'... Leaders (in farmers' associations) are crucial to success. Leadership itself is a common good and failure to reward it adequately and legitimately can lead to unofficial or corrupt practices. Local people can then take on the roles of researchers and extensionists, and by so doing increase efficiency and effectiveness through horizontal diffusion by farmer-to-farmer training and extension....' [adapted from Pretty & Chambers, 1992]

4.1 Introduction

Many forms of farmers' organizations were established in order to make farmers' participation in development more effective. Evaluation of farmers' participation in development in West African countries during the Yamoussoukro seminar in 1987 was not positive. According to Belloncle (1987), farmers' associations may be successfully involved in the development of their agriculture if they can be associated with situation analysis, identification of relevant innovations and evaluation of results.

Organizers of the Yamoussoukro seminar, in which most of the West African countries participated, were highly concerned with how farmers and their associations can effectively be associated with agricultural research and extension. The main concerns of these organizers can be summarized as follows (Belloncle, 1987:37):
Considering the present situation of farmers’ associations in West Africa, is it possible to make them take part in the preparation and identification of applied research and extension? Can the associations gradually take charge of extension? How and in what form can this be? What responsibilities should be given to them? [my translation]

Benin has established a policy for answering these questions and for linking farmers and their organizations with development activities: that is the organization of farmers into associations for services (‘Groupement Villageois’ – GV) and production. This chapter will deal with the policy of transferring some of the activities formerly carried out by extension agents and their institutions, i.e., the policy of giving more responsibility to the ‘Groupement Villageois’. Therefore, the main questions to be answered are: How was this policy organized and how has it evolved? What activities were entrusted to these farmers’ bodies? Did the implementation of the policy really make farmers’ participation in development more effective in Benin? The chapter will deal with the following points:

- a historical overview of various attempts to organize farmers for participation in rural development in Benin;
- the rationales and discourse supporting the use of the ‘Groupement Villageois’ as a means of bringing farmers to participate in rural development;
- the actors involved in the process of bringing farmers to participate in rural development through the ‘Groupement Villageois’; and
- the responses of various actors to the process of activity transfer to the GVs.

The data used for this chapter are gathered through four years of close contact with extension workers and some GVs. The field work started in the CARDER of the Borgou administrative Department and spread later on to other CARDERs. During the field work in CARDER-Borgou, GV committees were followed during their input and credit distribution tasks. Agricultural campaign evaluation meetings and others concerning the GVs were attended in five villages (five GVs). The meetings between GV committees and extension workers were also attended. Informal interviews were held with farmers, members of the GVs, with some GV committees and with the personnel of the cotton exporting company.

Extension of the study to other CARDERs was done through the collection of data on the GVs in the institution as well as through discussions with some members of GV committees and members of farmers’ unions committees at district level. Finally, documents, reports and other secondary sources were used for additional data.
4.2 Historical overview of attempts to organize farmers for participating in rural development

Many attempts to organize farmers for participating in rural development have been experienced. For the purposes of this chapter, three periods will be touched upon: periods before, during and after Marxist revolution. The Marxist revolution period was from October 1972 to 1989 in Benin.

4.2.1 Period before the Marxist revolution

This period stretches from independence (in 1960) to October 1972. There was a half-hearted attempt to create farmers' associations called 'Groupement Villageois (GV)'. The GV activities concerned trade of agricultural products and other goods necessary for the population as well as services such as input and credit supply. The first GVs in Africa were created in Dahomey in 1967 as pre-cooperative experiences, i.e., with the ultimate goal of being developed into cooperatives some years later. It had started in the administrative Departments of Zou, Mono and Atacora. But this first attempt failed. The creation of GVs became a reality only after the conference of the Organization of African Unity (OAU) held in Niamey in December 1969. During this conference, there was a recommendation inviting people in development to consider the village as the basis for community development. It is in application of this recommendation that, from 1970, the experiences with pre-cooperatives have been extended to all member countries of the OAU. The GVs are structures for community participation in development. The idea was born in a context where participation of farmers was perceived as a 'sine qua non' condition for development.

4.2.2 The Marxist revolution period

During this period, the GVs were reinforced and considered as one of the pre-cooperative structures. The GVs have two main objectives, one economic and one technical.

Economic objectives aim at enabling farmers' associations to carry out collection of agricultural products, input and credit supply to their members and the generation of surpluses through cotton production. These revenues can be used for communal infrastructure development. These economic objectives also had a psychological aspect as they aimed at moral satisfaction of farmers who were tired of being exploited by rural development agents and dubious traders. These objectives were attained successfully during this period, but only in the case of promotion of cotton production, i.e., in the GVs where cotton is produced. In the field of the cotton collection, a historical study of the level of GV involvement
In this activity helps to distinguish two types of market organizations: the ordinary and self-managed markets.

In ordinary markets producers, members of the GV, were only simple sellers. Weighing, handling and organization of cotton transportation were insured and coordinated mainly by extension agents at village and/or communal levels. These agents reported activities to their superiors. Therefore, extension institutions were intermediaries between cotton producers and the institutions responsible for cotton ginning and export. For this reason, extension institutions received a commission\(^1\) for cotton collection activities, the GVs being satisfied with the refund\(^2\) on pesticide treatments. This system of cotton production collection prevailed till 1980.

In order to do justice to cotton producers, CARDERs decided to establish self-managed markets by the GVs. In such markets, farmers organize weighing, management and transportation of cotton collected. Extension agents play the role of coordinators. The GVs report activities to extension institutions, which in turn report to the ginning and export agency that is the current ‘Société Nationale pour la Promotion Agricole (SONAPRA)’\(^3\). The CARDERs are paid for the intermediary and coordination roles. The refunds received by the GVs comprise market management commissions\(^3\), pesticide refunds and weighing refunds\(^4\). For successful implementation of self-managed markets some GV members are trained in weighing.

The technical objectives aim at educating GV members in cooperative management and reducing the activities of extension agents who were in charge, as has been discussed in chapter 3, not only of the extension work, but also of activities related to dynamics of the GVs, input and credit distribution, and the collection of statistics.

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\(^1\) The amount of commission received by the CARDERs is about 3,750 FCFA per ton of cotton collected.

\(^2\) Refunds on pesticides related to the system of yield-dependent purchase of pesticides. This system consists of making producers pay the pesticide used on cotton according to farm productivity and not at the real costs. Therefore, the better the farmer’s productivity the more he pays for the pesticide used. In such a situation, the quantity of pesticides used by individual farmers was not correctly recorded and there was a waste and diversion of pesticides by members of GV committees. When two farmers use the same quantity of pesticides, the farmer with a better yield per hectare pays more than the one with a lower yield, and ultimately for him as well. A forfeit rate of 23 FCFA per kg marketed was deducted for all farmers as a form of repayment in the system of yield-dependent purchase of pesticides. When the total amount deducted is greater than the real costs of the total volume of pesticides used by a GV, the difference is returned as a refund on pesticide. Later on this system was canceled and individual farmers repaid the volume of pesticide they used at the real costs. That way of repaying pesticides is referred to here as the direct purchase of pesticides.

\(^3\) Market management commissions are about 1,500 FCFA per ton of cotton collected.

\(^4\) For security reasons, a deduction of 2 kg is made per weight as a compensation for possible loss which may occur during transportation from the local marketplace to the industry. The value of weight difference between local market and the industry is returned to the GV as a refund on weight difference.
Apart from the GVs, created mainly for services to farmers, there were also other farmers’ associations for participation in agricultural production. These associations are for collective agricultural production. These are:

- as other pre-cooperative structures, the ‘Groupement Révolutionnaire à Vocation Coopérative’ (GRVC), the Clubs-4D of rural young people and women’s organizations (‘Groupement des Femmes -GF-’).

- as cooperative structures, the ‘Coopérative Agricole et Expérimentale de type Socialiste (CAETS)’ and the ‘Coopérative Agricole de Type Socialiste (CATS)’.

A GRVC is a voluntary association of rural people with a progressive collectivization of production factors such as land, work and tools, and with a distribution of revenues according to the amount of work of each member. Many types of GRVC were recorded according to the level of the collectivization of production factors (Tossou, 1985).

The Clubs-4D are associations of young rural people (men or women) for the same purpose as the GRVC. The age of these young people is limited to 18 years. The 4D means Democracy, Decision, Duty and Development, i.e., the rural young people Democratically Decided to carry out their Duties for the Development of their community or state.

Women’s organization, the ‘Groupement des Femmes’, is a kind of GRVC but only composed of women.

The CAETS and CATS are cooperatives in which all production factors are held in common. They are characterized by individual and voluntary participation; a collectivization of all production factors; the discontinuation of individual plots on cooperative farms; a better organization of work carried out cooperatively; democratic management; and a distribution of income on the basis of efforts made by individual members.

All these attempts to create pre-cooperative and cooperative structures for agricultural production failed in Benin. Most of the production associations created were in fact fictitious, as they were either not created on a voluntary basis or people were organized around interests such as food from the World Food Programme or facilities provided by the government. The reduction of all these services led to the disappearance of these pre-cooperative and cooperative structures for production. Only the GVs, some women’s organizations and the new forms of GRVC called ‘Groupement à Vocation Coopérative (GVC)’ have survived.
4.2.3 Period after the Marxist revolution

The dominant form of farmers' organizations are the GVs, as the existing GVCs and women's organizations are sub-organizations of the GVs. During this period the GVs have become more organized. Two types of GV can be distinguished according to the level of participation of farmers in the organization of cotton collection: the self-managed and the autonomous markets. The ordinary markets have all evolved into self-managed markets.

In fact, in order to give complete responsibility for GVs with respect to all the activities as recommended in the Structural Adjustment Programme (SAP) and the Agricultural Services Restructuring Project (PRSA)\(^5\) in Benin, autonomous markets were established. In this type of market, farmers are responsible for all activities related to cotton marketing. Producers are in direct contact with the exploitation and export institution, the SONAPRA. In addition to the refund obtained from self-managed markets, GVs now receive the commission previously allocated to the CARDERs. Detailed information will be given on this transfer process in the next section describing the policy of using the GVs as a means to bring farmers to participate in rural development. The GVs with autonomous markets are called GV-tests because this way of organizing markets and accountability of GVs for inputs and credit distribution is a new phenomenon that started in the agricultural campaign of 1991-1992. Only a few GVs are concerned with this type of market. Table 4.1 shows the evolution of these GV-tests in some of the CARDERs. From 1995 on, most of the GVs will have autonomous markets as far as cotton collection is concerned.

Table 4.1: Evolution of the GV-tests in some CARDERs in Benin

<table>
<thead>
<tr>
<th>CARDER</th>
<th>TOTAL NUMBER OF GV</th>
<th>GV-TESTS IN 1991/92</th>
<th>GV-TESTS IN 1992/93</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
</tr>
<tr>
<td>BORGOU</td>
<td>460</td>
<td>13</td>
<td>2.8</td>
</tr>
<tr>
<td>ATACORA</td>
<td>433</td>
<td>28</td>
<td>6.5</td>
</tr>
<tr>
<td>ZOU</td>
<td>457</td>
<td>8</td>
<td>1.7</td>
</tr>
<tr>
<td>MONO</td>
<td>284</td>
<td>4</td>
<td>1.4</td>
</tr>
</tbody>
</table>

SOURCE: Field study

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\(^5\) As in chapter 3, the Agricultural Services Restructuring Project (PRSA), an application of the Structural Adjustment Programme in the agricultural sector, aims at reducing the scope of activities formerly carried out by the CARDER. In this respect, activities such as input supply and distribution, agricultural credit and the collection of agricultural products will be transferred to private enterprises. The 'Groupement Villageois', a form of farmers' associations, were chosen as the only significant enterprises capable of taking over the activities to be transferred.
The GVs are now organized into the ‘Union Communale des Producteurs (UCP)’, and the ‘Union Sous-prefectorale des Producteurs (USPP)’ and the USPP are organized into the ‘Union Départementale des Producteurs (UDP)’. The UCP are farmers’ organizations at communal level. All the GVs in a certain commune are members of this organization. All the UCPs in a certain district are members of the ‘Union Sous-Préfectorale des Producteurs’ of this district. So the USPP are farmers’ organizations at district level. The ‘Union Départementale des Producteurs (UDP)’ in a province is composed of all USPPs of the province.

In practice, only the GVs and the USPPs are active in the implementation of the activity transfer from extension institutions to farmers’ organizations. But also, the scope of activity of each USPP depends on the number of GV-tests they have. Thus, in areas where cotton is produced, the USPP and their GVs are more active than in the areas where only food crops are produced.

4.3 The new policy of giving more responsibility to the ‘Groupement Villageois’

4.3.1 Description of the policy

The new policy of giving more responsibility to GVs seeks to progressively transform all the GVs in Benin into GV-tests, i.e., in GVs with autonomous marketing policies for the collection of cotton production. Through this process, GVs will be responsible for the management of all their assets and liabilities. Such accountability is supposed to be attained through the transfer of input and credit distribution, as well as the whole process of cotton collection to farmers’ associations. Such a transfer implies that farmers must organize themselves in order to carry out the main activities related to this process. These activities include:

- a correct census of farmers’ plots and formulation of their needs for inputs and credit;
- a correct distribution of inputs to farmers according to their needs;
- an updating of the various documents, i.e., the bookkeeping work;
- a forecast of harvest;
- an establishment of purchase schedule;
- weighing and transportation of cotton;
- a correct recovery of all kinds of credits since, actually, inputs are given to cotton producers and are reimbursed during the marketing period, i.e., as credit in kind; and
a correct management of the various refunds of GVs to contribute to the construction of communal infrastructures and execution of other relevant development activities in their villages.

4.3.2 Analysis of the relevance of giving more responsibility to GVs

The policy of giving more responsibility to farmers' associations has as an ultimate goal helping farmers contribute more effectively to rural development in Benin, and in the long run, taking over agricultural extension activities. These objectives are welcomed by the farmers since such transfer will make them less dependent on extension workers in their production activities. In effect, during the period that extension workers were in charge of all these activities, such as input (seeds, fertilizers and pesticides), agricultural credit, marketing of agricultural products, refunds were also managed by extension workers with or without (all the) farmers. Corruption of field extension workers and some of their superiors was observed. It was an opportunity for some extension workers to have access to additional revenue. This was made possible because of the lack of transparency which characterized the process. This situation has decreased notably with the creation of the different types of markets, mainly the self-managed ones. But still, there is a formal revenue that the CARDER gains from marketing activities. It is the commission of 3.750 FCFA they get per ton of cotton collected. All the extension workers benefit from such commissions. But, with the creation of the GV-tests, this commission for extension workers has diminished to 1.500 FCFA per ton and may be canceled completely. This may constrain extension workers in providing the required assistance to facilitate the promotion of the GV-tests.

But are the 'Groupement Villageois' capable of managing the activities to be transferred? For most of the field extension workers to whom we spoke the answer is negative. They think that the GVs are not yet that organized, or equipped enough and well trained to handle correctly these activities. They already predict the failure of the whole policy measure. But, considering the disadvantages for extension workers of such a policy (most of the benefits they derived from the activities transferred will now go to GVs), one may first think that this judgment is interest-oriented or interest-biased. However, as farmers have relied for a long time on extension services for input management and GV members are still considering inputs as public goods, there is some doubt about the success of this policy in the present environment. Nevertheless, an efficient implementation of the policy will contribute positively to the development of rural areas.

In my opinion and on the basis of my field experiences, the analysis of the relevance of the activity transfer policy has two aspects: economic and technical ones. The economic aspect of the answer will look at the economic contribution of the GVs to the development of their communities while the technical aspect will look at the capabilities of farmers and their organizations to really carry out activities that are to be transferred: that is, the human resource development dimension.
There is no doubt about the economic contribution of the GVs to the development of their village. This is one of the successes of state intervention through the CARDERs. In effect, revenues obtained by GVs from the various refunds received in cotton production areas were beneficially used for services to the community such as: building storage facilities, offices for the GV committees, residences for the Village Extension Workers, schools. They served also to restore and equip maternity facilities, clinics, to build roads and/or to buy vaccines for the people in case of contagious diseases.

The technical aspect of the activity transfer to GVs requires the development of the capacities of the GV committees to carry out the activities. In fact, the effective execution of the targeted activities requires specific expertise as described in section 4.3.1. The need for expertise is reinforced by the adoption of the direct purchase of pesticides. Calculation of expenses for pesticides is now done on the basis of the quantity of pesticides received by individual farmers. Also the technical aspects of the activity transfer to GVs calls for the development of the countervailing power of the other farmer members of the GVs in order to help them keep an eye on the way the activities are managed by the GV committees. These technical aspects are very important and constitute the essence of the discussion and analysis in this chapter.

4.4 Individual and collective responses of actors to the policy of giving more responsibility to the ‘Groupement Villageois’

4.4.1 Introduction: the main actors involved in the implementation of the policy

The main actors involved in the process of activity transfer to farmers’ associations (GV, UCP and USPP) are: farmers, GV members; GV committees; USPP committees; USPP managers; extension workers of the CARDERs; input suppliers; and marketing boards.

Farmers, members of the GVs are the ultimate beneficiaries of the services of the GVs. They are producers who need inputs, credits and the marketing of their agricultural products. They express their needs to the GV committees and repay the loans (in cash or in kind) they get from the GVs. As such, they may play a crucial role in the success of the process not only by claiming these services but also (more crucially) by acquiring the countervailing power necessary to control the way GVs are managed by the committees.

GV committees are composed of nine elected farmers. As such, they are the representatives of the GVs and all farmers at village level. They are the most active actors in the process of activity transfer from CARDERs to GVs. In fact, members of the GV committees, and mainly secretaries and chairmen, are in charge of related activities.
Most of these activities are done only by the secretaries of GV committees because they are the only literate people in these committees. Thus, their level of training, degree of consciousness, and ability to manage transparently are crucial factors that determine the success of the transfer process.

**USPP committees** are administrators of the USPP. The resources of the USPPs consist of 20% of refunds received by each GV and around 50% of the commissions paid to the organization for all activities involved in the collection of cotton (inputs distribution, market planning, weighing and transportation). They are not in charge of any of the activities transferred. That is the role of the USPP managers. USPP committees are elected by UCP committees.

**USPP managers** are not elected but recruited and have their services paid by the USPP. These managers are in charge of coordination of activities carried out by the GV committees. The main activities carried out by USPP managers are related to the drafting of campaign plans on the basis of information gathered from GV committees; the reception of various documents from CARDERs and distribution to GV committees; and the reception of the reports of GV committees on the progress of activities mainly during cotton collection. These reports are sent to CARDERs and to SONAPRA for payment. They are also in charge of the reception of funds from SONAPRA and distribution to GV committees for payment to farmers; and finally the reception of vehicles and their dispatch to various local cotton marketing centers.

There are three categories of extension workers that use active participation in the transfer process: Village Extension Workers (VEW), extension workers in charge of input management for the CARDERs at district level, and extension workers in charge of cooperatives, farmers’ organizations and functional literacy at district and regional levels, i.e., the specialists in cooperative matters. The VEWs back up GV committees in input distribution and in the input needs census in which they have a lot of experience. As indicated in chapter 3, the execution of these activities has, for a long time, been their source of power over farmers. Extension workers in charge of input management at district level back up GV committees in the bookkeeping activities while the specialists in cooperative matters are in charge of training members of the GV committees in organizational matters and aspects of cooperatives, record keeping and literacy training programmes.

The main input supplier and export agency in Benin, as far as cotton is concerned, is the ‘*Société Nationale pour la Promotion Agricole*’ (SONAPRA). The personnel of this public company has recently been involved in the process of activity transfer as the USPPs are supposed to be in direct contact with SONAPRA. Before, the CARDERs played an intermediate role between farmers (and their organizations) and SONAPRA. This public company has now acquired a training and back up role vis-à-vis the GV committees and USPP managers. In this case, only the GV-tests are concerned.
Finally, loans are provided to individual farmers, through the GVs, by the 'Caisses Locale de Crédit Agricole Mutuel' (CLCAMs). They are decentralized (district level) financial institutions which also collect the savings from individual farmers and GVs. Farmers are the main shareholders and are represented in the administrative board of the regional union of the CLCAMs.

4.4.2 Responses of actors to the policy of giving more responsibility to the 'Groupement Villageois'

In this section, attention is paid to only five of the main actors concerned with the policy of transferring input and credit management to GVs: members of the GV committees; other farmers, members of the GVs; Village Extension Workers; specialists in cooperative matters; and agricultural input supply companies.

The GV committees. Up until 1990, GV committees monopolized both information, inputs and credit, and refunds management, management that is in practice limited to three members of the GV committees: the secretary, the chairman and the chief treasurer of the GVs. These people behave as if they alone are the GVs. As such, they are not used to informing other GV members of activities, assets and liabilities of the organization. Technical information related to management matters was kept between them and did not circulate at all. As a matter of fact, every year the same people were retained as managers of the GVs since no other farmers knew how to manage these activities. In that respect, a specialist in cooperative matters has declared:

GV committees were not renewed for many years because some extension workers have established strong and personal relationships with some members of these committees. These people are local leaders who are used as pilot farmers by extension workers in their innovation transfer activities. Thus, these field extension workers always fear that the renewal of the committees may seriously affect extension activities. Also, members of GV committees have become too powerful because of the positions and roles that they play at communal, district and provincial levels.

Members of GV committees took advantage of this situation and misused the refunds of the GVs and mismanaged the inputs and credits. An illustration is given by the following opinion of a VEW on his GV committees:

Members of the GV committees have many strategies to mismanage assets of the GVs, mainly inputs, credits and also even production of other farmers.

*First strategy:* where the yield-dependent purchase of pesticides is used, members of GV committees allocated themselves more insecticide than they needed for the treatment on their farms while at the same time they were very strict with other farmers. The surplus of insecticide that they gained was sold to non-cotton producers for insect control in cowpeas at a price far cheaper than the real cost.

*Second strategy:* loans were granted to fictitious producers, who are in fact themselves. Such behaviour increased the rate of unrepaid loans that were supported by the GVs.
Third strategy: during the collection of cotton, a number of tons of cotton were allocated to fictitious people and in the name of these people they deducted the corresponding amount of money. This extra weight was derived either from compensation weight accumulated for GVs or from an extra weight reduction from the production of other farmers. In the first case, the refund on weight difference for the GVs diminished or was even negative.

Although this perception of GV committee members is shared by most (if not all) extension workers and specialists in cooperative matters that I met in the field, it is worth saying that these latter also adopted such behaviour in the past when ordinary cotton markets were organized and managed by extension workers on behalf of the exporting agency. Also, with the self-managed markets, VEWs collaborated with the GV committee members in such misbehaviour. As such, GV committees only took over from the VEWs in that respect.

In fact, most of the GV chairmen are big farmers and appointed for more than 10 years. According to farmers, some GV chairmen and chief treasurers were not that wealthy before and the mismanagement of the GVs seems to be the source of their wealth. Whatever the source of this financial power, the fact is that these GV chairmen do not allow other people to take over their role in the committees. The GVs in which the young people have tried to challenge the elders at these positions split in two (within the same village) despite the unsuccessful efforts of both extension officials and specialists in cooperative matters and other farmers’ organizations to prevent this. At one such occurrence, some young farmers justified their position thus:

We are not informed at all about the activities of our GV. Also, the GV committee is composed of big and rich farmers. It is always difficult for large and poor farmers to cooperate since they do not have the same problems. It is just like a friendship between blind and one-eyed men. The one-eyed man can escape from obstacles since he can see them, but the blind cannot do so.

Sometimes, some people do not repay the loans they obtained from the GVs. It is normally the duty of the GV committees to collect, one way or another, these credits. But, in practice in all the GVs I visited and in which repayment problems were crucial, GV committees were always passive in this matter although they knew very well that with the CARDERs, the unpaid loans were reported to police for recovery. In fact, to avoid police involvement, farmers managed reluctantly to pay their loans during the period of ordinary cotton markets. In most villages where repayment is still a problem, GV committees always argue the following to justify their passive behaviour:

In the village we are the same, we are so close. If you bring X to the police, he may be one

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6 According to the definition of GVs, there may not be more than one GV in a village or section of a town. The establishment of two GVs in one village is not normal according to the regulations.
of your relatives or a relative of a friend and all these people will run after you. You may be seen as a dictator and people won’t like this way of behaving.

To limit the rate of default, and manage the yield-dependent system successfully, some new GV committees, mostly composed of new people, adopted an alternative strategy which consists on a decentralization of work at farm level. In fact, each ‘bloc de culture’ has a chairman and a secretary. They are responsible for the estimation of the area covered by the farm of each member of the bloc, the degree to which technical advice and innovation are used on individual plots and the computation of the period of activities. This information which, formerly, was gathered by VEWs, is actually disseminated to members of the GV committees for decisions as to whether inputs and cash loans should be given to individual farmers of a ‘bloc de culture’. The chairmen and secretaries of the blocs also have the duty to collect the repayment. This experience is successful but unfortunately only few GVs adopted such strategies. This organization also gives power to GV committees vis-à-vis VEWs. In fact, VEWs need the information gathered by the chairmen of the blocs for their fortnightly reports. The GV committees of such GVs use this situation to make their VEW comply with their needs. It is a kind of service exchange or informal and implicit agreement between these GVs and VEWs - statistical data for relevant extension services.

With the adoption of the direct purchase of pesticides, two different responses were observed on the part of the GV committees. Some GV committees were against it. These were the newly elected young ones. As a legitimization of their position, they usually referred to the necessity to continue with the yield-dependent purchase of pesticides because of the refunds, and they argue:

Refunds on pesticides are still important for our villages. This allows us to increase the overall amount of refunds we get. We were elected to correct mismanagement of pesticides of the former committees. We need, then, to prove our capacity for better management of the system in order to improve the financial situation of our GV for more communal socio-economic infrastructure. To reach this objective we need enough financial resources……
…… the cancellation of this system will also lead to disappearance of small farmers from the process of cotton cultivation.

Such GV committees go on, even, to accuse former committees which they challenged recently as being behind such a cancellation:

Our former GV committees support this decision because they realize that either it is impossible for them nowadays to continue cheating their brother farmers or they only want to reduce the amount of refunds that the newly elected committees will get…
…… we realize now that the GVs contribute to the promotion of their leaders, mainly the chairmen, secretaries and chief treasurers, but once they become big and rich farmers with

7 A ‘bloc de culture’ is an extended area covered only with one crop (e.g., cotton or maize mainly). On this bloc, many farmers manage their individual plots.
the resources of the GVs and enter the networks of the officials of the CARDER, they even act against their interests.

Other GV committees support the direct purchase of pesticide by individual farmers. These are often the former GV-committee members and/or big farmers. One of them who was elected with the creation of the GV, who still is the chairman of his GV committee and chairman of farmers' organizations union at district and regional levels, told the researcher:

Whether we want it or not, one day it will happen that farmers need to go to the shops for agricultural inputs as we do today for cement. The yield-dependent system encourages lazy farmers\(^8\) to continue being lazy.

For this reason, the former GV committee members devised strategies to impose their favorable position about the adoption of the direct purchase of pesticide on behalf of the other farmers, although they know that there is opposition in some GVs. These strategies were to impress the officials at the headquarters in the CARDER that all their GVs favour cancellation. This was a way to speed up the process as they wish without taking into account the various protests of the young elected GV committees.

The newly elected GV committees were very enthusiastic in the beginning but according to recent information I got from the field when revisiting these GVs and the Rural Development Officer of these regions, some members of these committees were also involved in corruption, to the detriment of their GVs. That situation provides an important lesson: the popular saying about African politicians, that they just fight for political positions to have the formal right 'to take their slice of the national cake'\(^9\) is still valid within farmers' organizations.

Whatever the position of the GV committees was, the other GV members were not associated at the beginning with this decision-making process. It was only with pressure and involvement of the specialists in cooperative matters that they informed other farmers about the situation and their position\(^6\). Most of the time, GV committees' positions were shared by other farmers since they are aware of the fact that these people are far better informed on the situation elsewhere than they are.

Other GV members seemed not to be concerned with the growth of their organization. They still equated the GV only with its committee. They were only interested in getting inputs and loans from the GVs and having their cotton marketed. Information on the management of the GVs seemed to really have no interest for

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\(^8\) The concept of 'lazy farmer' is used in the villages mostly to stereotype all the small and poor farmers.

\(^9\) In fact, for some campaigns, GVs were allowed to choose between continuing with the yield-dependent purchase of pesticide or switching to the direct purchase of pesticide by individual farmers. But currently, the refunds system on pesticide has been completely suspended.
them. But, as part of their activity transfer to farmers, specialists in cooperative matters started to pressurize GV committees to give more information on the activities they were carrying out. From then on, GV members were given an opportunity to participate in the yearly financial report meetings organized by the committees with the guidance of the specialists in cooperative matters. Information obtained from such meetings helps other farmers to realize in what ways their GVs were mismanaged by the elected committees. Challenges from some committees started in some GVs and led either to the election of new GV committees or separation of the existing one into two GVs. Some farmers compared this behaviour with a regaining of consciousness. To illustrate such a comparison one farmer recounted me to an anecdote which recalled their reaction:

Once upon a time, there was a rich trader who always came to a village to collect their agricultural products, cheaply, to resell them at better prices in town. Villagers did not react to this situation until they were informed one day about the prices in town. From this day on and to show the trader their awareness of the situation and teach him a reasonable lesson, the villagers decided, the following market day, to offer the trader only millet, a goat and a lion, knowing that lions can eat goats and goats can eat millet. The trader was forced to accept these products. Before reaching the town he would have to cross a big river and he could not cross it with all products together. He would only make a profit from these products if he were very wise and could find the way to cross the river without any destruction of one or more of these products.

And to conclude his story and as a way to test how intelligent I was, he suddenly asked me: 'If you were this trader and had to cross this river with those products how would you cope?'

Like the GV committees, the other GV members also used the opportunities offered by the yield-dependent purchase of pesticides by requesting more insecticide than they really needed. The extra insecticide they got from the GV was either sold to non-cotton producers or either simply diverted for the protection of other crops than cotton, cowpeas mainly. Of course, this misuse of pesticide was to a lesser degree than that of the GV committees since their access to these products was limited. But when the yield-dependent purchase of pesticides was replaced by the payment of pesticide at the real costs by individual farmers, farmers then requested less insecticide than they needed. Although this behaviour had a negative influence on the yield and the quality of the cotton produced, they only thought about the debts that they had to repay:

It is far better that GVs incur debts vis-à-vis SONAPRA than it is desirable for individual farmers. With the GVs, things may be arranged with SONAPRA and delay in repayment can be accepted, but with individual farmers, repayment after the marketing of cotton is compulsory; if not you are reported to the police, and that is a dishonour for you. CARDER is less likely to let down their GVs.

\[10\] The right answer to that riddle, which I succeeded to find by the way, is left open for the reader in order to test his intelligence. It is not relevant for the purpose of this exercise.
This illustration shows that farmers perceived GVs as institutions of CARDERs. This perception has changed in the GV-tests since they deal directly with input and credit supplying institutions.

Villages Extension Workers (VEWs). Their behaviour towards the transfer of activities and responsibility to farmers and their organizations varies very much according to the way they perceive the process and intend to use its opportunities. Two groups can be distinguished - those who agree with the process and those who do not. VEWs who support the policy build strategies to grasp some of the opportunities offered by the new situation. The case of this extensionist, who shared his assessment with the researcher, gives a better understanding of this phenomenon:

It is good to give more responsibilities to farmers. Before, it was my duty to collect information about areas cultivated and record the inputs as well as the credits distributed. But, now this transfer creates enough time for me to go on with my own business and to come back only to collect statistical information from secretaries for writing my reports. I am quite lucky since most of my secretaries are well educated and good recordkeepers which facilitates my work. I don't know all the farms. I don't even do the follow-up to all of them but only and mainly the training on demonstration plots. The follow-up is done by the bloc chairmen who report technical problems encountered by their neighbours to me. The time that I saved this year helped me to increase the area I cultivate myself and to carry out more visits to the farmers of my contact groups. Contrary to what most of my VEW colleagues say, I'm not that busy since farmers have taken over some of my responsibilities. During meetings, they also help me to solve many more problems than I expect them to do. It is incredible.

Others were scared about the process since their experience convinced them that these activities were too difficult to be carried out and they already foresaw that farmers would fail to carry them out correctly. They reacted as follows:

I am quite sure farmers' organizations will fail to carry out activities and eventually kill each other. Our work becomes difficult now because farmers carried out the activities in the wrong way and you have to start them again and again yourself if you don't want to be penalized by your boss. I am frequently called upon to solve problems in the GVs.

In fact, my own experience in the field convinced me that these two points of view are both realistic and even complementary. In the GV-tests where cotton is produced, management of the newly transferred activities is well appreciated by extension workers. But in the GVs where only food crops are cultivated, management problems are really significant because there is no way to recover the credits. Little attention has been given to the development of such organizations into GV-tests by either extension workers and farmers themselves. But, even in cotton production areas, some VEWs were reluctant about the activity transfer and tended to botch the process. This was confirmed by some specialists in cooperative matters who said:

Sometimes, there is a lack of motivation from the VEW side to really help the GV committees to carry out efficiently the management of the activities transferred to them. They often say: we are asked to hand in the keys of input storehouses to GV committees. We have
done it, but we will see how far they can manage the situation. Thus, in these villages, input storehouses are transferred to GV committees without any basic training or explanation.

Such attitudes of VEWs are due to the way extension officials urge them to completely forget about the management of inputs and credits.

**Specialists in cooperative matters.** As part of the activity transfer to farmers and their organizations, responses of specialists in cooperative matters either at communal, district, or provincial levels were quite spontaneous, although they had been removed from the system of credit distribution and refunds utilization by the GV committees. In fact, before the beginning of the activity transfer process, specialists in organization and cooperation matters were deeply involved in the activities such as credit distribution and refunds utilization. They helped GV committees to prepare a request for credit, and played intermediate roles between them and the credit supplying institution (CLCAM). Also, they studied the feasibility of all projects that the GV could start with the refunds, and had to give their approval before any money could be drawn from the savings accounts of the GV. The GV committees, nowadays, deal directly with the CLCAMs. Their response to the change may be summarized in three points: catalytic role for better information circulation between members of the GVs; training of GV committees; and organization of experience exchange between GVs.

From 1990 on, they pressured the committees to organize periodic meetings at least once a year to evaluate their activities and report the results to the farmers. The main guidelines for such reports were: number of members; assets and liabilities of the GVs; a global view on how far the objectives set in the campaign plan were achieved; amount of refunds and their utilization (cash and account situation); use of inputs by each GV member; and level of literacy of members. It was through the organization of such meetings that other members became aware of the way their organizations were managed.

Specialists in cooperative matters organized training for GV committees, mainly for secretaries, chief treasurers and the USPP managers. Training was often related to: forecasting of production; establishment of input needs on the basis of this forecast; establishment of a purchase programme; and bookkeeping techniques. Small booklets, even translated into local languages, were produced for such purposes. Also functional literacy programmes were organized by these specialists. They even arranged visits between GVs to enhance the experience exchange process. I witnessed one of these exchange visits. The committee of the GV host explained to their colleagues the way they are organized in the GV. Male and female members of the GV host were present. The GV visiting team was composed of a group of about 15 people (male and female). After discussion they visited some of the blocs of the GV host. The following assessment of the visit day by the chairman of the visiting GV gives an illustration of their perception of the relevance of such visits:
We are very satisfied with this visit. We have learned many things about GV management, especially how conflicts are resolved, how decisions are made and finally the level of communal socio-economic infrastructures realized in the GV hosts...

We were also amazed by the way farmers we visited in their farms explained things. This shows that they master very well what they are doing...

When we go back home we will try to implement what we saw and heard in order to contribute better to the agricultural and socio-economic development of our villages.

**Input and credit supplying institutions.** Two institutions were in charge of those activities: the SONAPRA for input supply and the CLCAM for credit provision and savings collection. During the implementation of the policy, the SONAPRA worked together with specialists in cooperative matters of the CARDERs, especially for the training and informing of GV committees on the process. Each regional office of SONAPRA had a person in charge of GV-tests whose duty was to follow these GVs and to record input distribution and repayment situation. As such, these people served as linkage mechanisms between the CARDERs, the GV-tests and the SONAPRA. One of them was for a long time one of the initiators of the extension system in the Borgou province.

These liaison officers are very enthusiastic and satisfied with the performance of these GVs and have confidence in the success of the activity transfer process to farmers. But, they are sometimes surprised by the behaviour of some Rural Development Officers at district level. One of the liaison officers of that time told the researcher:

> It is surprising that some of the Rural Development Officers are not enthusiastic about the transfer process. They sometimes delay information to the GV-tests and are also reluctant to raise many GVs to the status of GV-tests. When I tried to understand the rationale behind such behaviour, one of them told me: most committee members of the GV-tests behave as if they don’t need anything more from extension workers. They sometimes express it publicly and do not pay any respect to the extension workers and even myself at all.

Despite this behaviour, the transfer process is under way and most of the GVs in the cotton cultivation areas have been raised to the status of GV-tests.

Apart from SONAPRA, which is a state-owned institution, there is a private one called ‘Société de Distribution des Intrants (SDI)’ which is involved nowadays in input distribution in collaboration with SONAPRA.

The CLCAM has gone through a restructuring process which makes farmers the only share-holders, i.e., each farmer or GV who wants to have access to credit needs to buy one or more shares. The CLCAMs' duty in the activity transfer process was to take over some of the activities formerly carried out by the specialists in cooperative matters especially the preparation of the credit request paper. From then on, some GV committees, mainly in the northern part of the country, have been independent from these specialists for their credit request and also have free access to their bank account for current withdrawal of savings from the CLCAMs. Of course, specialists in cooperative matters did not agree with the procedure used for such purposes.
4.5 Analysis of actors’ responses to the policy of giving more responsibility to the ‘Groupement Villageois’

4.5.1 Knowledge and information processes

The main knowledge and information processes that can be identified from the various observations and interviews can be classified into three groups: joint learning/training, facilitation and negotiation.

Joint learning/training

For farmers to carry out the activities transferred to them, they need to have the necessary capabilities. As such, capability building is a crucial knowledge and information activity. This capability building, in the present case, has two aspects according to the role played by farmers in the process - joint learning and training.

Joint learning, in the present case study, is a learning process in which farmers take an active role. Such learning is mainly information exchange between farmers. In fact, learning occurred both within and between GVs.

The learning processes in the GVs are related to activities in the committees and on the ‘blocs de culture’. Members of the committees learn mainly on-the-job. In fact, only secretaries receive training from extension institutions. In their daily work they teach other farmers (the chairmen of the blocs mainly) to get knowledge about input management.

Also, in a ‘bloc’, technical information is exchanged between farmers and the chairman of their bloc. Through this joint learning process the chairmen gain more knowledge on how agricultural innovations are used in the blocs and give advice to the bloc members, if necessary, on the basis of what they did on their own farm. According to the farmers, such an approach has been successful. This is confirmed also by some VEWs as we saw earlier.

Meetings are also organized by farmers to exchange ideas and recommendations. In fact, the meetings are occasions used by some GV committees to share their experience with other farmers. In that respect, the following speech of a GV chairman, chief treasurer of a USPP and chairman of the administrative board of a CLCAM, illustrates the limited scope of the joint learning opportunities in the process of activity transfer to farmers:

There should be a year of training, not only for the GV committee, but also for other young farmers to ensure a kind of continuity in the GVs. Knowledge is very important and training can contribute to it. Importance of knowledge is really clear when we go out of our village and meet other farmers.

Each of you (speaking to other farmers) must contribute to GV activities and play an important role in input and credit management.
Joint learning between the GVs takes the form of exchange of experience. To facilitate the management of the activities transferred, visits were organized between GVs by specialists in cooperative matters at provincial level. During these visits farmers learnt about how GVs are managed in other provinces. Most of the time, it was the less organized GVs that visited the more organized ones.

This case shows that joint learning may play a catalytic role as it can provide capabilities for actors in order to help them to cope with the change situation. Most of the time, it was very well appreciated by the farmers. The role played by specialists in cooperative matters shows that facilitators are of great importance in enhancing such processes.

Training activities were organized by the CARDER, sometimes in collaboration with SONAPRA, to provide GV committees with the essential knowledge and capability. Trainers, on the basis of the existing and experienced skills, anticipated the needs of farmers in order to build the training programmes. From my experience in the field, it appeared that these training programmes were successful. In fact, most of the secretaries and the USPP managers encountered and followed during the field work were satisfied with the training. Also, according to the extension officials and the results of the campaigns, the GV committees succeeded, in general, in carrying out the activities transferred to the GV-tests. That is the reason why from year to year the test is extended to other GVs and according to the extension officials in 1995 all the GVs, at least in the cotton production areas, will become GV-tests.

Training also concerns literacy. Farmers are taught in their local languages how to read, write and calculate. Such programmes are successful, especially in the Northern part where important leaflets are translated into local languages and few secretaries record their activities in these languages. Local newspapers do exist although there is no fixed frequency of publication.

From this case study, it appears that capability building is of much concern in the process of giving more responsibility to farmers. But, still, this process is mainly limited to the GV committees. Other farmers are not yet so concerned despite the efforts made with the literacy programmes. Attention needs now to be given to the other farmers in order to build a countervailing power within the GVs. Otherwise, as this case demonstrates, new ‘elites’ (farmers) will emerge within these associations, take over from the extension workers and continue with the misuse of the common resources of the GVs. This will be discussed in the section on coping behaviour.

Facilitation/coordination
As stated in the previous section, specialists in cooperative matters play a great role in the process of activity transfer to GVs. They act as catalysts either through training, joint learning (see joint learning/training) or through awareness raising.
Facilitation in that respect mainly creates opportunities for more access to relevant information and knowledge through better information management. Coordination activities are supposed to be carried out by the GV committees. But, they have yet to succeed in reaching such an objective. In fact, the case shows that information does not circulate very well in the GVs. Committee members mainly keep information to themselves unless they need the participation of other farmers for a given purpose. In that respect, training plays a great role and specialists in cooperative matters are needed for their facilitating roles.

From this case, it appears that external prime movers, like the specialists in cooperative matters, are crucially important in the process of giving more responsibility to farmers. Internal prime movers are not yet that efficient. This may be explained by the fact that the initiative of transferring activities to farmers is taken by the policy makers. As such, it is external to the GVs. For the time being, facilitators need to put pressure on the GVs in order to make the process successful. But if success is achieved in the GVs, it is not because of the perceived pressures, it is rather the perceived advantages of such a process.

Negotiation/consensus building

Negotiation in the present case study is observed with respect to the yield-dependent purchase of pesticides. The suspension of this yield-dependent purchase is done gradually. The analysis of the process helps to distinguish two levels of negotiation: negotiation between the extension services and the GVs and negotiation within the GVs.

Negotiation between extension services and the GVs took on an element of facilitation. Suspension of the yield-dependent purchase of pesticides is to be promoted by the CARDERs. Each of the GVs was asked to choose between the outright or direct purchase of pesticides, i.e., the system they prefer. The extension workers helped them with the implementation of the system. This means that a flexibility was introduced in the way decisions about farmers' problems were made in that respect. But, such a negotiation is only valid for the transition period since after some years the yield-dependent purchase of pesticides would be suspended in all GVs.

Inside the GVs the search for consensus on whether or not to cancel the system of yield-dependent purchase of pesticides has been difficult despite the facilitating role of specialists in cooperative matters and other field extension workers. In fact, in most of the GVs two strategic groups emerged - the big and the small farmers. Big farmers are for the cancellation of the yield-dependent purchase system while the small farmers are against it. Many reasons are offered by each strategic group to justify its position. The results of such negotiation varied from GV to GV. In the GVs where leadership of big farmers is strong, yield-dependent purchase system was suspended. In the other GVs the system has been retained, at least, for some years. Negotiation is, thus, a process of power balance between two (or more) strategic
groups. In that case, the strength of leadership seems to be the resource used in the process of negotiation.

4.5.2 Coping behaviour

The analysis of the response of actors to the policy of giving more responsibility to farmers shows that two forms of coping behaviour may be distinguished: rejection and acceptance of part or whole of the process.

(Partial) rejection of the policy

Partial rejection of the policy was noticed both among farmers and extension workers.

In fact, most of the farmers rejected the cancellation of the yield-dependent purchase of pesticides in the GVs. The opportunities they derived from the implementation of the policy are basically the reasons for such attitudes. This rejection attitude is also illustrated by the following opinion offered by a GV member:

We need to be serious and open. Suspension of the system of yield-dependent purchase of pesticides is appealing to large farmers. In our GV, we have not yet reached such a level of productivity to be able to afford this suspension. In the meantime, let us continue with the yield-dependent purchase system for as many years as it is still possible.

As such, this form of rejection is rooted in past experiences with regard to the benefits farmers derived from the yield-dependent purchase of pesticide, either individually or jointly. They are really convinced of the utility of this form of repayment. Such a rejection may be labelled as an *internalized rejection*.

But after some years, this form of repayment will be suspended in all the GVs as another step in the transfer process. Thus, all GVs complied with the situation since it was difficult for them to carry out the yield-dependent purchase of pesticides without the assistance of extension workers. It was just too complicated. As such, they accepted the repayment of pesticides at real costs, not because they were convinced of the advantages of the system but because they do not have a choice anymore. It is a *compliant acceptance*.

Some Rural Development Officers slowed down the process. As such, they have, implicitly, rejected the policy of giving more responsibility to farmers only because some of the GV committees do not respect them anymore. They are not able to say it explicitly to their superiors. They are not just motivated at all to speed up the process. Such rejection based on lack of motivation may be seen as a *skimping* of the process. These development officers did not succeed in controlling the situation since they do not have enough power to do so (see section 3.5.3 about factors that affect response of extension workers in the CARDER). Also, if their superiors are informed
about such an attitude, they will be disciplined. They have only complied with the situation. It is a *compliant acceptance*.

Neither of these patterns of coping behaviour influenced the outcome of the policy that much. In the case of internalized rejection, farmers controlled the situation as far as possible, i.e., during the transition period. The DEOs who tried to botch the process finally complied with the situation. As such, internalized rejection and skimping may lead to a compliant adoption when choices are not possible anymore or if the discovery of this rejection may lead to being disciplined.

**(Partial) acceptance of the policy**

Apart from the compliant acceptance mentioned in the section on rejection, the policy of giving more responsibility to farmers was accepted by most of the farmers and some extension workers. The main reasons underlying this acceptance were not related to great confidence of the actors in the relevance of the policy. But, they were more attracted by the opportunities the process offered them. In fact, the whole policy of giving more responsibility to farmers in general, and especially the decision to transfer some of the activities formerly carried out by extension workers, is an opportunity offered to many actors to attain the hidden goals or objectives of their institution. Most of the VEWs who were in favor of the process used some of the opportunities to save time for themselves. Members of GV committees used the process either to satisfy their social relationships, their financial problems, or to integrate into more powerful networks, and thus to increase their social position. Also, the speech of the chairman, as stated above when dealing with rejection, was an indirect way of telling people what are the means he used to go from the ordinary chairman of GV committee to the chairman of the administrative board of the CLCAM. Implicitly, he maintained that the opportunities offered by the knowledge he got from his position in the GV helped him to extend his network out of the village. This means that even if his position in the village is actually challenged he will be integrated in more powerful networks.

All these coping behaviours that are based on using opportunities offered by the process to achieve individual goals may be seen as *opportunity grasping*. Also, success of the process in cotton production areas in comparison with the areas where only food crops are produced has reinforced the fact that the opportunities provided are the basis of acceptance of the policy. But, it shows that these opportunities may be used either for group interests or for individual purposes. Also opportunity grasping may lead to internalized acceptance once the capabilities and knowledge gained through the opportunity grasping behaviour will be integrated as part of the actors’ frame of reference. That will need, of course, some time.
4.5.3 Factors affecting responses of actors to the policy of giving more responsibility to the 'Groupement Villageois'

Factors shaping the responses of the actors to the implementation of the policy of giving more responsibility to the GVs are either related to individuals or to structures.

Factors related to individuals
The main factors related to individual actors seem to be in their past experiences and level of formal education. In fact, the first GV was set up in the northern part of Benin where cotton was produced by almost the majority of farmers. As such, members of the GV derived individually or jointly a large income from this crop. During the process, all the actions were based on calculations of the level of income they could draw from all activities transferred.

Level of formal education seems to be a factor contributing a lot to the involvement of the actors in the process. In the GVs, all the secretaries are literate; chairman and chief treasurer positions may be given to illiterate farmers. The influence of secretaries is strong because of the knowledge and skills acquired through training. Unless ways are found to teach this knowledge and these skills in local languages, formal education is one of the few paths to get into the network of the GVs. Attempts were made by extension services to translate most of the information related to the GVs into the local languages and to use these translations during the meetings with the GV members. But the scope of such attempts is limited.

Factors related to structures
From the analysis of the various responses and on the basis of the observations and interviews carried out in the field, two main institutional factors may be identified as shaping the responses of actors in this case study: opportunities provided to the institution and the way information is managed.

In fact, acceptance of the process was mainly based on the opportunities provided. Many opportunities are offered to the GVs through the implementation of the policy of activity transfer. These opportunities are economic and technical. Economic opportunities are drawn from various refunds and commissions returned to the GVs. These resources are used to build socio-communal infrastructure such as roads, schools and cultural centers. Technical opportunities are the knowledge and capabilities provided through various training sessions. Also, in the long term, it is expected that the GVs take over some extension activities. Apart from these opportunities, actors involved try to create other opportunities for themselves. These are mainly related to the extension of their informal network and thus, their social position. As such, the opportunities available to actors play a great role in their response. In the GVs where these opportunities have not been noted, i.e., in areas where only food crops are produced, GVs and their members are not so enthusiastic about the new policy, and performance is very poor.
The way information is exchanged in the GVs proves essential in mobilizing the interests of other farmers with respect to the management of the associations. Information is power. The GV committees have monopolized information about the associations for themselves. Facilitation of the process of information exchange by the specialists in cooperative matters induced new dynamics in the GVs.

4.6 Conclusion

The study of the policy of giving more responsibility to farmers and their organizations for such activities as input and credit management, collection of cotton production and refund management shows that this policy met the needs of the GVs, since they have been very enthusiastic. Extension workers, specialists in cooperative matters and farmers are making necessary efforts either to extend the process to many GVs or to make the process as successful as possible. But this enthusiasm does not exist in all the GVs. Analysis of the responses of actors to the implementation of the policy shows the following.

Knowledge and information processes such as joint learning, training, facilitation and negotiation played important role in the success of the implementation. Specialists in cooperative matters played a major role in most of these knowledge and information processes.

Some of the components of the process were rejected by some GVs because it could reduce the opportunities they have in the process. Also, some Rural Development Officers attempted to boycott the process not because of sound arguments but only for psychological reasons (self-esteem). All these forms of rejection developed, later on, into a compliant acceptance of the components either because the available choices were suspended or because of power relations in extension institutions. As such, rejection may lead to a compliant acceptance, according to the situation. Opportunity grasping is the main behaviour that ensured success in the process. In fact, acceptance of the elements of the process is based mainly on economic, technical or psychological opportunities available for individual or groups of actors.

The main question is how these responses may lead to sustainable development of farmers’ associations in Benin. In fact, as long as the opportunities are regarded as interesting for actors, sustainability of the GVs may be guaranteed and reinforced. In the areas where cotton is produced, such an availability of opportunities is guaranteed mainly by the devaluation of the CFA which may increase the income and refunds that individual farmers or GVs may earn from cotton production. The opportunity grasping behaviour may, thus, lead to internalized acceptance of the policy of activity transfer. Still, the role of the external facilitators is crucial to avoid a monopoly of the associations by a group of leaders. As such, countervailing power needs to be built within the GVs. Otherwise, the opportunities may be only profitable to some people.
In the areas where cotton is not produced, attempts need to be made to find motivating opportunities for individual farmers and GVs. Such opportunities may be derived from the creation of a well-organized and strong marketing chain ("filières") for some food crops, at least maize, in order to give equal development opportunities to all the GVs in Benin. Such organization calls for a political will to develop the maize marketing chain to satisfy urban and regional markets. Some opportunities already exist, such as the unfinished industry for maize milling in Bohicon\textsuperscript{11}, in the central part of the country. Also, there is a need to find ways to give (kind and cash) loans for maize production, as Sassakawa Global 2000\textsuperscript{12} is trying for relative success in Benin. SONAPRA, SDI and CLCAM need to be interested officially in these activities. Also, the State may encourage the establishment of new private societies for such purposes (financing of maize production, the collection of the product, its processing and maize flour export and distribution). Techniques have been drawn up for such processing into local well known final products at the Faculty of Agricultural Science of the National University of Benin (see Hounhouigan, 1994). The availability of a marketing chain and various credit facilities for food crop production may increase the interests of the concerned farmers for the promotion of the GV-tests. Still, it is uncertain whether repayment of credit in cash and in kind will work, in such a situation, as it does in cotton production areas, unless the new maize marketing chain is also highly controlled by the owners. It is a way to prevent farmers from selling their maize to other companies or traders. In reality, such control has never worked for food crops. The experience of the Sassakawa programme in this field is limited. Problems may arise as soon as it is extended to the majority of the farmers.

\textsuperscript{11} There is an industry for maize milling in Bohicon. This industry was not completely finished because of financial disruption. Thus, it has not worked so far.

\textsuperscript{12} 'Sassakawa Global 2000' is a foundation set up by a Japanese man named Sassakawa in collaboration with the former United States president, Jimmy Carter. The ultimate goal of this foundation is to contribute to the food crop needs of the year 2000. As such, they are interested in the promotion of food crops, maize and cassava mainly. In Benin, its involvement is through the CARDERs. But, the technical packages recommended by Sassakawa Global 2000 are different from the ones of the CARDERs. For example, the CARDERs recommend 100 kg/ha of fertilizer for maize while in Sassakawa Global 2000 recommendations, 200 kg/ha are used.
CHAPTER 5  MAKING AGRICULTURAL EDUCATION MORE RELEVANT FOR AGRICULTURAL DEVELOPMENT NEEDS

‘In order to come to grips with the normative side of curricular change—which has to do with different interests, power relations, political ideas, cultural views on education, ideas about proper management, etc...—it seems useful to try to make these normative aspects explicit and to discuss them thoroughly. Only then will it be possible to see whether the educational innovation can be adapted to what people feel and think about their daily profession. Exchange of information, opinions and views on management and educational context may contribute to some sort of consensus about the definition of problems encountered and about procedures to tackle these problems. It is a well known fact that people are prepared to participate in processes of change when they feel that these changes are beneficial for them in meeting personal and/or group needs recognized and defined by themselves’ [Schamhart and Van den Bor, 1994].

5.1 Introduction

5.2 Historical overview of the organization of agricultural education in Benin

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5.6 Conclusion

5.1 Introduction

Agricultural education is one of the basic conditions for agricultural development in a country. There are many ways of looking at education. It can be in terms of governing body (e.g., public versus private), or according to its general aims and goals (e.g., academic and vocational), or in terms of its formalization (e.g., informal, formal and non formal education). In Benin, agricultural education may be classified into three categories:
public, formal\(^1\) and academic education which occurs in agricultural education colleges and the university;

- public, non-formal\(^2\) and vocational education which is carried out through extension services, other development projects and agricultural education centers called 'Centre de Promotion Rurale (CPR)'; and

- informal\(^3\) agricultural education which young people receive with the help of their fathers - who are farmers - when they do not go to school; or the society as a whole through day-to-day experiential exchange between farmers.

Some aspects of the last two categories of agricultural education were examined in chapters 3 and 4. In this chapter, attention will be given to the first category of agricultural education, i.e., the public formal and academic education.

Broadly speaking, there are two aspects to be analyzed in the role of education: its role for the individual and its role for the society.

On the individual level, education can play two roles:

1. the qualification of individuals, i.e., education helps individuals to *master knowledge, understanding, and skills* that are *necessary* for the *fulfillment of certain (future) roles* (e.g., profession, citizen); and

2. the identification of individuals within a given social structure, i.e., education helps people to internalize values, attitudes, norms and patterns of behaviour that are identified with a certain social structure and the position of people in the structure.

These roles explicitly imply that people are educated for a given profession or position in the society. Thus, their education must be adapted to the requirements of this profession or position.

On the societal level, education is considered as part of a societal system and, as such, interacts with other societal sub-systems, e.g., economic, political, sociological

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\(^1\) Formal education is the highly institutionalized, chronologically graded and hierarchically structured educational system, spanning from lower primary school to the upper reaches of universities (Tossou, 1989:8).

\(^2\) Non-formal education is any organized educational activity outside the formal system, whether operating separately or as an important feature of some broader activity that is intended to serve identifiable learning clientele and learning objectives (Tossou, 1989:7).

\(^3\) Informal education is the unorganized and often unsystematic lifetime process by which every person acquires and accumulates knowledge, skills, attitudes, and insights from daily experiences and exposure to his or her environment at home, at work, at play, from travel, reading newsletters and books, from radio etc... (Tossou, 1989:7).
and technological. These sub-systems or societal areas of activities influence education as education also influences society (Droogleever, 1983). As such, education must be adapted to the configuration of the society as its immediate environment and vice versa, i.e., there must be a continuous interplay between education and society.

The aim of this chapter is to study how formal, public and academic agricultural education is usually adapted to the future profession and societal areas of activities which are going through rapid political, economic and institutional change in Benin. In this respect, the chapter will focus especially on the way public, formal and academic agricultural education institutions respond to the new situation in Benin.

The materials used for this study were gathered through interviews with students, teachers, school managers and farmers as well as through the study of the available documents. The experience of the author as a lecturer in the Faculty of Agriculture helped in that study. In general, the response to the situation is limited or slow and, as a matter of fact, the opportunities for collecting relevant materials were also limited. The chapter will be divided into four parts which are:

- a historical overview of the way agricultural education is organized in Benin;
- the rationale behind the relevance of making agricultural education more tuned to the needs of agricultural development in Benin and the employment opportunities;
- the main actors involved in the process of agricultural education adaptation and their response to the situation; and
- the way information and knowledge are managed to reach the desired objectives.

5.2 Historical overview of the organization of agricultural education in Benin

Formal agricultural education in Benin has been carried out at three levels: the lower agricultural education colleges; the only one intermediate agricultural education college; and agricultural education at the university level.

There are two lower agricultural training colleges (Porto-Novo and Ina), currently called ‘Collège d’Enseignement Technique Agricole (CETA)’⁴. These training colleges

⁴ The name of these colleges has been changed many times over the years but the contents of their curricula have really not changed much. The names used were ‘Centre de Formation Rurale’ from 1962 to 1979; ‘Complexe Polytechnique Agricole Niveau I’ from 1980 to 1990; and nowadays ‘Collège d’Enseignement Technique et Agricole’.
colleges were established in 1962. The educational goal was to train development agents for the real needs of the users (the development institutions) and capable of quick adaptation to the evolving sciences related to agriculture.

Up until 1972, there were two levels of education in the lower agricultural college of Porto-Novo: that for the Village Extension Workers, trained for nine months after primary school; and for the ‘Moniteurs d'agriculture’ trained for four years after two years training at secondary school.

The agricultural education college of Ina, only trained ‘Moniteurs d’agriculture’, currently called ‘Agent Technique du Développement Rural (ATDR)’. From 1980 on, Village Extension Workers (VEW) were not trained anymore since the number of ‘Moniteurs’ and graduates from the intermediate agricultural education college and the Faculty of Agriculture has increased more than needed. As a matter of fact, there is a tendency to employ ‘Agents Techniques du Développement Rural’ as VEWs.

There is only one intermediate agricultural education college, called ‘Lycée Agricole Médjé’ in Sékou. This college was established in 1961 as a result of cooperation between the Swiss Foundation for Technical Development Assistance and the Republic of Benin, and originally had as its goals:

- to train young farmers on the use and maintenance of tractors and other agricultural machinery; and
- to give farmers the elementary knowledge required for agriculture.

It was only from 1970 that the Beninese government decided to transform the center into an intermediate agricultural grammar school called the ‘Lycée Agricole Médjé’. The educational goal of the center shifted from training young farmers to the training of intermediate agricultural technicians. These technicians, named ‘Conducteurs des Services Agricoles’ and currently ‘Contrôleurs du Développement Rural’, were trained to work in governmental development institutions.

The Faculty of Agriculture of the National University of Benin was established in 1970, initially as ‘Département des Etudes Agronomiques et Agrotechniques (DEAA)’. This department became a faculty in 1977 with four main goals which were to:

- train students in agricultural and technical sciences;

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[5] The initial name given to this college at its establishment was ‘Centre National des Techniciens Agricoles (CNTA)’ by the Swiss in 1961. Later on, it was called ‘Lycée Agricole Médjé’. But, with the revolution this name was changed to ‘Complexe Polytechnique Agricole Niveau 2 (CPA2)’ from 1980 to 1991. Today, the second name is being used.
participate in the organization and implementation of agricultural research in Benin;

- contribute to the in-service training of rural development workers (e.g., researchers and extension workers); and

- provide expert services related to development in general.

5.3 The new policy in agricultural education

5.3.1 Description of the policy in agricultural education

Agricultural education in Benin was provided only through the agricultural education colleges and faculty. Education in these institutions was organized in such a way as to respond to the government's needs for agricultural development. Thus, all graduates from these colleges and faculty were automatically employed mainly by the Ministry of Rural Development. As such, they worked in the CARDERs or in research institutions (see figure 5.1). The other limited employment opportunities available for graduates of these colleges and faculty in the private sector were ignored since the managers, students, teachers and parents did not bother about employment problems.

But from 1987 on, this automatic recruitment of graduates from agricultural education institutions as civil servants was suspended as a result of the agreement between the State, the World Bank (WB) and the International Monetary Funds (IMF) in the framework of the Structural Adjustment Programme (SAP). Thus, graduates of the agricultural colleges and faculty were faced with structural unemployment. As such, the role of education for individuals, i.e., to help them master knowledge, understanding, and skills necessary for fulfilling a certain role, is at stake.

In this new situation, planners and managers of agricultural colleges, teachers, students and their parents are all concerned about ways to cope with the situation. Professionalization of agricultural education was the only solution educational planners adopted as a short- and middle-term adaptation to the changing society. This professionalization of agricultural education was intended to shift educational objectives from providing employees for development institutions, to training students as farmers, i.e., who are to create their own rural enterprises in the framework of the back-to-the-land policy. For this purpose new educational curricula were drafted

6 The concept of 'professionalization of agricultural education' is used to refer to the policy of gearing agricultural education more towards the professional employment needs of graduates.
Figure 5.1: Agricultural education and employment system

(Adapted from Tossou, 1989)

VEW: Village Extension Worker
SEO: Subdistrict Extension Officer
SMS: Subject Matter Specialist
CETA: 'Collège d'Enseignement Technique Agricole'
for these colleges in 1986 (Tossou, 1989). These curricula placed more emphasis on practical training than was the case in the former curricula. Education planners hoped that with these new educational programmes, graduates from agricultural colleges would be able to work in their own farm enterprises as young and modern farmers. Thus, it was assumed that specialization was no longer necessary. More attention was, therefore, paid to general knowledge in agriculture.

A general seminar on education (‘Les Etats Généraux de l’Education’) was organized in 1990 by the Ministry of Education. Recommendations were also made with respect to agricultural education. The need to train students to become young farmers in agricultural colleges was reinforced during this seminar. But no attention was given to on-the-job training of farmers in the colleges in order to improve their knowledge and skills.

At the Faculty of Agriculture a seminar was organized in 1991 in order to develop a global new training strategy. This seminar was based on data collected from graduates of FSA working in or outside the public sector. Many actors were involved in this seminar - alumni, employers (governmental and non governmental), students, teachers, planners and donors. The seminar resulted in an agreement on the need to make the education more professional according to profiles identified through data collected. But, there was a difference of opinion with respect to the concept ‘professional’ between actors. So far, no new training curriculum has been drafted. We will come back to these points later in the chapter.

Also, to justify the right of existence of the Faculty in this changing situation7, emphasis is now officially placed on other activities relevant for higher educational institutions such as:

(1) more integrated and development-oriented research;

(2) in-service training and upgrading of knowledge of agricultural development workers to equip them with relevant skills for facing the actual development challenges; and

(3) giving relevant services (e.g., technical advice and consultancies) to various institutions.

For a better coordination of all activities in (2) and (3), development of a formal framework was attempted. This was the ‘Centre d’Appui au Développement (CAD)’, a Center for Development Support which has as main objectives to:

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7 For many years, the Faculty of Agriculture focused its activities on training general agriculturists to be employed in the national agricultural sector. This sector seems to be overloaded with engineers, at least according to the donors. Thus, the right of existence of the Faculty is at stake.
facilitate participation of researchers of the Faculty in development-oriented studies, in in-service training and knowledge upgrading for development workers;

- establish a framework within which graduates of the Faculty may acquire some experience in development-oriented research; and

- facilitate a better coordination of various consultancies carried out by the academic staff in order to increase their numbers and qualities. This can ensure additional resources for the Faculty.

Many committees and external consultants worked on the project and got the CAD started. Unfortunately so far this project has not yet been realized. The perceptions and reactions of various strategic groups involved in the project vary in that respect. In all, the processes of change in the Faculty of Agriculture are very slow.

Finally, the number of students to whom fellowships may be granted by the government is nowadays limited. Thus, parents have to pay for the education of their sons and daughters.

5.3.2 Analysis of the new policy in agricultural education

Success of various strategies developed either at agricultural college level or university level depends heavily on the way the various actors involved in the educational system in Benin respond to these new orientations, although they all agree on the need to adapt education to employment opportunities.

In this section, the significance of the new policy will be discussed. This significance must be seen with respect to rural development policy in the country. In fact, the rural development approach adopted by a country determines to a considerable extent what kind of agricultural education is needed (Van den Hoogen, 1986).

In such an analysis, the manpower required for implementing the rural development policy will be one of the main elements in judging if the actual educational policy measure is relevant or not. In my opinion, three basic questions may serve as guidelines for the analysis as far as the manpower required is concerned:

1. Is there a need for people capable of analyzing an agrarian reality which is complex and which needs creativity and a multi-disciplinary approach, i.e., professionals who are capable of working with farmers?

2. Is there a need for professionals who are able to act as farmers? and/or

3. Is there a need for well-qualified specialists in a precise field who are capable of helping development to benefit from the latest findings of research?
For a long time, agricultural development was based on transferring new technologies to farmers. In such a situation graduates were considered as knowledgeable people whereas farmers were seen as ignorant. Improving theoretical knowledge of students and training specialized manpower were the main educational objectives. This view of development has changed recently, at least at the policy level, and this change has given rise to the present study. Development policies tend to be more oriented towards improving community services, satisfying basic needs of farmers for agricultural development, and developing capabilities of the rural people to manage their own activities and to solve own problems. Qualities needed for achieving such goals are related to development workers as well as to farmers themselves. Therefore, manpower needed may be classified into two categories:

- development workers capable of analyzing a complex agrarian reality in a joint action with farmers and other development actors, i.e., professionals who are able to work in multi-disciplinary teams and who are also capable of generating technologies relevant to agrarian reality analysis; and

- improvement of capabilities of farmers to participate in such teams, and provision of opportunities for them to have access to short courses relevant for their farming activities.

As such, well-qualified specialists who are only capable of helping development to benefit from the latest findings of agricultural research are not needed that much since such people are more oriented towards technologies than the specific development needs of the country.

The Faculty of Agriculture is suitable for teaming such people who are needed for systemic development planning and organization (objective 1). This educational activity must go hand in hand with other development studies and in-service training, i.e., the outreach activities. This calls for a profound curriculum reform in order to devote more attention to such skills as group work, assessment of the agrarian reality, decision making and problem solving. Theoretical knowledge might be given to students only with the intention of supporting these activities instead of being an educational objective by itself.

Agricultural colleges may be more suitable for training that can be offered to farmers. Training students to become farmers is a short-term and unrealistic view of education since already more than 70% of the active population working in farming needs some knowledge improvement in order to increase productivity. Development planning is a coordinated action that looks to all sections of the population in its attempts to find long-term and sustainable solutions to the current problems instead of devising short-term solutions. As it has been stated in a well-known Chinese proverb quoted by Ngu (1984):

113
If you are planning for a year, sow rice
If you are planning for a decade, plant trees
If you are planning for a lifetime, educate people....

Education is a lifetime input or investment that needs accurate planning. It is, then, more important to concentrate on the mass of people who choose or who still want to choose farming as their lifetime work instead of creating new forms of non-motivated farmers or new types of 'cas sociaux'. In the CARDERs, initiatives are taken in that respect through the 'Centre de Promotion (Formation) Rurale (CPR)'. Actually, there are at least six such training centers in Benin. In these CPR two types of training are actually offered:

- short courses of one to three weeks for retired civil servants who would prefer to engage in rural activities and, thus, who need specific training (e.g., in horticulture, poultry or farm management). This training is also for farmers who have similar specific interests; and

- one-year (12 months’) training for people out of school who would like to start farming activities.

Demands for such training are high and the available centers are not yet able to satisfy them. The CARDERs have explicitly expressed concern over raising financial resources in order to increase the capacity of such centers. Agricultural colleges in which infrastructures already exist, although obsolete, may be progressively directed towards such training and, thus, limit the scope of their classical formal education.

5.4 Individual and collective responses of actors to the new orientations in agricultural education

5.4.1 Introduction: actors involved in the policy

The main actors involved in the readjustment of the training programmes to the new employment opportunities are: policy makers; education planners; education institution managers; academic staff; donors and/or their representatives; students; employers of graduates from agricultural education institutions; and the Beninese society.

Policy makers are government representatives. They are in charge of framing government policies in education, which are heavily based on the back-to-the-land policy advocated by the government. They decide on the way resources allocated to education may be used. It is their duty to approve or reject educational programmes drawn up by planners. Most of the time educational goals are set by them. That is the case of the present objective of training farmers in agricultural colleges.
**Education planners** are the people in charge of curriculum development. They are not permanent civil servants. Curriculum planning is usually the task of an ad hoc committee called *Commission interministérielle* set up for this purpose. Composition of this committee varies. Its role is to determine the various subjects to be taught; the broad outline of knowledge to be acquired by students; time to allocate to each subject and importance of practical and classroom teaching. The committee is always composed of government representatives who are the policy makers in education; representatives of academic staff; representatives of the employers who were in the past limited to the Ministry of Rural Development; and sometimes representatives of the donors. The committee disbanded once the programme is set.

**Managers** of agricultural education institutions are in charge of the day-to-day management of these institutions. Whatever terms are used to name them in each institution, it is their duty to manage the execution of the programme with the limited resources allocated to the institution or to look for additional resources from donors. They do not have any influence on the allocation of resources from the national annual budget but have an important role to play in the success of the management of new adaptation processes.

**Academic staff** is mainly composed of teachers or lecturers. They are responsible for subject matter. Their professional career depends a lot on the efficacy of the adaptation processes. In theory, they must comply with the recommendations of planners and managers. But, in reality they create enough room for themselves in the management of their teaching activities, especially the academic staff in the Faculty of Agriculture. This will be elaborated later in section 5.4.2.

**Donors or their representatives** are the agencies supporting financially and technically differing education institutions. They are not physically present in the colleges. They intervene through the Ministry of Education. But in the Faculty of Agriculture their representatives are physically present. This presence may be permanent or casual according to needs. Sometimes, they have a double status as representatives of donors, and members of the academic staff. Their influence on the adaptation process is high. They have their own educational policy that they have to defend.

**Students** are beneficiaries of education. Their lives depend on the relevance and quality of the education they receive. They are heterogenous as far as their socio-economic conditions are concerned. Their ultimate objective is to find a job after graduation, mainly as civil servants (Tossou, 1989). If they comply with the new orientation of agricultural education they need to change this objective in favor of starting their own business.

**Employers** also have a high interest in the education of agricultural colleges and Faculty. They need to have employees who respond to their needs. But, their influence on the process is low. The employers were in the past limited to the state
development institutions (e.g., extension, research and other development projects). But today, the Non Governmental Organizations are the main employer since their number is increasing steadily.

The Beninese society (e.g., farmers, former alumni, parents, traders) are all affected by the new situation. They need to improve their rural activities. For this purpose they need to have well-trained graduates capable of satisfying their needs. A special category of the Beninese society are the parents of the students. They need relevant education for their sons and daughters. This need is increased among those who have to pay for the education. The former alumni will assess the level of education of the present students after graduation and will compare it to what they received. Their perception of the quality of education will influence the place the new graduates hold in the society.

This variety of actors with different and sometimes conflicting interests already gives a picture of differentiation in response to the new orientations of the agricultural education system.

5.4.2 Individual and collective responses of actors to the new orientations in agricultural education

Response of actors involved in the process of re-orientating agricultural education in Benin varies from one group of actors to another. Six groups of actors will be taken into account in this discussion. These are: managers, academic staff; donors and/or their representatives; students, employers and the Beninese society, mainly parents of students. For each of these actors two levels of analysis will be distinguished: agricultural colleges and the Faculty of Agriculture. As far as the Faculty is concerned more information concerning part of the process of restructuring the mission of the Faculty, mainly about the seminar on curriculum reform, can be found in Schamhart & Van den Bor (1994).

Managers of agricultural education institutions. They were the first to react positively to the implementation of the new curriculum for training farmers. They changed the title of the diploma awarded to graduates of agricultural colleges as determined by the planners. They persuaded students of the relevance of a new programme for them and implemented it. But, once confronted with the reality of student strikes, they told students officially that the new programme was suspended even before the official decision to suspend it was made by the representatives of the government. Finally, they recognized that changing the title of the agricultural college graduates to ‘farmers entrepreneurs’ would in the future create a confusion in the employment market for these graduates. They were, therefore, indeed using a new programme, but the title of college graduates did not change. This behaviour was confirmed recently by one of the managers of an agricultural college:
It is unfair to change the title of the graduates of the colleges. This was a mistake of my predecessor, which will have a negative influence on the job opportunities of graduates, once recruitment for the agricultural sector as civil servants starts again. We are using the new educational programme mainly by increasing the opportunity of students to have practical exercises. This will enable them to be as qualified to start their own rural business and to be employed as civil servants... We do not want to damage the future of the students.

Such behaviour is based on the cultural thinking and attitude of the employer. The title of the diploma is very important in Benin. It has nothing to do with the contents of education. A diploma entitled ‘Farmer entrepreneur’ is worth less than one of ‘moniteur’ or whatever else, even when the contents of education are the same. Such a conception is shaped by the perception that farming is a ‘dirty’ job. Education is an alternative to such a job. Thus, it is difficult for people to recognize and give credit to a diploma directly related to farming activities. This is further elaborated in section 5.5.3 when discussing factors related to individual actors.

Managers of the Faculty of Agriculture have played a more active role since their room for manoeuvre in the process of reorienting activities in the institution is greater than the one that managers of the agricultural college have. Managers of the Faculty are the ones who took many of the initiatives, as they are in contact with all actors involved in the process and have, therefore, more access to information than others. They initiated various processes to move more quickly than they actually are. They set up various ad hoc committees to work out the final reformed training programme. They acted as real internal prime movers. But, can they behave otherwise? In fact, they are more concerned about the right of existence of the Faculty in the new situation than other actors. Also, donors and/or their representatives put pressure on them to make things advance more quickly if financial and technical support are to continue.

Academic staff of agricultural education institutions. Teachers of agricultural colleges have not modified their teaching. They still use the same content, and the same teaching methods. They do more practical teaching, but this is nothing more than making students work on school farms, with no organization and no theoretical background. They are aware of the situation. But according to them, they cannot change if the teaching conditions do not change. One of them told the researcher:

According to the new programme, there will be 30 hours for tractor driving. But till now, there has not been one tractor in the college. In the other colleges the existing tractors are out of service. Also, apart from an in-service training of some days, no training of trainers has been organized in teaching methods. We only teach as our teachers taught us. We simply copy their teaching methods... Without real training in teaching methods, it will be impossible for us to change even when we want to do so. This has been brought to the attention of the Ministry of Education.
At the Faculty of Agriculture, the response of academic staff varies according to category of age and seniority in the college. Therefore, two categories may be distinguished, senior and junior lecturers.

Senior lecturers are more reluctant either to reform the curriculum or to set up the ‘Centre d’Appui au Développement (CAD)’. Their participation in these processes is very limited. They do not react positively to the basic decision made to issue lecture notes and use more active and participatory teaching methods. This attitude seems to be due to the fear of going through the whole process of contents-reformulation and of learning new methods. All these things need more time, which is difficult for the seniors to devote since they are more heavily involved in other activities out of the faculty such as involvement in Non Governmental Organizations, in national or international networks which help them to increase their income. The initiation of the CAD activities may go against their own interests.

Most of the junior lecturers seem more open to innovation since they have their career at stake. They are more involved in the various steps of curriculum reform. Some of them take initiatives in curriculum development for in-service training, as well as knowledge and skills readaptation for rural development workers at national and regional levels. They are also more open and more inclined to use active and participatory teaching methods.

Regardless of the category to which they belong, all academic staff are opposed to a strong professionalization of education in the faculty. They collectively agree on a good balance between practice and theory but are very concerned about maintaining a level of academic training which is in line with the requirements of the ‘Conseil Africain et Malgache de l’Enseignement Supérieur’ (CAMES), the highest scientific regional institution. Also, they believe that there still is a need for highly trained engineers for development in Benin, but teaching methods have to be seriously modified.

Donors and/or their representatives in agricultural education institutions. They have the financial power, and therefore, use it to stimulate or pressure the other actors to achieve their policy of development cooperation. Their response is always different in situations where many donors support an institution. In agricultural colleges their action was to support the implementation of the new curriculum once it was prepared. At present, their support is mainly through the training of managers in group dynamics, financial accounting, training in curricular adaptation to new needs, training to become a good enterprise manager and training in pedagogical follow-up. Also emphasis is placed on giving more value to agricultural activities in colleges so as to impart the basic skills capable of facilitating the initiation of private rural enterprises for students after their graduation.

At the Faculty of Agriculture, donor representatives who are expatriates manage to orientate the curriculum reform in a direction which is compatible with the political
objective of their country of origin, i.e., according to the mission assigned to them within the framework of cooperation. They want quick results. They are real external prime movers, more powerful than the internal ones. For example, before the reformed curriculum was adopted by the academic staff, some of its aspects were already being implemented. They need to justify their presence in the Faculty with respect to the donors.

All the expatriates present in the Faculty agree on the necessity for curriculum reform but do not agree on how strong the professionalization of the education ought to be. Some of them are geared towards more active and participatory teaching methods with a good balance between practical teaching and theory, whereas others support a strong professionalization with more practice and less theory. These conflicting positions sometimes create confusion between academic staff and donors, and even, bring staff members in conflict with each other.

**Students of agricultural educational institutions.** They are not much involved in the adaptation of education to the new situation. The involvement of students in the process was noticeable in the Faculty of Agriculture as far as the seminar on curriculum reform was concerned. But, even there, their participation was low because of power differences between them and their managers and the academic staff. All the students are concerned about employment opportunities but do not agree with the strong professionalization and training of young farmers as the solution to the new situation of the societal system. These feelings are expressed differently between students of colleges and those of the faculty. The latter have the same point of view as their teachers, so they have nothing to really worry about. But, students of colleges have put a kind of pressure on their managers and planners in order to have the situation reconsidered.

After three years of implementation of the new programme, students realized that the title of their certificate had changed but the education had not changed much; change only concerned the use of the students for work on the school farm. They said the quality of education is less than before, what they called 'formation au rabais', i.e., discount education. Some of the students told me:

> During three years of application of this new programme, half of the contents had never been executed... Theory is more than practical teaching, which only consists of work to be carried out on the school farm. No questions are allowed during these practicals and the objective is only to have experience in farm activities and with traditional tools... It is a loose education and we have already experienced this kind with *Ecole Nouvelle* and we are not ready for such education again.

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8 *Ecole Nouvelle* was an educational reform which was prepared and implemented in primary and secondary schools during the marxist revolution period with negative results. Most of the students who are currently targets of the new training program in the agricultural colleges underwent this type of education.
They did not trust the State anymore when it was promised to them that after graduation, financial supports would be provided to help them start their own agricultural business:

In the programme, it was clearly specified that the state would promote the creation of private rural enterprises by facilitating access to land, and providing required financial support. How can a state which is not yet able to pay salaries for its employees provide financial supports to the private businesses of all graduates from colleges and even the Faculty? Many State farms were created in the past but the state was unable to provide the required financial and technical assistance for them without foreign aids.... How may a state which is unable to buy one tractor for each of the agricultural schools provide one to individual graduates? Surely, we will become traditional farmers as our parents are now.

They are also sceptical about the behaviour of the extension workers who sometimes are their part-time teachers or supervisors during field work:

Some extension workers are opposed to the new training objectives. During our field work our supervisors make fun of us. They say: "You only need general training. We don't know why they send you here to us who are specialists. We don't know what to teach you, just look how specialists are doing...". Some of the part-time teachers who are also specialists have the same attitude towards us.

Students still hope that one day they will be recruited as civil servants, so they want the same education as former graduates. On the basis of these reasons they went on strike and succeeded in making managers and decision-makers reconsider the educational programme.

But some of them are more conscious of the situation. Whether they are from colleges or from the Faculty, they have adopted individual strategies which consist of choosing a specialization which may guarantee more employment opportunities. As such, in the colleges many students choose animal husbandry as a specialization. This specialization has potential employment opportunities mainly in the northern part of the country. For example in 1990, from the discussion with the manager of the lower Agricultural College of Ina, it appeared that 80% of the final-year students chose this specialization. Table 5.1 gives examples of the importance of such specializations in the choices of the students of the intermediate agricultural college of Sekou.

This table confirms that there is a concentration of demands for some specializations, namely animal husbandry, crop production (for one’s own rural enterprise) and rural engineering for casual jobs in rural areas.

In the Faculty of Agriculture demand for specialization is more concentrated in the social sciences. Of course, all these demands have not been satisfied because of limited supervision possibilities. But in the colleges, students without fellowships always choose the specialization they want. It is one of the conditions of their being in those colleges.
Table 5.1: Distribution of the students according to their field of specialization in four academic years (absolute numbers)

<table>
<thead>
<tr>
<th>Field of Specialization</th>
<th>1990</th>
<th>1991</th>
<th>1992</th>
<th>1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal husbandry</td>
<td>13</td>
<td>13</td>
<td>13</td>
<td>12</td>
</tr>
<tr>
<td>Rural engineering</td>
<td>3</td>
<td>9</td>
<td>10</td>
<td>12</td>
</tr>
<tr>
<td>Crop production</td>
<td>9</td>
<td>15</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Fishing &amp; Forestry</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>Food technology</td>
<td>4</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>29</td>
<td>37</td>
<td>36</td>
<td>36</td>
</tr>
</tbody>
</table>

**Source:** Field research in the 'Lycée Agricole Médji de Sékou'

Employers of graduates from agricultural educational institutions. Their response to the situation is mainly to choose more qualified candidates. For one given job position there are usually up to a hundred candidates. For selection, employers use criteria such as specialization (diploma), curriculum vitae and professional experience. The contents of the training are not usually relevant.

The Beninese society. It has no particular response. People do not agree with high professionalization since every parent would like his/her son or daughter to become a civil servant. Continuous increase in demands for private enrolment in the agricultural educational institutions show the degree of importance they still attach to this education, although they do not see it as a prime alternative choice. Table 5.2 gives examples of the situation in the intermediate agricultural college of Sekou with respect to the demands for private enrolment.

Table 5.2: Evolution of demands for private enrolment in the intermediate agricultural college of Sekou

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of demands</td>
<td>4</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>16</td>
</tr>
</tbody>
</table>

**Source:** Field research in the 'Lycée Agricole Médji de Sékou'

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9 The concept of ‘private enrolment’ is used to refer to the enrolment for which parents have to pay educational fees for their sons and/or daughters.
5.5 Analysis of actors’ responses to the new orientations in agricultural education

5.5.1 Knowledge and information processes

From the analysis of the various forms of response adopted by the actors, i.e., a close look to the evidence collected in this case study, three main knowledge and information processes may be identified: decision making; negotiation/consensus building; and facilitation. All these processes are related to curriculum design.

Decision making
Curriculum planning involved a process of decision making about educational objectives and teaching methods. The level and degree of involvement of actors varied between agricultural colleges to the Faculty of Agriculture. The main actors involved in the process in each of these institutions are shown in table 5.3.

Our data support that:

- whatever is the case, farmers and students’ parents are not associated with the process, although the final development goal of agricultural education is to contribute to the improvement of the community services;
- policy makers are strongly involved in decision making about educational programmes in agricultural colleges but less in the Faculty of Agriculture;

Table 5.3: Actors involved in decision making on educational reform

<table>
<thead>
<tr>
<th>Agricultural colleges</th>
<th>Faculty of Agriculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Policy makers</td>
<td>Representatives of the donors</td>
</tr>
<tr>
<td>Utilizer of the Ministry of Agriculture</td>
<td>Utilizer of the Ministry of Agriculture + NGOs</td>
</tr>
<tr>
<td>Representatives of the academic staff</td>
<td>The academic staff</td>
</tr>
<tr>
<td>Managers</td>
<td>Managers (Representatives of the students)(^{10})</td>
</tr>
<tr>
<td></td>
<td>(Representatives of former alumni)</td>
</tr>
</tbody>
</table>

\(^{10}\) (...) These actors are involved only in part of the process.
students are not involved at all in the curriculum reform planning in the agricultural colleges. In the Faculty of Agriculture they are partly involved in the process and this involvement is not that active. In fact, after the seminar on curriculum reform, all decisions related to curriculum reform are made by the managers, academic staff or their representatives and the representatives of the donors.

Although the situation seems better in the Faculty of Agriculture, no real joint decision making has occurred in the process since, as has been said earlier, no agreement was reached during the seminar on curriculum reform. Decisions are made by a category of actors on behalf of other actors, mainly students who are supposed to be ultimate beneficiaries of educational reform. Students and farmers are not considered as knowledgeable actors in the process. Thus, their influence on the educational reform is too small. They are in a way victims of regulations set by other actors. We may better term this process of decision making as regulation setting. This process of regulation setting occurs mainly in agricultural colleges. Such a situation may increase discrepancy between learning objectives of students and the educational objectives. Thus, students’ coping behaviour may tend either towards voluntary rejection or towards an acceptance based on external influence.

**Negotiation/consensus building**

At the beginning of the process of curriculum reform, there was no agreement on educational objectives. The way a consensus was reached on the matter varied between various agricultural education institutions.

In agricultural colleges, students went on strikes in order to protest the decision to train farmers in these colleges. Through this manner of protesting they succeeded in influencing the educational objectives set by other actors for them. As such, although they were not able to introduce a profound change in the contents of the programme, the training objective was changed. From the students’ point of view, this result is of great importance for their future professional life.

In the Faculty of Agriculture, the seminar on curriculum reform initiated by managers under pressure of donors, and which involved most of the actors concerned with agricultural education in Benin was, in fact, a first step in the negotiation process. It aimed at reaching a common understanding and agreement about a significant educational objective for such a higher education institution in the new socio-economic situation in Benin. This educational objective was labelled as ‘gearing training towards the professional employment of the graduates’. The concept of professionalization was a focus point for the continuation of the negotiation process. In fact, the main disagreement between the various actors in the Faculty of Agriculture with respect to curriculum reform was the meaning given to, or the interpretation of, the concept ‘professional education or professionalization’ by each of the groups of actors and the way this professionalization was to be achieved. Some of them see professionalization as a result of a training programme more
oriented towards practical work. Others think that it can be achieved through an improvement of the teaching methods to be more active and participatory. And the other categories of actors subscribe to a good balance between theory and practicals with the improvement of the teaching methods. This shows different ways of conceptualizing and operationalizing ‘professionalization’. All these different views of the concept are guided by various, often hidden, interests of the groups concerned. We will come back to this in section 5.5.3.

All the structural changes initiated to justify the right of existence of the Faculty of Agriculture since 1990 have not yet been completed. The process of change is very slow. Managers and academic staff, consciously or unconsciously, slow down the negotiation process in such a way that adaptation in this situation is progressive and gradual. If the process is conducted very well, such an on-going adaptation may lead to a more internalized and sustainable adaptation based on negotiation, renegotiation and consensus between the actors concerned.

In both the agricultural colleges and the Faculty of Agriculture, actors tried to reach a consensus on the educational goals. But, the negotiation processes in these two types of educational institutions differ in terms of their duration. As such, negotiation may be fast or slow. All depends on the prevailing power relations, i.e., the ability and capacity of each of the various actors to induce others to carry out their directives or any other norms they support.

Facilitation/coordination
Facilitation, in this case, refers to the process through which some actors speed up the curriculum reform process towards the desired outcome. Facilitators are either managers of educational institutions, donors, or both. They act as internal and external prime movers. On the basis of the evidence collected, facilitation in the process of gearing agricultural education towards the development needs of Benin, may be related to important activities such as coordination and facility provision.

The coordination of the knowledge and information activities is carried out by the managers of educational institutions. Such a coordinating role has been apparent in the Faculty of Agriculture in which managers (dean and vice-dean) take required initiatives either to form relevant ad hoc committees, or to organize various meetings in order to support the process of curriculum reform. Sometimes, this coordination takes the form of regulations (directives, norms, standards) that academic staff must comply with. Managers speed up the process, and initiatives in that respect are taken by them without consulting the academic staff. They may be helped by some teachers regarded as motivated and engaged in the process. Such attitudes may be understandable since the managers are confronted with many constraints. On the one hand, donors put pressure on them in order to make progress in the reform. On the other hand, the academic staff is not motivated to hurry, or is not pressed for time with regard to the reform since additional efforts are required from them to
implement it. As such, managers are caught in the middle between donors and academic staff.
Facilitation, in this case, means knowing when to act with regulations and/or with interactive activities (e.g., meeting and ad hoc committees).

Facilities are mainly provided by donors either indirectly through the Ministry of Education or directly through their representatives at the institutional level. Depending on the institution, these facilities may concern financial or material resources, or training opportunities. In all agricultural education institutions, such facilities are crucially needed for the implementation of any reform since the government's financial assistance is being reduced from year to year. Also, training and teaching facilities are either not available or obsolete.

In the agricultural colleges facilities are supplied by the Canadian International Development Agency for the:

- training of managers (e.g., directors and vice principals) of colleges in the field of agricultural school management matters;
- training of academic staff in relevant teaching methods and techniques in micro enterprise-oriented training, and the provision of them with relevant teaching materials; and
- provision of learning facilities to students with regard to private, small, rural enterprise creation and management.

In the Faculty of Agriculture, French university cooperation provides facilities for the creation of the 'zone d'application' which was already operational before the adoption of the new curriculum. Such an interest may be guided by the role played by such an application zone for the implementation of their conceptualization of professional agricultural education.

Dutch cooperation is more focussed on the development of outreach activities for the Faculty through the 'Centre d'Appui au Développement', the improvement of teaching methods, the improvement of research capacities of academic staff and assistance for preparation of a long-term strategic development plan for the Faculty.

In each of these institutions, donors play an important role in the facilitation of the process of curriculum reform. In their involvement, each of these donors places emphasis on the activities they regard as essential either for a successful

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11 A 'zone d'application' is an area selected as a host for various sorts of field work organized for the students of the Faculty of Agriculture during their training. This zone covers many villages. The present 'zone d'application' is situated in the community of Ahouanonzoun, in the Atlantique province.
implementation of a professional agricultural education and/or for the design of the role of Faculties of Agriculture in development. As such, they act according to the development aid programmes of their countries of origin. Thus, they are more or less imprisoned in their own cultural background (Van den Bor, 1983). This analysis of the way facilitation is oriented by donors helps to better understand the position of managers. Sometimes, donors’ representatives are also caught between the cooperation policy of their countries or universities, and social realities of the institutions in which they are operating. So far, their power, which is derived from resources they can easily mobilize, has been considerable in influencing the orientation of agricultural education in Benin. Academic staff and managers of educational institutions are not always free in their decisions and actions. In such a situation, coping behaviour may be oriented towards grasping opportunities provided through cooperation with donors, compliant acceptance or towards the skimping of most of the innovative changes in agricultural education. Thus, only few really fundamental, internalized and sustainable changes may occur within the education system in Benin.

Facilitation through coordination and facilities provision influences the process of change in terms of speed, but also the coping behaviour of the actors with respect to motives behind adopted behaviour. Facilitators sometimes use regulations and sometimes use more interactive processes.

5.5.2 Coping behaviour

Two broad forms of coping behaviour emerged from the evidence collected: acceptance or rejection of part or the totality of the policy measures in the field of agricultural education. Within each of these two forms, specific forms of acceptance (or adoption), and of rejection will be derived on basis of the reasons or the circumstances that support actors’ current coping behaviour.

(Partial) rejection of the policy
Implementation of the new training programme in agricultural colleges has shown that the whole programme as planned was not completely executed. Students openly expressed their rejection of the educational objective through many strikes. After these strikes, they succeeded in changing the title of their diploma. This rejection is based on past experiences with the government’s previous unfulfilled promises, the current learning experience of students and the ideas that students have about education and farming activities. These last reasons will be dealt with in the section about the factors which influence the responses of actors in the present case study. Such rejection was mainly based on the experiences and value systems of the students and may be termed internalized rejection. Despite these strikes, the managers also

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12 Interactive processes are those processes which involve all the main actors concerned with change and which imply negotiation, facilitation, joint decision making and/or joint learning.
succeeded in introducing major changes in the training. These two categories of actors shared the control of the process through various negotiation strategies.

Results of negotiation show that internalized rejection, in that case, is not total but partial since it has to do only with the final goal of education but not with the contents and teaching methods. From the point of view of students, this rejection, even though partial, is a success since some managers have recognized the danger in changing the title of the diploma. Thus, internalized rejection of part of the policy measures may influence this policy in such a way that it can be readjusted to the desires of the actors concerned. The influence of such coping behaviour on the policy seems to be due to the fact that students acted as a group, not individually. Maybe in situations where interests are different, e.g., in the case of the academic staff in the Faculty of Agriculture, individual internalized rejection may not lead to a noticeable policy change.

(Partial) acceptance of the policy
Students in agricultural colleges and in the Faculty built up their own strategies to cope with the situation. This consisted of choosing specializations that are promising, in their view. Such behaviour denotes a specific way of coping in situations in which actors at stake are not powerful enough to influence the whole change process. Such a strategy is guided by their short-term objective which is, first of all, to ensure an opportunity for employment. Also these specializations may be useful in the middle-and long-term when recruitment for the public agricultural sectors starts again. It is on the basis of this hidden agenda that students develop a series of stratagems and adaptation techniques to deal with the choices that confront them. It is this hidden agenda that influences the adaptation of students in faculties (Verna, 1993). For some students, the strategy of choosing relevant specializations may be interpreted as a way to cope, in the short run, with the pressures or regulations put on agricultural education. Thus, such an acceptance may be seen as compliant acceptance. In fact, at the beginning of the study some of the students interviewed said:

Before my entrance into this college, I planned to choose rural extension as a specialization. With such a specialization, you can only work as an extension worker. Since the recruitment for extension activities was frozen, I chose animal husbandry which may provide interesting employment opportunities in the private sector. With a few hypodermic syringes and veterinary medicine you can find your way in the field. Thus, in case of non-recruitment, we can manage with this specialization. But, we still hope that with the democratic renewal things will get better.

But some years later, students became accustomed to the situation. Thus, the orientation towards more specific specializations as coping strategies adopted by students is no longer compliant acceptance. It has become internalized as the present students incorporated the new situation into their frame of reference. This is also justified by the fact that some of the students who enrolled in the colleges with private (parental) funding already have clear ideas about their specialization before
entrance. Of course, this choice is always guided by the current employment situation. Thus, the strategy of choosing more specific specializations becomes an *internalized acceptance*.

In conclusion, compliant acceptance may be a coping behaviour at the onset of a change. When actors become accustomed to the new situation, they may have time to integrate the new situation into their value system, since these changes may serve as a new experience for them. Thus, compliant acceptance may be transformed into internalized acceptance.

For the time being, the curriculum reform is still at its beginning in the Faculty of Agriculture, and no concrete coping behaviour or clear intentions can be observed. But, the past and current attitudes and motivation of academic staff may provide a basis for the prediction of the coping behaviour of this staff. In this prediction, a distinction will be made between junior and senior academic staff.

Junior staff may use the facilities offered to the Faculty by the donors to build their academic life. They are at the beginning of their academic careers and they need to grow. Research and training facilities are significant opportunities for achieving such growth. As such, they are more inclined to accept curriculum reform than their elders. Such acceptance based on interest in facilities provided by donors is a form of acceptance that can be called *opportunity grasping*, rather than a pure acceptance based on conviction or internalization. Of course, the use of these facilities helps junior staff to learn new teaching methods which can enrich their teaching experiences and can, thus, be internalized in the long run. But, if facilities are withdrawn, this opportunity grasping may evolve into a form of voluntary rejection, unless external pressures are forcefully put on them to make them comply with the new requirements of the curriculum reform. Anyhow, as newcomers in the field of teaching they may be more open to innovations.

But the senior staff are almost at the end of their career. They are no longer so concerned with being promoted but with making money. As such, all opportunities available in the Faculty, and which can help them achieve these objectives are welcomed. In that situation, the expected behaviour will hardly be adopted even if the available resources are used. These resources are not so motivating for them that they can innovate. Also, on the one hand, there is no other successful power instrument available to managers to put pressure on staff to, at least, make them comply with the reformed curriculum and related behaviour. On the other hand, they have no sound reasons to convince other staff members and managers of the uselessness of the curriculum reform. They just do not want to make the necessary effort to change their teaching methods. Coping behaviour may tend, in that case, towards rejection. This form of rejection is a pure *skimping* of the curriculum reform. Their current attitude and interest in practicals are enough to support such a knowledge claim.
5.5.3 Factors affecting the responses of actors to the new orientations in agricultural education

On the basis of the evidence collected in the field, the factors that affect the response of actors in the process of curriculum change will be analyzed within two categories: individual and institutional factors.

Factors related to the individual actors or group of actors

On the basis of the analysis of my own experiences as actor in the Faculty of Agriculture and as researcher in the agricultural colleges, two main factors related to individuals seem to shape their coping behaviour. These are past experiences and motivation.

The way past experiences influence actors’ choices will be analyzed through three main points - the design of education, the perception of farming, and the teaching experience of some of the academic staff.

Education has been, for a long time, considered as a path to public employment. A study carried out on education in the intermediate agricultural college shows that students enter the college only with an interest in being assured permanent paid jobs as civil servants (Tossou, 1989). Directors, vice principals and even some students of agricultural colleges confirmed that most of the students generally show a certain resistance to practical agricultural production activities during training. Employers of the graduates of agricultural colleges are of the same opinion. Some of them even said:

They are not eager to work in the rural areas, and have a bureaucratic idea of their roles and tasks in their working areas. Some of them even show that they are not cut out for working in rural areas. They adopt a white collar attitude (Akowe). They do not behave in a way that would build confidence between them and the farmers...

This idea about education is not specific to students of agricultural colleges. It is the ‘rule of the thumb’ for all educated people in Benin, including me, even though this perception is changing nowadays for some of us. This attitude has its roots in the way the French colonialists fashioned education. The education system was and still is completely disconnected from the rural community in such a way that educated people have always been regarded as outsiders by this community.

Education is seen as a way to escape from farming activities. I remember my father always told his sons, ‘if you don’t want to return to farming, like I do, you need to work hard at school’. People have thus for a long time, been sent to school not to become farmers but to escape from farming. Farming is considered as a ‘dirty’ and difficult job, even by farmers themselves and by the authorities who support the policy of ‘retour à la terre’. Farming activities are considered as the last choice for illiterates. Even some illiterates, in order to escape from farming, enroll themselves, with the financial and material support of their parents, in some non-formal training
as mechanics or carpenters. That is part of the colonial inheritance. But also the low level of productivity in farming activities contributes to such attitudes. Things are changing nowadays with regard to this last factor since many farmers are richer than the great majority of civil servants. But this is not yet enough to convince everybody.

A successful curriculum reform implies changes in teaching methods. But the majority of the academic staff are trained in more directive ways with an objective of transferring theoretical knowledge to students. As such, academic staff teach students as they were taught themselves. Many of them have used such teaching methods for years. That is another part of the colonial legacy.

A relevant coping behaviour for academic staff will be to exchange their teaching methods for a more practical, participatory teaching. Such changes may require a lot of effort from the staff. If training opportunities are offered, power relations and academic promotion patterns in agricultural colleges may help to change, at least partially, these methods. But in the Faculty of Agriculture such change will be difficult since there has been no pressure and senior staff are not so motivated as far as teaching is concerned. In fact, for them teaching is a kind of formality. They are more oriented towards outreach activities capable of yielding additional income, since salaries are very poor in Benin. Only senior academic staff who hold a management position are concerned with the quality of their teaching methods.

**Factors related to institutions**

At the institutional level, two main factors influence knowledge and information processes and coping behaviour of actors. These factors are the resources available to the institutions, and the communication patterns.

The government’s financial assistance to agricultural education institutions is poor and has drastically decreased over recent years. Institutions are more oriented towards various donors to secure additional financial assistance. As discussed concerning the process of facilitation and coordination, such assistance gives enough power to representatives of donors over educational institutions. For a long time, assistance was obtained whatever the conditions, since it was needed badly. But in such situations, change is neither internalized nor sustainable. Of course, it provides facilities for some actors to achieve individual objectives or ‘projects’ (see opportunity grasping). This raises a dilemma with respect to external assistance: if you comply with the conditions, you get assistance and, then, you have less room for decision making; and if you don’t comply you don’t have access to this assistance. For sustainable development it is better to openly reject assistance when the conditions are not seen as profitable. Also, donors need to change their policy and gear towards the policy of the beneficiary institutions, i.e., to give them more decision power even though they receive assistance. But for such a change to be successful, educational institutions should elaborate sound, long-term strategic planning which serves as a basis for cooperation. Without such a strategic planning, donors may not know clearly whether or not it is worthwhile for them to provide...
assistance. Donors, as social actors, also have their own development cooperation interests and objectives to satisfy.

Communication patterns that exist in the institutions influence both the knowledge and information processes and the coping behaviour of actors. In fact, in this case we are confronted with two different manners of curriculum reform, i.e., the curriculum reform in agricultural colleges, and in the Faculty of Agriculture in Benin. In the agricultural colleges, reform was quick and quite fundamental. None of the actors involved in the system were associated with the planning process, which seems to have been directive and top-down. In the Faculty of Agriculture, by contrast, the process is slow, gradual, more bottom-up and gives opportunities for open and interactive communication between various actors. As such, the case is an opportunity to study responses of actors to the changes initiated in various agricultural education institutions, but also offers an opportunity to understand the relevance of two different approaches used in these institutions for a sustainable educational programme reform. These two approaches seem to correspond with the ones distinguished by Adams in planning: the rational and the interactive models of planning. According to this author (Schamhart and van den Bor, 1994 in quoting Adams, 1984) rational models of planning are characterized by:

- rational decision making and technical reason
- predetermined, structured, sequential and logically associated procedures
- the assumption that there is agreement on goals
- the assumption that change can be managed by professionals and experts having sufficient knowledge to control the process
- the assumption that techniques or technology is available to translate targets into programmes of action
- an 'objectivist paradigm'

and the interactive models of planning are characterized by:

- the recognition of the importance of individual perception, the inconsistency of human behaviour and the crucial but variant nature of social context
- less emphasis on predetermined structured procedures
- conceptualization of planning as a revolving process of interaction-interpretation-decision to mediate between knowledge and action within a context of uncertain future and incomplete understanding of the present
- consensual norms as prerequisite to decision making, grounded in the interpretative activity of those involved and developed through common expectations and obligations
- emphasis on the importance of interpretation of practice, the meaning of information exchange, and the dynamic nature of the interaction of individuals and systems with their environment
- a 'subjectivist paradigm'.

The curriculum reform in the agricultural colleges seems to be based on a rational planning model while in the Faculty of Agriculture it tends to a more interactive model. The analyses in the case study show that the curriculum reform at the
university level is slow but might lead to a more sustainable reform than in the agricultural colleges where reform was rapid. Apart from the speed of change, the main reason for such a difference is the degree to which all concerned actors are involved in the process of curriculum reform. We will come back to this in the conclusion.

Analysis of the (current or predicted) coping behaviour of the actors in the agricultural colleges and the Faculty of Agriculture shows that in the first case internalized rejection and compliant acceptance were the main forms of coping behaviour adopted by students. The compliant acceptance has progressively been translated into internalized acceptance. But it is worthwhile to note that such a translation has not materialized for the same students but has occurred for students who were aware of the educational programme and employment opportunities before their enrolment in the colleges.

Opportunity grasping is identified as a potential coping behaviour for the academic staff in the Faculty of Agriculture. This coping behaviour may lead, for some actors, to an internalized acceptance of the curriculum reform, but there is a danger that for others this opportunity grasping ultimately leads to skimping. In that extreme situation, coping behaviour will not be a consequence of the process of the interactive curriculum reform but may be due to individual factors.

5.6 Conclusion

Analyses of the responses of actors to the process of curriculum reform in agricultural colleges and the Faculty of Agriculture help to draw the following conclusions.

At the level of the agricultural colleges, a consensus on the educational programme has been reached. This consensus has its roots in the internalized rejection of part of the policy measures by students. Compliant acceptance is the behaviour of students following this negotiation, since the programme itself did not change. But as time passes, this form of acceptance, i.e., the choice of specific specializations, became an internalized acceptance for new students. Thus, the compliant acceptance of an expected behaviour may not last over time. It can be transformed into an internalized acceptance of the expected behaviour. All depends on situations and actors considered.

The main factors shaping the coping behaviours are past experiences of the students in terms of planning of education and perception of farming activities. Also, communication patterns of institutions with regard to the process of educational programme planning in a more structured and top-down way and the power relations in the institutions have also influenced these coping behaviours.
At the level of the Faculty of Agriculture, there is on-going adaptation characterized by step-by-step planning and implementation of the reform. It started with educational needs assessment, discussion between various actors, introduction of more active and participatory methods in the teaching of some of the academic staff, who may act as catalysts or stimulative examples for others, and the creation of an instruction zone ('zone d’application'). These changes occurred before the adoption of the reform programme by the academic staff. Such a curriculum reform is facilitated by internal and external prime movers, managers and donors representatives respectively. This process was carried out on the basis of consensus building.

The predicted behaviours are opportunity grasping and, in the extreme case, skimping for some of the academic staff. The communication patterns in the institution and the facilities provided by donors will contribute a lot to such individual and collective response.

In sum, the analysis of the process of curriculum reform planning and implementation in the agricultural education institutions demonstrates the direct relationships existing between knowledge and information processes and the coping behaviour of actors. It demonstrates the degree to which communication patterns in institutions shaped knowledge and information processes, and thus, coping behaviours. In that respect, the present case study may contribute to the dilemma which already exists in the recommendation of rational versus interactive curriculum planning.

Schamhart & Van den Bor (1994) discussed thoroughly the significance of the two models in the Beninese situation and reached a conclusion that the interactive model seems to work in the situation of the Faculty of Agriculture with some limitations. But, even with these limitations, such a model would not be successful in the agricultural colleges where power relations are very strong: teachers and students have less power in the process of decision making. Although they may influence the implementation of the programme, avoidance of discipline by managers and government representatives is a motivating factor that prevents them for doing so. Such motivation does not exist in the Faculty of Agriculture where academic staff is more independent in their activities. Therefore, we may conclude that a more rational model of planning is more feasible in a context where power relations are too strong.

An education planning model must be grounded in the culture of educational institutions involved for any sustainable implementation of reformed educational programmes.
CHAPTER 6  FRAMING PEOPLE'S RESPONSES TO POLICY CHANGE IN THE AGRICULTURAL SYSTEM OF BENIN

6.1 Introduction

As explained in chapters 1 and 2, the objective of this book is to contribute substantially to the theory on people's responses to policy measures. Such contributions must be grounded in or emerge from the reality studied, i.e., from the various cases. Also, various emergent relationships should be developed, cross-checked and provisionally verified after they emerge. This chapter is an intermezzo. It seeks to analyze in a comparative way the various responses of the actors, be they individuals or groups, to the policy measures in the field of extension, farmers' organizations and agricultural education in terms of knowledge and information processes, coping behaviour and factors that influence them. The way this comparison will be carried out is described in full at the end of the section about the analytical framework in chapter 2. This comparison was expected to lead to the identification of relationships between these responses and the factors that influence them. These relationships will be summarized in the form of a provisional emergent theoretical framework on people's response to policy change and will be verified by the results of the analyses in the next chapter about the search for greater client-orientation in agricultural research.

The main learning points to be developed in the chapter will be related to knowledge and information processes in a situation of policy change; coping with policy change; a provisional framework for people's response to policy change in Benin; and main knowledge claims about the relationships between policy measures, communication processes and coping behaviour of social actors.
6.2 Knowledge and information process in a situation of policy change in Benin

In this section, the emergent knowledge and information processes that occurred in various cases studied are analyzed and compared to those identified in chapter 2. Attempts will be made to find out if there are differences between cases. The analysis of factors that influence or shape these processes will help to understand these differences better.

6.2.1 Emergent knowledge and information processes

Knowledge and information processes in which social actors are engaged in each of the three cases vary enormously according to the degree to which all concerned actors are really involved, or the role they played in the processes. The main knowledge and information processes that emerged from the cases are: training; needs anticipation; regulation reinforcement; regulation control; regulation setting; joint learning; negotiation; and facilitation. For the sake of analysis, these knowledge and information processes will be divided into two categories: directive knowledge and information processes, i.e., those used as instruments to enforce new legislation or regulations; and the interactive ones which are used as a way to develop or induce new coping behaviour.

A directive knowledge and information process is one which is monopolized by one or more of the categories of actors. In an interactive one, one or more categories of social actors use information either for common understanding or for facilitating this common understanding. Table 6.1 presents the main knowledge and information processes that emerged from the cases.

Table 6.1: Main knowledge and information processes emerging from the cases

<table>
<thead>
<tr>
<th>Directive</th>
<th>Interactive</th>
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<tbody>
<tr>
<td>Extension</td>
<td>Regulation reinforcement -</td>
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<td></td>
<td>Regulation setting -</td>
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<td></td>
<td>Regulation control</td>
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<tr>
<td>Farmers’ organizations</td>
<td>Training</td>
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<tr>
<td>Education institutions</td>
<td>Regulation setting</td>
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<td></td>
<td>Facilitation - Joint learning - Negotiation</td>
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<td></td>
<td>Negotiation</td>
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<td></td>
<td>Facilitation</td>
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</table>

**Regulation setting**

Regulation setting is used to refer to a situation in which only powerful actors develop programmes, tools and actions for less powerful actors who are supposed to
use these instruments. Such a knowledge process occurred in the extension institutions and in the agricultural colleges.

In fact, in extension institutions, the main tools and directives designed for the improvement of extension activities were somehow ‘suggested’ in general by the World Bank representatives during a seminar. The design of the tools was based on an evaluation of the daily practices of the extension workers. But, in reality these tools are the same as those used by the World Bank in other countries. Thus, attempts were not made to adapt the tools to the Beninese situation. The case study also shows that these tools are considered by extension workers as kinds of black boxes that they cannot open and modify. As such, they look more like regulations than technical tools. Thus, the knowledge and information process dealing with the design of tools is labelled as regulation setting.

These regulations were, later on, communicated, and explained to field extension workers and additional directives were issued for effective implementation of the regulations set previously. This process is called, here, regulation reinforcement in the extension services.

In the case of the agricultural education colleges, the case study shows that the process of curriculum reform is carried out only by the more powerful actors. Students who are the ultimate beneficiaries of education are not very much involved in this process. Thus, they do not influence the establishment of the new educational programme that much; if only by going on strike. They are, thus, used as instruments in the implementation of the new programme. As such, they see it also as a regulation.

Training - Regulation reinforcement

Training is a one-way information exchange process in which the more knowledgeable actors help the less knowledgeable to increase either their knowledge or skills (know or know-how). This is a rather one-sided and specific definition of training given to make a sharp distinction between training and joint learning and to equate it with regulation reinforcement. As table 6.1 shows, it is an important knowledge process used for the implementation of professional extension activities and for making farmers more responsible for their relevant activities. In the educational institutions training has not yet started, apart from the usual training of the students.

Two kinds of training activities were distinguished in the extension institutions: training for maintaining the level of field extension workers, and training in new tools and directives related to the implementation of the T & V system. Results in this case show that less attention is given to the first kind of training by both the trainers and the trainees because the contents of such training activities do not vary that much from year to year.

More attention is paid to training in the tools and directives. Such training activities were carried out for many years, as the non-implementation of these tools and directives by VEWs was seen as caused by lack of capability. Thus, during these
training activities, problems encountered by the VEWs in their attempts to use the tools and directives were not analyzed in order to adapt to the conditions of the farming community. But, the officials always thought that the VEW do not yet know how to use the tools and, that is the reason why they were facing such problems. Therefore, the officials continuously trained VEWs in tools and directives. These training activities looked like the reinforcement of the tools and directives. Thus, they were labelled as regulation reinforcement.

Two forms of training activities emerged from results of the study of the knowledge and information processes in farmers’ organizations: training sessions organized by Specialists in Cooperative Matters (SCMs) or other officials, and the joint learning activities amongst farmers. The training organized by the SCMs is rather a classroom teaching exercise although some practical experiences or cases are used to illustrate the various aspects. Thus, the officials have used more directive teaching methods while the joint learning activities of farmers have been more interactive.

It appears from these results that all forms of training activities organized by extension institutions are top-down because they are mainly based on anticipation or regulation setting and are directive with respect to teaching methods. Only the contents vary from situation to situation. Also, in the field, frequent controls were organized by the officials and the World Bank representatives to reinforce the compliance of the VEWs to the implementation of the tools and directives.

**Regulation control**

This form of knowledge and information process emerged only from the case study of extension institutions. In fact, in addition to the regulation reinforcement process, i.e., the continuous training of the VEWs in new tools and directives, extension officials and the World Bank representatives organized field visits to check on how VEWs are implementing the tools. These field visits led not only to correction of poor performance but also to disciplinary action. Discipline was applied in the case of misuse of the directives. Thus, check-up visits were organized to reinforce the strategies developed to ensure the compliance of the VEWs with tools and directives. That is the regulation control process. This regulation control is based on the assumption that poor performance was due only to individual VEWs’ unwillingness and lack of capability to implement the tools (individual blame) instead of analyzing the whole system in which the individual VEWs were acting.

**Facilitation**

Facilitation is the process through which some actors speed up the process of change. Facilitating activities were carried out in the farmers’ organizations and in the agricultural education institutions (table 6.1). In the case of education, facilitators were both internal and external prime movers (managers and donors’ representatives) while in the case of farmers’ organizations, facilitating activities were carried out only by external prime movers (specialists in cooperative matters, and sometimes field extension workers).

But the facilitating approaches used were not different between the cases. In both cases, facilitators tried to introduce more dynamics in the process. But, the inputs of
the facilitators varied from case to case. In fact, in the case of farmers' organizations, facilitators mainly provided information and organized relevant interactive encounters or helped GV committees to do so.

In the agricultural education institutions, some of the facilitators were in charge of the provision of information and the organization of relevant interactive encounters while the others were more concerned with financial and material facilities provision. In both cases, results show that facilitators may use regulations, interactive communications, or manipulate facilities (training, finances, materials) they can more easily mobilize than the other actors.

Negotiation
Negotiation is the process by which actors arrive at a common agreement or reach a consensus either on concepts, or on relevant actions to be taken to improve the situation identified through various learning processes. It is a process of attaching meaning to situations, accommodating or adapting interests through collective action. As shown in table 6.1, negotiation emerged as a knowledge and information process in farmers’ organizations and in the case study of agricultural education institutions.

In the case of the farmers’ organizations, negotiation occurred both between extension institutions and the GVs and amongst the farmers of the GV. In this case, the process concerns the suspension of an input management system in which each of the actors in the GVs (small against big farmers; members of GV committees against simple GV members) has his/her own interests to defend. These interests are, most of the time, different and conflicting. Social leadership and technical knowledge about input management are the main sources of power used in this process.

In the case of agricultural education institutions, a negotiation process occurred only in the Faculty of Agriculture. The negotiation process, in this case, concerns, first of all, the meaning given to the concept of professional education, and later, the relevant teaching methods and other related activities. Facilities provided are used as a source of power that influences the process.

In both of these cases, results of the analysis of the negotiation processes have shown that negotiation is a matter of power balance between two (or more) social actors. But, the power that each of the actors brings into the process varies from case to case. This power may be derived from the social position he/she holds as well as whether he/she has easy access to relevant facilities (technical, financial, material).

Joint learning
Joint learning is the process through which various actors come to know more about each other’s conditions, experiences or problems and/or exchange knowledge and know-how. It is a process through which actors arrive at a common understanding about a given problem situation. Joint learning is only used in the farmers’ organizations as an instrument to facilitate the implementation of the new policy measures with regard to GV management. The learning processes in the GVs are related to activities in the committees as well as activities on the ‘blocs de culture’. Members of the committees learn mainly on the job. In fact, only secretaries receive training from extension institutions. In their daily work they teach other farmers (the
chairmen of the blocs mainly) about input management. Also, in the blocs, technical information is exchanged between farmers and chairmen of their blocs.

From these results and according to table 6.1, directive knowledge and information processes are mainly carried out in the extension services. No interactive tools have yet been used.

In the other cases, more interactive knowledge and information processes are used, although there are some variations within the education institutions in that respect. Such variations are certainly shaped by some internal and external factors.

Finally, the knowledge and information processes that emerge from these three cases show that our initial conceptualization of the interactive instruments to be used for successful implementation of the various policy measures seems to be too optimistic. In fact, in chapter 2, we advocated that for the implementation of the policy measures, the significant knowledge and information processes be joint learning, joint decision-making, negotiation and facilitation. These policy instruments are conceived as interactive. But the results of the analyses of the three case studies show that directive instruments are also used in all the situation studied, although their importance varies from one case to another. But, when we take into account the degree of success reached in the implementation of the various policy measures, it is obvious that our initial conceptualization was not that wrong. In fact, the analyses of the cases have also shown that a high degree of success has been reached so far in the cases where interactive processes were used (e.g., GVs) compared to other cases.

Nevertheless, the results can help to adapt the figure 2.4 to figure 6.1 (see figure 6.1).

6.2.2 Analysis of factors affecting the emergent knowledge and information processes

The results of the comparative analysis of knowledge and information processes in the three cases show the following.

As the main knowledge and information processes identified in extension services show, communication is directive and top-down in this case study. All activities in these institutions are carried out as regulations. In fact, training sessions are always based on knowledge transfer instead of knowledge exchange. Training sessions are mainly organized to educate people on what to do and how to do it. Such a training philosophy is understandable since training needs identification is mainly based on anticipation. Field extension workers have never been asked what kind of training they need and, thus, they do not bother anymore about training. When you ask them to list the most important problems they face in their daily work, they always talk about material things and rarely about training needs. Also, supervision organized by officials in the field, which normally aims at backing up the field extension workers, always take a form of checking the application of the regulations.
Figure 6.1: Main Knowledge and Information Processes used as part of policy instruments in rural development in Benin
World Bank representatives are powerful in these institutions. Even when seminars are organized as a way to make various actors concerned with agricultural development in Benin (extensionists, researchers and agricultural educators) participate in the process of redefining extension activities and approaches, the outcomes are known beforehand by World Bank representatives. The method may seem participatory but in reality it is the same approach and tools designed elsewhere that they 'suggest' to the extension services in Benin. They are always present even in the field, and, like the officials, declare that they are backing up field extension workers; but in reality extensionists feel such supervisory visits to be a check up on the implementation of the regulations, i.e., as a regulation control.

Provision of relevant information and organization of interactive encounters by specialists in cooperative matters in GVs influenced the dynamics of the process of giving more responsibility to farmers. In effect, results of the study on farmers' organizations show that before the implementation of the policy making farmers more responsible, the GV committees did not inform other members of the organizations of material and financial management of the 'Groupement Villageois'. But with the new reporting procedures devised by these specialists, procedures that gave more opportunities for comprehension to GV members, farmers became more concerned with the running of their organizations. Such a sudden awareness introduced a dynamic into the GVs. Thus, role changing is considered by GV-members as essential for the development of these organizations.

Finally, the case of agricultural education institutions also demonstrated the influence of communication patterns on the curriculum reform process. In the agricultural colleges, a more rational model of curriculum planning was used while a more interactive process occurred in the Faculty of Agriculture. Also, the heavy involvement of the government in curriculum reform in agricultural colleges and the limitation of these activities to only some groups of actors impart an aspect of regulation to the new curriculum. In agricultural education institutions in general, and in the Faculty of Agriculture in particular, donor representatives strongly influence the process of curriculum reform. They shape the curriculum in a way that meets their cooperation mission.

From these results, we can derive two main factors related to this communication aspect. These are institutional or local culture, and pressure from the donors.

Institutional or local culture
Culture is the whole of values, norms and motivation and discipline systems. Motivation and discipline systems are the structures set in an institution or a community to reward and stimulate good performance and punish poor performance (the carrot and stick). As such, institutional culture defines what is perceived as acceptable behaviour and/or actions, and determines, formally or informally, explicitly or implicitly, the roles of each of the actors in the institutions or organizations. In the present cases, two main aspects of culture seem to be crucial factors shaping the responses of actors to policy change: the information management system, and power relations.
Results of case studies show that information management is threefold: the quality of the information exchanged, the way the available information is used by actors, and the provision of relevant information so as to increase the countervailing power of the less powerful actors.

In extension institutions, results show that field extension workers do not always mention in the reports they send to their officials the main problems encountered by the farmers and by themselves. Thus anticipation, which is essential in extension institutions, is not based on enough relevant information from the field. But, also when this information is provided by field extension workers to officials and their supporting staff, it is not reasonably exchanged amongst services or used by individual officials. Sometimes, the already existing information is again requested from the field. In that case, the collection of such information proves to influence the execution of activities planned. These two forms of information management have an influence on the quality of anticipation and partly explain the repetition observed with respect to the content of some training activities, and thus, the monotony of the extension services in Benin.

In farmers' organizations, the successes of the facilitating roles played by the Specialists in Cooperative Matters prove that the provision of relevant information to farmers increased their awareness. Thus, in some GV's, farmers took, with relative success, the required action for an effective renewal of the GV committees. Thus, relevant information provision proves to contribute to increasing the countervailing power in the GV's.

The power relations in the case studies have two dimensions: capability of actors to carry out the expected actions, and their capability to do otherwise than is expected of them, i.e., the autonomy of the actors.

Improvement of capability of actors is important in various knowledge and information processes mainly in extension institutions and farmers' organizations. Such activities are carried out through various training sessions, regulation reinforcement and joint learning. Basic assumptions guiding such processes are the recognition that the non-knowledgeable actors need more knowledge to carry out efficiently the expected activities. Most of the non-performances observed are interpreted by extension officials as lack of capability. But, research has shown that these poor performances are not only a matter of capability. Other factors are taken into account by individuals in their actions. Extension workers are social actors who take reasoned actions.

The case study of extension institutions also shows the danger that exists in an exclusive orientation towards the improvement of the actors' capability. In fact, in such situations, the individuals are always blamed while the system is never questioned. Also, for any action to be taken, field extension workers always ask for permission from the officials. As such, creative actions are taken too late and sometimes when they are not so relevant anymore. If these actions are not successful, field extension workers do not feel all that responsible since actions were taken only with the agreement of the officials.
Results of case studies about extension institutions and agricultural colleges show that actors at operational level (VEWs, students, and academic staff mainly) have officially little room to do otherwise than what is officially expected of them. That is, they have less autonomy in their actions. Such a conclusion is reinforced by frequent supervisory visits organized by the officials and representatives of the main donor to extension institutions. Also, the fact that poor performance is always attributed to the unwillingness of less powerful actors to carry out the expected activities is another illustration of this lack of autonomy. But, research also shows, in these cases, that these so-perceived less powerful actors created some room for themselves to act otherwise than the expected behaviour.

The main learning derived from these results is that actors must be seen as knowledgeable and capable. They know their area of responsibility more than any officials or donors. Thus, they need to have more formal freedom for action. This calls for a decentralization of intervention planning. In such circumstances, government officials will act as facilitators and coordinators of activities designed and carried out by the real actors. Therefore information and knowledge are no longer the monopoly of one category of actors, i.e., the officials or donors, but must be shared and exchanged.

Pressures from the donors
Donors play an important role in the change process in extension institutions and in agricultural education institutions.

In the extension institutions, donors contribute a lot to the design of the extension approach. This contribution is felt as imposition by extension workers in general. But, even when they do not agree with these contributions, they have little formal influence. The source of power of these donors is related to the financial assistance they provide to extension institutions. But, the negotiation of such assistance is not carried out by extension officials. Rather, it is part of broad assistance of the donors to Benin through the Structural Adjustment Programme. Thus, the influence of these donors is also political. The avoidance of such pressures is quite difficult, if not impossible. Anyhow, such pressures shape the knowledge and information process in the institutions since they are part of the agreement between the two institutions.

In the agricultural education institutions, pressures from donors seem more facilitative. In fact, they speed the process by providing the relevant (training, financial, material etc...) facilities. In doing so, they lead managers to organize relevant interactive encounters or take relevant actions and regulations that are necessary in the situation. The power of the donors in this case is not rooted in the political system in Benin. Nevertheless, the donors do have their own development policies that shape their attitude in the negotiation process.
6.3  Coping with policy change

6.3.1 Emergent coping behaviours

Five forms of coping behaviour emerged from the analyses of the three cases: skimping; internalized rejection; compliant acceptance; opportunity grasping; and internalized acceptance. These coping behaviours may be categorized in terms of rejection or acceptance. With this categorization, the results in each of the cases are presented in table 6.2.

Table 6.2: Coping behaviours emerging from each case

<table>
<thead>
<tr>
<th></th>
<th>Rejection</th>
<th>Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Extension</strong></td>
<td>Skimping</td>
<td>Compliant acceptance</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internalized acceptance</td>
</tr>
<tr>
<td><strong>Farmers' organizations</strong></td>
<td>Skimping</td>
<td>Compliant acceptance</td>
</tr>
<tr>
<td></td>
<td>Internalized rejection</td>
<td>Opportunity grasping</td>
</tr>
<tr>
<td><strong>Education institutions</strong></td>
<td>Skimping</td>
<td>compliant acceptance</td>
</tr>
<tr>
<td></td>
<td>Internalized rejection</td>
<td>Opportunity grasping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internalized acceptance</td>
</tr>
</tbody>
</table>

The distinction between various coping behaviours is based on the reasons underlying the predicted or current coping behaviour.

*Skimping* is the coping behaviour through which actors reject the expected behaviour but do not openly express their rejection either because they do not have sound arguments to convince the other actors about the uselessness of the expected behaviour or because they want to avoid anticipated consequences of rejection (e.g., avoidance of discipline or suspension of opportunities available). The first aspect of skimping occurred in the Faculty of Agriculture and was observed in the farmers' organization where concerned actors seem to have some autonomy in their action. The second aspect of skimping was observed in extension institutions where communication was directive and much pressure was put either on the officials (by the donors) or on the field extension workers by the extension officials. On the basis of these two aspects of skimping, it can be concluded that two main reasons may explain this form of behaviour. These are lack of motivation and avoidance of perceived consequences of rejection. An increase in motivation of actors or a change in the perceived consequences of rejection may increase the probability of a change in actual coping behaviour.

*Internalized rejection* is a coping behaviour through which actors openly express disagreement with the expected behaviour and have sound arguments to prove that. These arguments have to do mainly with their past experience, in the case of farmers'
organizations, and past experiences and value systems, in the case of the students of agricultural colleges. As past experiences can be expected to have shaped the value system, it is, then, obvious that internalized rejection is based on the non-compatibility of expected behaviour with the value system. But, the expression of this form of coping behaviour depends a lot on the environment in which it occurs. In fact, in directive and top-down institutions, open criticism is not welcomed. Thus, an internalized rejection may be expressed mainly in the form of skimping, as well as compliant behaviour. It will depend on the strength of the power relations in institutions and degree of pressures exerted on the actors.

Compliant acceptance is a coping behaviour that consists of accepting the expected behaviour only because the actors concerned try to avoid anticipated consequences of a rejection of the expected behaviour. These consequences may relate to disciplinary action or suspension of additional allowances by the officials, as well as loss of social prestige or rewards for field extension workers. Such a form of coping behaviour emerged from the cases of extension institutions and farmers’ organizations. In the agricultural extension institutions, both officials and field extension workers have adopted such behaviour either to guarantee financial assistance from donors or to avoid pressures and frequent controls from superiors.

In farmers’ organizations, some GVs adopted such a coping behaviour when extension agents withdrew from the system of yield-dependent purchase of pesticides. They were not able to carry the system out efficiently by themselves. In the first case, the actors who adopted such behaviour do not always express it as expected, especially when they do not foresee a visit from their officials. But, in the second case, i.e., with the GVs, behaviour is permanent, although they do not like it, but if they choose to continue with the system of yield-dependent purchase of pesticides they will not get any support from extension workers and they may fail. If these GVs have the essential capabilities they may adopt another form of behaviour. Thus, in both cases, lack of power is the reason for acceptance. This power may relate to the capability of actors to carry out given activities, or their autonomy to adopt behaviour other than the one expected. In this last case, lack of autonomy is due to the desire to avoid discipline.

Opportunity grasping is a coping behaviour adopted only with the intention to use facilities offered through the process. Such a coping behaviour was observed in farmers’ organizations where old GV committees used financial or material resources of the GV for satisfying their own interests, and some of the new elected GV committees showed that their interests in the GV are based on the facilities they can use. Also, such a coping behaviour was predicted for the junior staff of the Faculty of Agriculture. It is essential to say that the use of opportunities provided does not always lead to acceptance. It may also lead to skimping (that is the case of the senior staff in the Faculty of Agriculture).

Opportunity grasping is different from compliant acceptance, since, in the first case, the actors accept the behaviour because they are attracted by the facilities offered and
are convinced that these facilities may help them to achieve their own objectives, but not for avoiding discipline.

**Internalized acceptance** is a coping behaviour adopted on the basis of past experiences and the value system in general. Such a behaviour was observed in extension services and predicted for the junior staff in the Faculty of Agriculture. The case of the extension services shows that some extension workers adopted the new training approach in extension because of their past experiences with the foreign/French collaborating agencies. But, not many of such extension workers were met in the field.

In conclusion, the emergent coping behaviour of actors in the process of policy implementation in Benin may be either skimping, internalized rejection, opportunity grasping, compliant acceptance and internalized acceptance (see figure 6.3 on page 149). Each of these coping behaviours is a reasoned action taken by knowledgeable social actors as a response to changes as they perceived them.

In the conceptualization of the adaptive behaviour of actors, only the main reasons for an adopted or a predicted behaviour are taken into account. Perhaps, when we look at other aspects, it will be difficult to make a clear distinction between some of these coping behaviours. For example, as explained in the cases, opportunity grasping, as a behaviour, may lead, over time, either to skimping, internalized rejection or internalized acceptance. Thus, in practice, it is sometimes difficult to make a clear distinction between these different forms of coping behaviour since there is not a sharp distinction between them and they may evolve into each other over time. Finally, we are dealing with human beings with all their related processes (e.g., perception, interpretation, intentionality, calculation and agency) which may also change over time. Thus, only dominant characteristics of these forms of behaviours may help to achieve such differentiation. Therefore, the emergent coping behaviour may be put on a continuum from internalized rejection to internalized acceptance or vice versa (see Kelman, 1970; Sherif & Nebergall, 1965; Sherif & Hovland, 1961), compliant acceptance, opportunity grasping and skimping are somewhere between these two forms of behaviour (see figure 6.2)

![Figure 6.2: Coping behaviour continuum](image)

6.3.2 Analysis of factors affecting coping behaviours in a situation of policy change

The main factors that influence coping behaviours may relate either to individuals or to institutions in which individuals are operating. Table 6.3 summarizes these factors as they emerged from each of the case studied.
Table 6.3: Factors affecting coping behaviour in each of the cases

<table>
<thead>
<tr>
<th>Factors related to individuals</th>
<th>Factors related to institutions/structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extension</td>
<td>Level of education</td>
</tr>
<tr>
<td></td>
<td>Past experience</td>
</tr>
<tr>
<td></td>
<td>Motivation</td>
</tr>
<tr>
<td>Farmers' organizations</td>
<td>Past experience</td>
</tr>
<tr>
<td></td>
<td>level of literacy</td>
</tr>
<tr>
<td>Education institutions</td>
<td>Past experience</td>
</tr>
<tr>
<td></td>
<td>Motivation</td>
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<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The distinction between individual and institutional factors was made for the sake of analysis. But, in reality, the factors related to individuals may be influenced by institutional factors and vice-versa. Thus, there is an interrelation between these two groups of factors.

From the table 6.3, it appears that:

- at the level of individuals, the main and intertwined factors that influence coping behaviour are: past experience; level of education or literacy; and motivation.

Past experience of actors seems to heavily influence their coping behaviour, since the evidence collected from each of the three cases seem to support such a knowledge claim. Past experience might be working or teaching experience, perception of farming activities and farmers, design of education or might have its roots in the value systems of actors.

The level of education and literacy emerged as a factor from the study of extension services and farmers’ organizations. This level of education influences the capability of actors to effectively adopt the expected behaviour, or to reject it. This was the case of the Village Extension Workers.

Motivation is the readiness of actors to make the required efforts for the acceptance of expected behaviour. Sources of motivation may be discipline, material or financial interests, or simply related to the past experience of actors.

- at the level of institutions or structures, the main factors seem to be the degree of autonomy of actors in institutions; the capability of actors in institutions; the information management system; and resources available (provided or generated in the institutions/structures).
Figure 6.3: Different forms of coping behaviour in dealing with policy change in Benin
The autonomy of actors is too weak in extension services and agricultural education colleges. Policy measures are, then, planned in a directive way, and are perceived as regulations by actors. As such, relevant initiatives are not taken or simply not welcomed and the whole planning and implementation process is based on anticipation. Such a situation influences coping behaviour of the actors. People at the operational level do not feel responsible for their actions since these actions are always taken with the approval of the superiors. Such an attitude may change if enough responsibilities are given to actors at operational level in order to stimulate individual initiative and self-determination. Thus, decentralization is necessary and the points of view of the powerless actors, i.e., the field extension workers, need to be taken into account. They are not only passive receivers in communication processes. They must be considered as knowledgeable actors, and thus as sources also.

Development of capabilities of actors is crucial for successful implementation of policy measures. In all cases studied, such actions are being initiated. But, these actions are not always based on the real needs of the beneficiaries, but sometimes also oriented towards technical or organizational improvements which are far from the immediate training needs of concerned actors.

For the improvement of this situation, the way information is exchanged and used in the institutions seem to be important. This was discussed in full in section 6.2.2 when analyzing factors that affect knowledge and information processes.

Provision of resources is crucial for the implementation of policy measures. The cases show that it influences some actors in their coping behaviour. This influence is sometimes positive if actors, while using the opportunities, adopt the expected behaviour. This does not happen all the time; some actors use resources available but do not adopt the expected behaviour unless it has been clearly indicated that the use of opportunities is a condition for acceptance of the expected behaviour. That was the case of the extension workers at village level when they were in charge of inputs and credit distribution.

6.4 Towards a provisional framework for people’s responses to policy change in the agricultural system

From the comparative analysis of the actors’ responses to the implementation of the various policy measures, the factors that affect these adaptive responses as they have emerged from the three cases may be summarized as in table 6.4.

Table 6.4 suggests that no individual factors affect knowledge and information processes. Of course, the emerged individual factors that influence coping behaviour may also influence knowledge and information processes since coping behaviour is a consequence of the importance that each actor gives to the processes. The main relationships that have emerged from the analyses of the three cases are summarized in figure 6.4 on page 153, which is a provisional emergent framework for people’s responses to policy measures in Benin. This emergent framework gives more insight.
Table 6.4: Factors shaping knowledge and information processes and coping behaviour of actors in a changing situation

<table>
<thead>
<tr>
<th>Factors related to the individuals</th>
<th>Factors related to the institutions/structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge and information processes</td>
<td>Capability of the actors</td>
</tr>
<tr>
<td></td>
<td>Information management</td>
</tr>
<tr>
<td></td>
<td>Autonomy of actors</td>
</tr>
<tr>
<td>Coping behaviour</td>
<td>Past experience</td>
</tr>
<tr>
<td></td>
<td>Level of education/literacy</td>
</tr>
<tr>
<td></td>
<td>Motivation</td>
</tr>
<tr>
<td></td>
<td>Resources available</td>
</tr>
<tr>
<td></td>
<td>Autonomy of actors</td>
</tr>
<tr>
<td></td>
<td>Information management</td>
</tr>
<tr>
<td></td>
<td>Capability of actors</td>
</tr>
</tbody>
</table>

into the factors that shape people’s responses to policy measures, compared to those identified in chapter 2, as a result of the theoretical analysis of the situations studied (see figure 2.3). These insights are related to three main aspects:

- a clearer understanding of the various aspects of the institutional culture that influence both knowledge and information processes and coping behaviour in the Beninese situation. Particularly important are the resources available to actors; the way information is managed in the institutions; and the control system that affects actors’ autonomy. But, the emergent framework fails to point out the aspects related to the local culture of farmers’ organizations and affecting farmers’ responses;

- the importance of the past experience of the actors in their responses; and

- a better understanding of the relationships between knowledge and information processes as policy instruments, and actors’ coping behaviour on the one hand, and between knowledge and information processes and policy measures on the other.

6.5 Conclusion: the main knowledge claims about policy measures, knowledge and information processes, coping behaviour and relationships between them

On the basis of various analyses of relationships between policy measures, knowledge and information processes, and coping behaviour on the one hand, and factors that influence coping behaviour and knowledge and information processes on the other, we can make some provisional claims or propositions. These knowledge claims or propositions will be cross-checked later on with the case study about agricultural research.
1. Social actors (individuals and groups) actively and creatively design coping behaviour to deal with sudden and disruptive change to try to reach individual objectives or at least to safeguard their own interests, i.e., to make the best of the change. These coping behaviours vary from internalized rejection to internalized acceptance with many stages in between depending on:

- self-perceived interests, i.e., the motivation of the actors;
- the style of communication and information adopted by the institutions or organizations in which the social actors are operating (top-down versus participative; directive versus interactive communication style);
- the perceived stability of the policy, which is mostly based on actors’ past experience with other policies in a similar environment; and
- the room for manoeuvre available to the actors in terms of resources, facilities, capabilities and autonomy/accountability.

2. Acceptance of the policy measures depends heavily on positive material, financial and social motivation of actors; the provision of enough room for manoeuvre for them; and the utilization of more interactive policy instruments.

In situations of insufficient actor’s motivation, or of directive communication style and strong control and pressure, various forms of policy rejection may be encountered. Thus, in top-down institutions, coping behaviour tends to develop into skimping and compliant acceptance. In more interactive situations, behaviour seem to be more internalized (rejection or acceptance). Opportunity grasping may occur in any of these types of institutions. But the question is whether the (perceived) ‘rejectability’ of the expected behaviour shapes the use of top-down and directive approaches in policy implementation. The present study does not take this aspect into account.

3. The degree to which the countervailing power of the social actors is developed influences their responses to policy change. This countervailing power may be either related to the autonomy or accountability of the social actors, or to the development of their capability. Facilitators have an important role to play in the building of such a countervailing power.
Figure 6.4: Provisional emergent framework for people’s response to implementation of policy measures in Benin

- - - => Direction of first order influence

- - - => Direction of second order influence
4. From the above, it can be claimed that the various policy measures designed within the framework of the Structural Adjustment Programme (SAP) and the Agricultural Services Restructuring Project (PRSA) will have hardly any success in the institutions where bureaucracy is too strong, with little room for manoeuvre for the social actors (e.g., extension institutions). But, in institutions where more interactive information processes are used and enough autonomy and accountability is provided to actors (e.g., the new forms of farmers' organizations - the GV-tests), the chance of success may be high although in this case other important factors must be taken into account (e.g., the existence of marketing chains for most of the crops).

These provisional knowledge claims and propositions will be cross-checked with research on agricultural research.
CHAPTER 7  MAKING AGRICULTURAL RESEARCH MORE PROBLEM-ORIENTED

Every attempt by man to make changes in agricultural practices, whether by individuals who themselves tilled the soil or by learned men prompted by scientific curiosity, can be considered as agricultural experimentation. Even the most primitive forms of agriculture must have evolved as the cumulative result of 'trying' new approaches, whether by hit-or-miss methods or by following chance observations' (Arnon, 1968:1).

'A growing recognition of what became termed 'indigenous (or local) technical knowledge' led to a focus on the farmer as innovator and experimenter. This has led in recent years to increasing interest in 'collaborative' and 'collegiate' relations between researchers and farmers...

If innovation and experimentation are shifted away from the researchers' plots and back to the farmers' fields, then the role of research and extension necessarily shifts from the one of exploring technical solutions and transferring these as messages and packages to the one of joint learning and analysis by research and facilitation of sharing and exchange by extension' [Adapted from Cornwall et al., 1992].

7.1 Introduction

Agriculture cannot be carried out, even traditionally, without research. In developing countries, agriculture is the dominant economic activity and the main source of both economic growth and export earnings. For decades, growth in agriculture was achieved by extending low-technology systems into expanding areas under cultivation. However, nowadays the potential to further increase the cultivated areas is very often limited due to the tremendous population growth and the importance of the people working in this sector. Also, the over-exploitation of the areas under cultivation in some countries or regions led to a low productivity of these soils. This situation has
made it necessary to introduce and use more productive technology and/or intensive, but adapted production systems. Effective strategies to reach such a goal require solid support from extension and research institutions.

Historically, agriculture and extension services have often been isolated from overall development goals, although this differs between francophone and anglophone countries. This difference is due to colonial legacies. In fact, the differentiating element among the colonial experiences with respect to agricultural research in Africa is in the way research in the colonies and the metropolis were linked, and the types of relationships maintained between them after independence. The former aspect of this difference influences the starting point of today's structures of agricultural research while the latter aspect affects the nature of the changes that have taken place and the level of resources that have been available to national research since independence (Trigo, 1986).

Under British colonial rule, each colony was perceived as a distinct entity to be ruled and developed according to its particularities. Thus, research was not centralized. But, in the former French colonies, agricultural research was highly centralized and closely tied to the metropolis. In these colonies, national agricultural research was carried out by a multiplicity of agencies and in a manner that led to fragmentation and duplication (Daniels & Nestel, 1981). It was usually organized on single crops or along single discipline lines, even though the subsistence farmers who were the clients of much of this research, did not often practise extensive mono-cropping but usually managed a complex system of inter-cropping. This meant that many research projects have limited relationships to farmers' needs, especially the small farmers. Thus, research was oriented towards big farmers who were always ready to innovate and to take risks, and also towards export crops in order either to contribute to the economic objectives of the metropolis or to increase annual earnings for the state. These new technologies, adjusted to big farmers' needs are to be transferred to all categories of farmers by extension workers. That is the well-known model of Transfer of Technology (TOT).

Finally, there is a shortage of national research policies that specify priorities and can be used to effectively determine the most appropriate allocations of available resources. Lack of coordination of research activities between the various groups of researchers is, thus, another characteristic of research in developing countries. As Daane and Van den Bor (1994) argued when analyzing models for post-graduate training in Africa, 'there is a necessity for African countries to focus on priority research programmes that meet broad objectives and address national needs. Such programmes should be flexible and make maximum use of available national and foreign capacity, including the knowledge of farmers and extensionists, to produce tangible results'.

In recent years, especially from the 1980s onwards, a number of research managers, and policy makers started to examine the situation and tried to bridge the various existing gaps within the research community, on the one hand, and between researchers and (small) farmers, on the other, in the national research system. Under the umbrella of Farming System Research in the anglophone countries and
Recherche-Développement or Recherche sur les Systèmes de Production in the francophone ones, many new approaches have been developed for reaching such an objective. All these approaches differ as far as contents and research methods are concerned. They are either more oriented to small farmers needs, or focussed on more participatory methodologies for agricultural research. Some of these approaches are Farming Systems Research & Development (FS/R&D); Farming Systems Analysis (FSA); On-Farm Research (OFR) and Research & Development (R&D). Although all these various forms of FSR aim at integrating farmers into the research process, some scientists still perceive the approach as too top-down (Tripp, 1989). These scientists emphasize Participatory Technology Development (PTD) which is more associated with the Farmer First (FF) paradigm (Chambers et al., 1989). PTD is seen as capable of enhancing farmers’ innovative capacities as well as enabling resource-poor farmers to ‘reach up’ and to ‘pull down’ external resources and exert influence on the direction of change.

Other scientists emphasize the necessity of considering the so-called ‘indigenous or local knowledge’ (Brokensha et al., 1980; Richards, 1985) and experimenting capacities of farmers (Box, 1988; Chambers and Jiggins, 1987), while others are more focussed on gender issues in agricultural research (Poats et al., 1988; Jiggins, 1988).

Benin, as a developing country, is undergoing its own development process in a way quite similar to that of the other francophone African countries. The objective of this chapter is to analyze the way agricultural research is reorganizing in Benin in order to bridge the gaps identified above, i.e., a better coordination of research activities and more farmer-oriented agricultural research.

The central question of this case study is how far the relationships that emerged from the analysis of the first three cases, i.e., provisional propositions, still hold in the implementation of this new orientation of agricultural research in Benin.

The main specific objectives in this case study are:

- to identify the main implications of new policy measures in terms of actions to be carried out according to the officials;

- to assess the actual behaviour of actors towards the main selected actions or activities;

- to identify reasons and factors that affect the assessed behaviour;

- to identify and classify some of the knowledge and information activities that are initiated for the implementation of the actions and activities;
to identify the perception of actors about the knowledge and information activities and institutional factors shaping them; and

to identify facilitators, their actual activities and power positions

The data used to reach these objectives are mainly empirical. But, secondary sources were also used. Observations, formal and informal discussions were carried out with researchers, farmers and some extension workers. For this case study, two R&D regional units were visited for two months. Secondary sources (existing reports, studies and publications related to the matter) were used for basic information on agricultural research in general and in Benin in particular. Such information is mainly used for the section 7.2.

7.2 Historical overview of the organization of agricultural research in Benin

Agricultural research in Benin has always been tuned to the agricultural development policy of the country. Broadly speaking, three periods may be distinguished with respect to agricultural research: the colonial period, the early post colonial period and the way agricultural research has been organized since 1981.

7.2.1 The colonial period

During the colonial period, objectives of agricultural development in Benin may be summarized as:

- increasing productivity of the export crops, mainly cotton and oil palm by means of research;

- transferring innovations generated by research to farmers; and

- ensuring the primary collection and export of agricultural products.

In line with these objectives, agricultural research was organized according to single crops and is fragmented through various research institutes and stations. As such there were three institutes in total (Fagbémiro & Sprey, 1990), namely the ‘Institut de Recherche pour les Huiles et Oléagineux (IRHO)’ for research on oil palm, the ‘Institut de Recherche en Agronomie Tropicale et des cultures vivrières (IRAT)’ for food crops, and the ‘Institut de Recherche du Coton et des Textiles exotiques (IRCT)’ which was in charge of research on cotton.

All these research institutes were managed by French agencies. The main objective in these institutes was to generate high yielding varieties and techniques. Research programmes were elaborated in Paris in the framework of regional research networks
of those French institutes. Results, varieties and innovations generated in these institutes were directly transferred to farmers through appropriate extension services.

As such, farmers were approached by many extension services but did not have any influence on them.

Results of these single crop organization of the research were quite satisfactory since Benin was, at that time, among the main African countries in oil palm production, and in cotton, tobacco, and coffee production to a lesser degree. But for food crops, results were meagre since the needs of farmers were not taken into account in research programmes.

7.2.2 Early post-colonial period

During the 20 years following independence (1960 to 1980) the orientation of agricultural research did not change very much. In none of the former French colonies, did the end of colonial rule immediately change the characteristics of French agricultural research in the former colonies with which France still maintained close economic, political and cultural links. Activities of the French agricultural research institutes in the former colonies continued, but under formal cooperation agreements with the new national governments. In Benin, after independence, a clear and formal emphasis has been put on the development of food crops in the agricultural policy of the country although the results have not been that visible. Development objectives in the agricultural sector were to ensure self sufficiency in food, and to promote the production and exportation of industrial crops in order to ensure earnings for the country on the one hand, and to provide raw material for local industries on the other.

The organizational arrangement for achieving these objectives did not change very much from these of the colonial period, only coordination of activities of the existing research and extension institutes was improved. The main coordination and linkage mechanisms established are the:

(1) establishment of the National Committee for Agricultural Research ("Comité National de la Recherche Agronomique - CNRA") in 1963. It is composed of representatives of the various institutions involved in agricultural research (e.g., research institutes, CARDERs and the Faculty of Agriculture) and even representatives of decision makers with respect to national resources allocation (e.g., the Ministries of Planning & Economy, of Finances). The objectives of the CNRA are: to define, annually, the general orientation of agricultural research in the country; to determine research priorities; and to set up relevant networks for the transfer of the results of various research programmes;
establishment of the National Directorate for Agricultural Research (‘Direction de la Recherche Agronomique -DRA’);

establishment of new research units and diversification of the research areas (creation of disciplinary research in the field of soil science, animal husbandry, and food nutrition);

later on, the nationalization of the research institutes formerly run by French institutes; and

establishment of a coordination unit for extension activities at regional level. That is how the first CARDER was created in 1968 in the Mono province and extended to other provinces in 1975.

As is apparent from the previous description, changes in agricultural research organization during this period were only oriented towards coordination through the establishment of new national institutes and coordination units. Approaches used for agricultural research did not change at all. The main characteristics of the agricultural research in Benin were as follows (Perrault & Stoop, 1990; Zacharie & Sprey, 1992):

- high emphasis on variety improvement and cash crops, i.e., organization of agricultural research according to single crop lines;

- farmers linked to researchers through extension services (CARDER). The process was Research----> > ---CARDER--- > > ----Farmers, i.e., a top-down and one-way approach;

- farmers’ knowledge and needs not, or poorly, taken into account;

- less importance devoted to socio-economic and socio-cultural dimensions of agricultural research, i.e., research was carried out under controlled conditions and results were transferred to farmers; and

- lack of research programmes focussing on natural resource management.

Results of this way of organizing agricultural research were: ignorance of farmers’ needs and knowledge in research activities; non-adoption of the so-called ‘more productive’ technology by farmers; and a slow increase in agricultural production. This situation led to the necessity of finding more participatory research approaches to bridge these gaps. Thus, the Research & Development (R&D) approach was introduced in the research system. In this chapter, R&D is mainly used to refer to the current approach of client-oriented research adopted in Benin. It is the RAMR project approach, which is not the same as the francophone ‘Recherche-Développement (R-D)’, but rather a Farming System Research approach.
7.2.3 Agricultural research organization from 1981

In early 1981, a regional seminar was organized in Cotonou. The objective of this seminar was to find relevant ways for transferring results of agricultural research to farmers. On the basis of a situational analysis of the national agricultural research system, four main recommendations were made with respect to the way agricultural research may be carried out. These concern the planning of research programmes in multi-disciplinary teams, and on the basis of socio-economic and physical constraints in rural areas; the targeting of research programmes according to agro-ecological variations in the country; the increase in researchers’ knowledge of the prevailing farming and cropping systems for a better understanding of constraints and opportunities in each agro-ecological zone; and the necessity of introducing more flexibility into the linkage institutions or mechanisms among researchers, on the one hand, as well as between farmers and agricultural researchers on the other.

These recommendations reinforced the necessity of more participatory approaches in the organization of agricultural research, i.e., an explicit necessity of tuning research activities to farmers’ needs and conditions.

In line with these recommendations, various new research approaches have been initiated in Benin through projects and programmes, namely: (Ehouinsou, 1990; Zacharie & Sprey, 1992)

1. a French approach in agricultural research (‘Recherche-Développement’) has been experimented with since 1985 through a cooperative project with French scientists in the Zou Province (RD-Zou);

2. a French approach in agricultural research was tried, called ‘Recherche sur les Systèmes de Production (RSP)’ in collaboration with the Semi-Arid Food Grain Research and Development (SAFGRAD) in the Borgou Province from 1985;

3. a research project on Traditional Farming Systems was carried out in the Atlantique province by the GTZ and the European Development Fund;

4. an applied research project was initiated by the Dutch Royal Institute of the Tropics (KIT) and the International Institute for Tropical Agriculture (IITA) in 1986 in the Mono province. This project is based on the On-Farm Adaptative Research (OFAR) approach, that is, the ‘Recherche Appliquée en Milieu Réel’ (RAMR) project; and

5. R&D approach was initiated in the Mono Province by the Faculty of Agriculture with financial support from the Canadian International Development Research Center (IDRC).
As explained in the introduction, all these forms of participatory research had neither the same approaches, nor similar contents.

Apart from the RAMR project, which has been more successfully carried out (progressive integration of farmers to research process, introduction of relevant technologies, and development of technologies with farmers), all the other projects initiated to introduce more participatory approaches into the organization of agricultural research in Benin ceased (Ehouinsou, 1990). Some of the reasons for this are related to the lack of coordination between and within projects, and their unsustainable character, i.e., the projects have stopped with the suspension of the external funding. This last point has been highlighted in a report of the World Bank summarized as follows (World Bank, 1991):

> During the last 20 years, agricultural research has declined in sub-Saharan francophone Africa. This decline is partly due to the insufficiency of resources allocated by governments for this activity. But, also, donors are reticent to give significant and long-term assistance to research programmes. They continually support existing programmes with technical assistance (experts) in such a way that at the end of the programmes, the activities stop as results of the departure of the experts. National research institutions do not have the resources necessary to take over the activities. Since agricultural research is only productive in the long run, it is not realistic to expect good results in such conditions.... [my translation].

As such, the configuration of the agricultural research system in Benin is still dominated by the traditional, classic, top-down, crop and discipline-oriented approach (see also Preuss, 1991). The experience of the RAMR project in the Mono province is, up to now, the most successful participatory approach to research organization in Benin.

In addition to these various attempts for improving agricultural research in Benin, the establishment in 1984 of a dependency of the International Institute for Tropical Agriculture (IITA) which was formerly based in Ibadan, Nigeria, had a great impact on the evolution of agricultural research in the country.

7.3 New orientations in agricultural research organization: a more client-oriented research

7.3.1 Description of new orientations in agricultural research

The research environment as described in the previous section, combined with population growth, led to the necessity of ensuring more sustainable agricultural development. Such necessity implies that agricultural research must be adjusted to its physical environment. Three main actions may be taken to reach such a vital adjustment: making the existing coordination committee, i.e., the CNRA, which is composed of the various actors involved in agricultural research, to become more dynamic; the establishment of relevant planning mechanisms that will contribute to a better translation of political and economic goals of the country into realistic
research programmes; and the participation of farmers in the various phases of research programmes. This will help researchers to gain a better understanding in the factors that influence innovation adoption in farmers' conditions.

This last action is a key point in the rural development policy, the 'Lettre de déclaration de Politique de Développement Rural (LPDR)' signed by the Beninese Ministry of Agriculture in Washington within the framework of the Structural Adjustment Programme (SAP). In this policy it was clearly spelled out that agricultural research and extension services must be tuned to the real needs of the farmers who are now going through a process of organization into more structured associations (see chapters 3 and 4). To achieve this objective, and in line with the recommendations of the SAP, the national agricultural research system in Benin is going through a process of restructuring that is still at its very beginning. Some of the important points in this process are as follows.

The establishment of a National Institute for Agricultural Research, the 'Institut National des Recherches Agricoles du Bénin (INRAB)' which is supposed to be responsible for all agricultural research programmes in Benin, regardless of the institutions in which they are initiated. Such an institute was established in order to bridge the existing gaps between the various institutions which are involved in agricultural research and which are not under the jurisdiction of the former National Directorate for Agricultural Research (DRA) (see 'Décret No. 92-182 du 06 Juillet 1992'). As such, it is a coordination institute for agricultural research.

Actually multi-disciplinary committees are set up in order to determine relevant research programmes that will serve as a basis for the development of a strategic plan for agricultural research. These committees are composed of researchers from different disciplines and different institutions.

The tuning of agricultural research activities to farmers' needs and conditions, i.e., making agricultural research more client-oriented has also been emphasized. This objective is to be reached through the regional agricultural research stations and mainly by the extension of the experience gained by the RAMR project in the Mono province to other regions of the country. In line with this new orientation of agricultural research, three new R&D units have been established in addition to the RAMR unit in order to cover all the provinces and in accordance with identified agro-ecological zones.

7.3.2 Analysis of the relevance of more client-oriented research

From the foregoing historical analysis of the configuration of the agricultural research in Benin, it appears that:
(1) the organization of agricultural research has not changed very much since the colonial period;

(2) experimental station research, i.e., research in controlled conditions, is the dominant approach to agricultural research. This has the implication that research is organized across various crops with only the objective of generating new high yielding varieties, regardless of their relevance for farmers conditions and needs. But some attempts have been made in the Mono province through the RAMR project to use a more adaptive and participatory approach to agricultural research;

(3) there is a lack of coordination of research activities carried out by various actors and groups of actors involved in this system. The consequence of such a situation is that the impact of the agricultural research programmes on the agricultural development in the country is not that visible; and

(4) there is also a lack of a coherent national research plan.

At the same time, agricultural development in Benin is currently confronted with many challenges such as a decrease in the availability of bush fallow which has supported shifting cultivation for decades, the dominant farming system in the country. This means that opportunities for extending cultivated areas are limited. As a matter of fact, the possibility of increasing agricultural production is at stake as this production was mainly based on the extension of the areas under cultivation by individual farmers. Also, there is a decrease in soil fertility due either to erosion or to the intensive cultivation of the limited areas in some regions without any attempts to maintain the level of fertility (see De Haan, 1992). Finally, an increase in the agricultural population is apparent. This is a result of the various programmes of voluntary retirement from the civil service and the increasing number of unemployed graduates and people out of school engaged in agricultural production.

With these problems in mind, it is clear that the extension of the RAMR project’s experiences to other agro-ecological zones may contribute to the improvement of the situation. But, to carry out a thorough analysis of this policy, it is worthwhile to have a closer look at the RAMR project itself.

The RAMR project is an on-going Farming System Research and Development (FS/R&D) programme initiated in 1986 as a joint cooperation project between the Dutch and Beninese governments with the technical assistance of the International Institute for Tropical Agriculture (IITA) and the Dutch Royal Institute of the Tropics (KIT). The main objectives of the RAMR project are the development and transfer of appropriate technologies to farmers through the extension service, the CARDER of the Mono Province; the development of a research methodology for on-farm research relevant to farmers’ conditions in Benin; and the institutionalization of R&D activities in Benin (Koudokpon, 1992).
The RAMR project has developed an approach based on progressive involvement of farmers in the research process. In that respect, it started with a 'researcher-controlled' approach and moved progressively to 'farmer-controlled or -managed' experimentation. The main steps of this progressive involvement of farmers in agricultural research are (Huijsman and Koudokpon, 1992):

- at the beginning of the project, an on-farm adaptative research approach was adopted in order to establish credibility, to obtain visible results, establish a tradition of teamwork, consult farmers about their problems and establish a strong linkage with the CARDER;

- a Research and Development (R&D) approach aiming at the generation of technology with a high level of farmers' participation. In this approach, R&D researchers still play a leading role. That is the 'researcher-managed' R&D approach; and

- a Research and Development (R&D) approach in which farmers play a leading role by selecting research priorities, and contribute for local or indigenous knowledge. That is the 'farmer managed' R&D approach. In that way, scientists learn from farmers and consider the experimental capacities of farmers.

As the objective of the new policy of an increased client-orientation in agricultural research is the institutionalization of the RAMR project, certain crucial aspects, as stated below, need attention if any success of this policy is to be achieved.

The behaviour of actors involved in the process needs to be changed. In fact, as explained previously, agricultural research has not, so far, associated farmers with any kind of technology development.

Also, the success of the RAMR project is partly due to the intensive financial support it received from the Dutch government. An institutionalization of this experience requires, then, the provision of relevant (financial, technical and human) resources. Such a provision is not guaranteed since the agricultural sector is being restructured. One of the objectives of the Agricultural Service Restructuring Project, i.e., the 'Projet de Restructuration des Services Agricoles' (PRSA) is to decrease costs of agricultural development services, it is, thus, clear that resources to be provided to agricultural research may not be that high. Also, only a few junior researchers have received training in participatory approaches, and most of the senior researchers who are in the majority in the INRAB are near retirement.

Finally, coordination and provision of relevant technical support are some of the main problems arising from the institutionalization of pilot experiences. This aspect is quite critical since experiences in participatory approaches are quite limited in Benin.
7.4 Individual and collective responses of actors involved in more client-oriented research

7.4.1 Introduction: actors involved in new orientations in agricultural research

Before introducing the main actors involved in the process of R&D institutionalization in Benin, it is worth taking a broad view of the general set-up of the R&D activities as it is now.

Regional R&D units are composed of permanent teams and ad hoc R&D networks; the RAMR team is one of these regional permanent teams. Each of these R&D units has three research sites. Field research technicians are employed at the site level, and thus are in direct contact with farmers. All this will be elaborated later in this section.

The main steps in the research process are: constraints and problem identification; implementation of the relevant R&D programmes; and dissemination of the main, successful results to farmers with similar problems.

On the basis of this set-up, the main actors and groups of actors involved in the policy of more client-oriented research through various R&D units are: regional R&D networks; permanent R&D teams; field research technicians; and farmers at the various R&D sites.

The regional R&D network is a regional linkage structure. It is a multi-disciplinary team composed of representatives of the main institutions involved in agricultural development at regional level. The main actors involved in this network are the disciplinary researchers having research programmes or interests in the region, specializing either in agro-forestry, horticulture, soil science, socio-economics, agronomy or animal science; the permanent R&D team of the regional unit; the representatives of the National R&D Coordination Unit who are disciplinary.
researchers operating at national level; and the representatives of the governmental extension institution.

Regional R&D networks are in charge of identification, in collaboration with farmers at the sites, of the main agricultural development constraints; the definition of the main R&D activities and experiments to be carried out with farmers, i.e., the yearly R&D programmes; the evaluation of the programmes' results which may be carried out either at the end of the agricultural campaign or as a mid-term evaluation; and the debriefing (restitution) of experimental results to the farmers involved in the programmes.

The permanent R&D team is the technical day-to-day management team of the R&D programmes at regional or agro-ecological level. On the basis of the programmes designed by the R&D network for the agro-ecological zone, the permanent team sets up field experiment protocols and discusses them with field research technicians. These protocols are revised according to the various comments of field research technicians and transferred to them for implementation. The permanent team is also in charge of establishing contacts with relevant institutions and organizations (governmental extension bodies and Non Governmental Organizations) at regional or local level in order to look for opportunities for collaboration. It is a multi-disciplinary team composed of researchers with various specializations.

Field research technicians are those in contact with experimenting farmers. They are supposed:

- to participate in the design of the experiments (protocols), register the farmers who are willing to carry out the various on-farm experiments, i.e., experimenting farmers, discuss experimental design (protocols) with experimenting farmers; and

- to help experimenting farmers in carrying out the tests, regularly monitor the experiments to gather relevant information for the analysis and justification of results, as well as identify new constraints and problems faced by experimenting farmers.

Farmers at the R&D sites. The population of all the villages selected as R&D sites is involved in the research programmes carried out in their areas. In fact, most of them participate in the problem identification process, and in the research debriefing meetings. According to their priorities, they may voluntarily carry out some of the R&D field experiments developed to solve some of the most important problems identified. Experimenting farmers are seen as counterparts of field research technicians in the R&D experimentation process.
7.4.2 Individual and collective responses of actors to the implementation of new orientations in agricultural research

The ultimate goal underlying the policy of a greater client-orientation in agricultural research is that R&D activities will generate relevant technologies¹ that can be disseminated by extension institutions. As such, actors' responses to this policy may be better grasped through the main steps in the research and extension process.

Actors' responses to constraints and problem identification

Problem identification is carried out in the field through diagnosis. The main actors of the regional R&D networks are involved in the process. Involvement of extension institutions has increased recently. In fact, at the beginning of the process, only extension officials of headquarters of the CARDERs were associated with the activities of the networks. But, more and more field extension workers are associated with these activities. Thus, actually, in most of the R&D networks, representatives of extension institutions are selected from regional and district as well as village levels. As such, various extension officials, Rural Development Officers and specialized technicians at district level, as well as Village Extension Workers are involved in the R&D networks. But their intervention is still limited to problem identification. Their commitment for the implementation of the various R&D programmes designed is low. We will come back to this in sections 7.5.2 and 7.5.3. According to the opinion of the R&D researchers, farmers are also enthusiastic about taking part in problem identification.

Actors' responses to the implementation of the R&D programmes

R&D teams, field research technicians and farmers are the main active actors in the implementation of the R&D programmes. My own experiences in the field were that all these actors jointly carried out the implementation of the programmes. Although, farmers' collaboration in the tests was low at the beginning, it is improving now. An illustration of this involvement is given through the assessment of the process by a R&D researcher:

In the first years, it was hard to ensure farmers' collaboration in the experiments, despite the fact that they were very enthusiastic about the process of problem identification. They were quite sceptical about the objectives, results and benefits to be drawn from these experiments. But, as time went by, their collaboration has increased. Nowadays, they firmly believe that the R&D programmes aim to solve their problems. We, R&D researchers and technicians, are quite proud of this collaboration. Farmers' delegations regularly come to see R&D teams to express their satisfaction about the R&D activities. These delegations are sent by the population of the sites to bring various gifts to R&D researchers as a recognition of their contribution to the development of their community.

But there is a difference in response among farmers. In fact, farmers' responses to the R&D programmes may vary according to site and type of technology. Most of

¹ Technology is used in a broader sense here. It may be related to agricultural techniques, varieties or animal husbandry techniques.
the time, technologies related to the improvement of food crops productivity (e.g., improved varieties) are more welcomed than other technologies.

Also, in some of the sites, gaining farmers' collaboration is very difficult despite the efforts of R&D researchers in this perspective. The main reasons for such a lack of collaboration, according to the researchers, is neither due to the process, nor to the relevance of the technologies. Rather, it is due to a lack of material motivation on the side of the farmers. We will come back to this later when dealing with the coping behaviour. The anecdote below gives an example of such a lack of collaboration as perceived by R&D researchers:

In site X, one of the R&D sites, a farmer is reluctant to carry out an agro-forestry experiment although he recognizes that he is facing a soil degradation problem. But, he didn't clearly express this feeling to the researcher. He always found excuses to avoid contacts with him. But, finally, he agreed to have the field research technicians install the experiments themselves. But after the experiments were installed, he pulled out all the plants without warning either the researcher or the field research technicians, who finally discovered that they were expected to pay the farmer or give presents to him to ensure his collaboration. That is what a French researcher had done during the implementation of a previous R&D programme.

Such reluctance is also observed by field extension workers who are supposed to be involved in the implementation of the R&D programmes. Finally, some field research technicians are not well motivated to carry out their work. This will be discussed later in the chapter.

**Actors' responses to the dissemination of the R&D results**

The findings in the field showed that the only mechanism set up to disseminate results of R&D programmes is the formal and official participation of R&D researchers in monthly workshops ('ateliers mensuels') organized for extension workers. In fact, according to the recommendations of the new national extension organization ('système national de vulgarisation'), and in line with the T&V system, researchers must be associated with these workshops aimed at designing appropriate solutions to problems encountered by farmers and which cannot be solved by field extension workers. These workshops held at regional level are one of the links between extension and research. According to the opinion of researchers interviewed, most of the time they do not yet have solutions for the problems submitted to them.

Apart from this formal integration between extension and research, there are few real exchanges of adapted technologies between the R&D teams and the field extension workers of the sites in which R&D programmes are running. Extension workers rely more on their bosses than on the relevant findings available to them at local level, i.e., they usually refer to their bosses for information or technologies they need for their daily work. This is due to hierarchical procedure and the lack of accountability and initiative in the extension institutions as discussed in chapter 3. However, R&D teams make efforts to initiate such horizontal collaboration between extension and research by organizing regular visits for farmers with which field extension workers
acting in the R&D sites are associated. They hope they can raise extension workers’ awareness in this way.

7.5 Analysis of actors’ responses to more client-oriented research

7.5.1 Knowledge and information processes

From the situation described above, it would seem that one could label some of the knowledge and information processes which dominate the way R&D programmes are designed and implemented, as ‘joint learning’ and ‘negotiation’.

Joint learning
Joint learning, in this context, is the learning process through which both disciplinary researchers, regional permanent R&D teams, field research technicians and farmers of R&D sites learn from each other through open discussions. This learning process takes place in various ways, at various levels in the R&D regional structures and also, at different stages in the implementation of client-orientation in agricultural research. In order to make a thorough description of the various joint learning situations, a distinction is made between phases of the process as indicated in table 7.1.

Evidence collected from the R&D researchers shows that all these joint learning situations do not work as expected. Apart from the phases of problem identification, debriefing and evaluation through village meetings, in which farmers’ contributions are well appreciated by R&D researchers, their participation in other learning situations (e.g., experiment formulation and experiment implementation) is still low. For example, experimenting farmers’ contribution to the implementation of R&D programmes is limited to the installation of experiments (ploughing, sowing and weeding). Formal observations and data collection about performance of experiments are done alone by field research technicians. Thus, despite the enthusiasm of R&D permanent teams to involve farmers more in the process, they have not yet succeeded in doing so either because they do not know how to do it by themselves or because of motivation on the part of the field research technicians and farmers. The main reasons for such situations will be fully discussed later in this chapter when dealing with coping behaviours and factors affecting actors’ responses in this case study.

Negotiation
Two forms of negotiation emerged from the data as occurring between R&D researchers, extension workers and farmers: negotiation on priority setting and negotiation on experimental design.
Table 7.1: Joint learning situations in the process of client-oriented agricultural research in Benin

<table>
<thead>
<tr>
<th>Phases</th>
<th>Actors involved</th>
<th>Joint learning activities</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem</td>
<td>Regional R&amp;D network</td>
<td>Agro-ecological zones identification + general agricultural</td>
<td>Agro-ecological zones</td>
</tr>
<tr>
<td>identification</td>
<td>Regional R&amp;D network</td>
<td>constraints identification</td>
<td>Main constraints</td>
</tr>
<tr>
<td></td>
<td>Farmers of the sites</td>
<td>Specific agricultural constraints identification in the sites</td>
<td>Farmers’ needs and main problems in each of the sites</td>
</tr>
<tr>
<td>Priority</td>
<td>Regional R&amp;D network</td>
<td>Problem ranking</td>
<td>R&amp;D priorities and programmes</td>
</tr>
<tr>
<td>setting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment</td>
<td>R&amp;D permanent team</td>
<td>Drafting of experiments designs</td>
<td>Provisional protocols</td>
</tr>
<tr>
<td>formulation</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>R&amp;D permanent team/ Field research</td>
<td>Discussion of provisional ‘protocols’</td>
<td>Revised ‘protocols’</td>
</tr>
<tr>
<td></td>
<td>technicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Field research technicians/</td>
<td>Discussion of the revised ‘protocols’</td>
<td>Adapted ‘protocols’</td>
</tr>
<tr>
<td></td>
<td>Experimenting farmers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experiment</td>
<td>Field research technicians/</td>
<td>Installation of experiments Monitoring</td>
<td>Experiment results</td>
</tr>
<tr>
<td>implementation</td>
<td>Experimenting farmers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debriefing</td>
<td>Regional R&amp;D network</td>
<td>Debriefing of results</td>
<td>Agreement on results</td>
</tr>
<tr>
<td></td>
<td>Field research technicians</td>
<td>Discussion of results</td>
<td>Agreement on new needs and constraints</td>
</tr>
<tr>
<td></td>
<td>Experimenting farmers</td>
<td>Main learning points and new problem identification</td>
<td></td>
</tr>
<tr>
<td>Evaluation</td>
<td>Field research technicians and</td>
<td>Monitoring of the experiments</td>
<td>Agreement on learning points</td>
</tr>
<tr>
<td></td>
<td>experimenting farmers</td>
<td></td>
<td>Identification of new problems, needs and constraints of farming activities</td>
</tr>
<tr>
<td></td>
<td>R&amp;D permanent team</td>
<td>Monitoring of the experiments</td>
<td>idem</td>
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<td></td>
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<tr>
<td></td>
<td>R&amp;D network/ R&amp;D team /</td>
<td>Indoor discussions</td>
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<tr>
<td></td>
<td>Field research technicians</td>
<td>Field visits</td>
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<tr>
<td></td>
<td>Experimenting farmers</td>
<td>Village community meetings</td>
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</tr>
</tbody>
</table>

Source: Field data from the case study
Negotiation on priority setting occurs between researchers, extension officials, and farmers. In a form of a joint decision-making process. In fact, after problem identification, extension officials and (R&D and thematic) researchers discuss the main programmes to be undertaken. Each of these actors has specific objectives which are not always reconcilable. According to the researchers interviewed in the field, extension officials need to have technologies that can be suitable for many situations and are interested, sometimes, in solutions which have not emerged during problem identification. Researchers themselves are short of relevant solutions. In fact, solutions from research stations do not, most of the time, correspond to farmers' needs. But, according to R&D researchers, priorities are set by taking into account the solutions already available from research stations. Thus, only a limited number of solutions have so far been developed by R&D researchers themselves in collaboration with farmers. With such diverse interests and mismatch between supply and demand, R&D programmes are negotiated in order to build up consensually designed programmes. Farmers are not associated with this priority setting process. Nevertheless, they do influence this process with their attitude towards the R&D programmes identified. In fact, farmers do not always have similar interests in all of the programmes designed. Hence, they do make choices according to their interests. It is, in a way, their form of involvement in the negotiation process in which they play a passive role.

Negotiation on experimental design always occurs between R&D teams and field research technicians on the one hand, and these technicians and experimenting farmers, on the other, about the way experiments are to be carried out (see table 7.1), i.e., the ‘protocols’. In fact, final experimental designs are set up after opinion exchange between these groups of actors.

7.5.2 Coping behaviour

The various coping behaviours identified in the analysis of the evidence collected in the field, with respect to the process of making agricultural research more client-oriented in Benin, can be classified in two categories: rejection and acceptance of part of the activities involved in the implementation of the policy measure.

(Partial) rejection of the activities initiated in client-oriented research process

Many forms of rejection of part of the activities initiated by the permanent R&D teams have been observed. These forms of rejection are related to different actors, mainly farmers, and some of the field research technicians.

Although farmers have indicated many problems in the field of agricultural development, they do not accept all the programmes initiated to solve those problems. In fact, as previously stated, farmers have different degrees of enthusiasm for carrying out the various experiments designed to solve their problems. They are more inclined to accept experiments which have quick and visible results and those which
may contribute to daily subsistence (mainly food crops). Experiments related to soil fertility improvement either by controlling the population of striga\textsuperscript{2} or introducing the cultivation of mucuna\textsuperscript{3} are not easily accepted. The main reasons given by farmers for the rejection of these technologies are related to their culture. In fact, for them, it is nonsensical behaviour to continue cultivating poor soils even when it is meant to improve fertility. Fertility, they feel, is provided to soils by nature. Poor soils are just left under fallow. Moreover, they think that cultivating non-edible crops is a waste of time. Thus, they don’t agree to carry out such experiments. Such culture-bounded behaviour may be seen as an internalized rejection of technologies. But, such coping behaviour is only tenable in regions where land is still available and, thus, shifting cultivation is feasible. This means that the existence of reliable alternatives may lead to an internalized and open rejection. As a farmer told the researcher: ‘it is no use wasting your time and energy trying to improve the fertility of an already poor soil from which you are not even sure to obtain valuable products. You may save this energy for clearing new land’.

Some of the field research technicians also do not carry out their work properly as they should. They are not eager to put forward much effort and always find fictitious reasons for not doing so. The following situation I witnessed during the field research gives an illustration of such behaviour:

I witnessed a situation in which the field research technicians of site Z did not carry out the necessary observations about field experiments and did not spray cowpea experiments with insecticide simply because, in the first case, they had not been asked to do so, although they had been doing it for many years, and in the second case because they needed a four-liter can for insecticide dosage. Such a can is easily found in the village where they live and they can borrow it from farmers. But, they simply waited until the R&D researcher in charge of these experiments provided them with the can. From the discussions held with the researchers, it appeared that all these reasons were not always valid. In fact, this same day, when we arrived in the village around 11.00 a.m, we met these technicians in the street talking with people. They told us they were looking for one of their experimenting farmers with whom they had planned to work. This did not convince the researcher with whom I visited this R&D site, since he told me that they always give similar reasons to justify their behaviour.

From this instance, it appears that the technicians concerned are not motivated to do the work properly, but they do not want to tell the researchers the truth and always simply accept verbally all the recommendations they receive. Such behaviour may be seen as a ‘skimping’ of R&D programmes. The main reasons underlying such behaviour in this case study seem to be a lack of material and financial motivation. In fact, the field research technicians concerned are civil servants who worked for years in a previous R&D programme that provided them with many material and financial perquisites. They are not at all motivated to work, since in the current

\textsuperscript{2} Striga is a parasite on sorghum, maize or cowpea which appears on poor soils.

\textsuperscript{3} Mucuna (Mucuna pruriens) is a covering grain legume used by the RAMR project as a way to improve soil fertility and/or to combat Imperata cylindrica, a weed plant.
situation more than four months of transportation allowances are still unpaid. Such skimping of R&D programmes is also observed with farmers at a former R&D site. The skimping, which is hidden rejection, has turned out to be a pure rejection in the case of these farmers.

These two forms of skimping show that this type of rejection may have as a result a compliant acceptance or a pure, and even internalized rejection.

(Partial) acceptance of the activities initiated in the process of client-orientation in agricultural research

As far as acceptance of the R&D activities initiated by the various actors is concerned, the analysis of the present case helps to distinguish two forms: acceptance based on internal motivation and acceptance guided by opportunities available. In effect, most of the R&D researchers encountered in the field are very enthusiastic about client-orientation in agricultural research, even when they do not yet have all the necessary knowledge and know-how for successful implementation of this type of research. In fact, most of them have worked either as extension officials at regional level or as Rural Development Officers at district level. Moreover, they have chosen voluntarily to move from extension to client-oriented research activities. One of them told the researcher:

I have been an extension officer for more than four years. Through this experience, I have noticed some weaknesses in the way we develop innovations for farmers. In fact, we have a stereotyped conception of what extension is and how it can help farmers. During a short study abroad I discovered the necessity of a participatory approach to development, as a result of the critiques made by my fellow course participants on my presentation. From then on, I have been convinced of the necessity to listen to farmers instead of blaming them for non-adoption. Thus, I decided to move from extension to client-oriented research since the way extension is organized does not allow the utilization of such a method.

As this evidence shows, and since enrollment in the R&D activities has been voluntarily chosen by R&D researchers, their enthusiasm to the implementation of R&D programmes may be seen as an internalized acceptance. This internalized acceptance of R&D activities by the concerned researchers does not mean that these activities are carried out correctly by them. In fact, as has been explained in the joint learning situations, so far, some weaknesses can be pointed out as far as the implementation of the R&D activities is concerned. These weaknesses seem to be related to the low level of farmers’ involvement in priority setting and in the monitoring of the R&D experiments; and to the reliance on available technologies to set R&D priorities. As such, there is little real development of technologies that can involve researchers and farmers. But, rather, it is more an adaptation of existing technologies to experimenting farmers’ conditions. The required articulation between researchers’ knowledge and the local knowledge necessary for effective Research and Development activities has not yet occurred. Thus, participatory technology development deserves more attention in order for client-orientation in research to become a reality.
As noted earlier when describing the actors’ responses to the policy, farmers of the R&D sites are also enthusiastic about the research activities in their villages. This enthusiasm is evident in all the programmes. In fact, programmes related to food crops are far more interesting for farmers than other programmes. Discussions with R&D researchers showed that inputs used on the experiments are provided by the R&D programmes through permanent R&D teams and outputs of the experiments, i.e., the products belong to the experimenting farmers. As such, farmers use the opportunities provided by R&D programmes to access agricultural inputs in order to increase their annual productivity. Such an acceptance of R&D programmes may be seen as opportunity grasping.

Such coping behaviour seems to be critical to the success of client-orientation in agricultural research, especially when experiences gained from previous R&D programmes are taken into account, since these types of behaviour may turn into rejection if facilities are not available all the time. For a sustained acceptance, farmers need to provide themselves inputs for the field experiments.

7.5.3 Factors affecting the responses of the actors to new orientations in agricultural research

The main factors affecting the responses of actors, either through the knowledge and information processes or the various coping behaviours identified, seem to be related to past experiences and cultural backgrounds of actors; and the actors’ power in terms of capability and autonomy.

Past experiences and cultural background may be important factors shaping the responses of both researchers and farmers to the new policy of client-orientation in agricultural research. In fact, most of the R&D researchers encountered in the field were extension workers before turning to research activities. But, as appeared in chapter 3, i.e., the case study about extension, farmers are not seen as knowledgeable and capable. Thus, the association of farmers with extension planning is not seen as relevant. But, since these researchers do not receive any additional training in participatory approach to extension and research, it may be one of the factors that affects the current way of implementing client-oriented research.

Also, farmers’ knowledge of soil fertility and its improvement shapes the way they perceive some of the experiments designed to solve their problems. This knowledge is derived from the cultural values of the communities as well as from past experiences of farmers in dealing with less productive lands.

The power that the actors have in the implementation of the R&D activities also affects their responses in general and their coping behaviour in particular. This power may be expressed either in terms of capability or autonomy/accountability. Points of view of R&D researchers, as expressed during the field research and described below, give an illustration of the influence of these two forms of power:
I left the CARDER because I felt we were not free enough to take significant initiatives. We were dependent on our bosses. But, since I started working in the R&D programmes, I have never received a directive from my superiors forcing me to do other than I have planned. Superiors always accept our initiatives. Nothing is imposed and there is no pressure from anyone. We are independent, and even too independent, since back up activities are few or do not exist. It seems that I have left one extreme for another. The experimental designs we formulated are rarely criticized by members of the National R&D Coordination Unit. Even these superiors at national level do not master the R&D activities very well. R&D means different things to different people. In general, it is equated with diagnosis and on-farm experiments. I have been too rudely awakened and surprised by this idea. It seems that even the members of the National Coordination Unit who are supposed to manage all the R&D activities in Benin do not have enough knowledge of the issue.

Researchers at regional level have the autonomy to adapt their programmes to the needs of farmers and extension institutions of their region. Even the field research technicians of the site have substantial autonomy in the management of their working programmes, which are not submitted to permanent R&D teams. As such, the researchers consider the field technicians as partners in the R&D process. This autonomy for actors has positive as well as negative influence on the responses of actors.

A positive influence is, as has been shown in this chapter, that researchers are very enthusiastic about research activities. Also the experiments designed are, as far as possible, responses to the problems identified. No programme is imposed from without. In this way their actions are client-oriented, although they do not yet fully take into account the constraints and opportunities available to farmers in terms of local knowledge and know-how. A negative influence is the lack of real back up procedures and the 'skimping' of the activities by some field research technicians.

Actually, actors cannot be blamed for the low involvement of farmers in the research process or for developing specific technologies that take into account the constraints and opportunities available to farmers. In fact, most of the researchers do not have any additional training on the matter. They simply try to do as they can. They do not have the capability to do otherwise. But, it also may be due to the influence of the RAMR project which started with a similar approach. Lack of support from the National Coordination Unit may also be understandable since members of this unit, who are supposed to manage all the R&D programmes in Benin, have not received any training in this area. They only learn from experiences gained by collaborating with foreign experts in the field.

Finally, most of them are senior civil servants near retirement. Thus, training is not their major concern, and training in such a situation will be also useless. Promotion of well trained junior researchers is currently desirable.
7.6 Conclusion

The analyses of the responses of actors to the implementation of client-oriented research shows that agricultural research in Benin is more and more focussed on the felt needs of farmers, although new technologies are not yet developed as an articulation between the scientific knowledge of researchers and the local knowledge of farmers, as it should be. The main knowledge and information processes that have taken place during the process are joint learning and negotiation, which are more interactive processes. The main coping behaviours identified were labelled as internalized rejection; skimping; internalized acceptance and opportunity grasping.

The analyses of the coping behaviours in this case study clearly show that when the collaboration of actors in a change process is based on self-interest, there is a greater chance for future rejection if benefits are no longer guaranteed. In fact, a historical study of the reasons underlying some of the coping behaviours identified in this case study, such as skimping and internalized rejection, shows that when opportunities disappear or are retrenched, opportunity grasping as coping behaviour may turn into rejection or skimping. Also, the case of the field technicians as it has been described in this chapter indicates that opportunity grasping may also turn to compliant acceptance or skimping. As such, when opportunities are not available anymore for actors, an acceptance, based initially on the grasping of these opportunities, may turn out to either internalized rejection, skimping, or, in situations where power relations are too strong, i.e., in directive and top-down situations, to compliant acceptance.

But since opportunity grasping is still the coping behaviour adopted by experimenting farmers in the process of client-oriented research; the success of such policy measures may not be guaranteed ceteris paribus. One may predict that discontinuation of supplying experimenting farmers with required inputs may also lead to skimping or rejection of the R&D activities. Thus, more participatory methods in technology development and the design of technologies on the basis of the constraints and opportunities in farmers’ conditions must be taken into account. Moreover, making experimenting farmers more aware of the necessity for them to financially support the costs of the inputs required for the experiments is more crucial.

The case of the R&D researchers showed that internalized acceptance of policy measures does not mean or is not always based on having the skills required for proper implementation of prescribed actions.

Finally, the analyses showed that the autonomy of the actors is one of the main factors that influence these responses. A high degree of autonomy or accountability permits actors to take initiatives and adopt behaviour that they prefer to such an extent that some of the voluntary actions have a negative influence on the process. Other factors influencing actors’ responses in this case study are past experiences, cultural background and actors’ capability.
CHAPTER 8 THEORETICAL AND PRACTICAL CONTRIBUTIONS

8.1 General conclusions of the study

8.1.1 Introduction

Before drawing the main conclusions, it is worth recalling the basic objective of the study and placing the present chapter within the whole exercise in order to situate the conclusions in the context of the book.

This book is about policy change in agricultural development in Benin. Its objective is to understand how social actors reconstruct the world around them in such a changing situation and the related coping behaviours and knowledge processes. The methodological set-up of the research was to discover emergent knowledge and information processes as well as the various forms of coping behaviour of actors through a continuous confrontation of empirical data with theoretical concepts (see chapter 2). In line with such a methodological process, chapter 6 has already provided some provisional theoretical conclusions on the basis of a comparative analysis of the three first case studies, i.e., the process of making agricultural extension more professional; the study of the policy of giving more responsibility to farmers; and the process of making agricultural education more relevant for agricultural development needs. The main knowledge claims that have emerged from the comparative analyses of the results of these case studies were:

- social actors actively and creatively adopt a plurality of coping behaviours to deal with change in their environment. These behaviours may be rejection or acceptance based on reasons which vary according to situations and actors;

- acceptance of policy measures is facilitated either by a positive (material, financial or social) motivation, the provision of enough room for manoeuvre to actors, or the utilization of more interactive policy instruments. Rejection is more likely to occur in top-down and less motivating situations;

- responses to policy change are influenced by the degree of countervailing power available to social actors. This power may be in terms of autonomy and/or capability; and
the role and the power of facilitators influence the responses of the social actors to policy change.

These emergent and provisional theoretical conclusions are, once more, cross-checked with empirical data in the field of client-orientation in agricultural research to find out whether or not they are confirmed in another changing situation.

From the results of the analysis in chapter 7, it appeared that these provisional knowledge claims that have been derived from the first three case studies still hold in the situation of client-orientation in agricultural research. Moreover, it led to a better understanding of the reasons that motivate skimping as a coping behaviour. It also showed the danger that exists in a situation where actors have been given too much room for manoeuvre in terms of autonomy or freedom, without having either the necessary capabilities or the right incentives. Finally, some of the factors related to the local culture of the farmers were identified. All these aspects are elaborated later in this chapter.

8.1.2 Main conclusions

On the basis of the conceptual framework developed in chapter 2, actors’ responses to the implementation of the various policy measures were observed, first of all, in three different change situations (extension institutions, agricultural education institutions, and farmers’ organizations). The various responses that emerged from these case studies were compared to the theoretical framework of chapter 2. As a result of this comparison, a provisional grounded framework was elaborated and cross-checked later against a fourth case study related to agricultural research. The main conclusions drawn are as follows:

Actors’ responses to policy change in Benin have two aspects: the knowledge and information processes initiated by the government officials as part of a set of policy instruments chosen for the implementation of the various measures; and the coping behaviours of the actors as responses either to the situation of change itself or to the knowledge and information processes.

Actors’ coping behaviours may be broadly classified into two categories: rejection or acceptance of part or all of the process. In fact, in all of the case studies these two forms of coping behaviour have been observed. As such, policy measures are not accepted in the way that they have been designed and expected to be carried out. Acceptance or rejection is always based on legitimate reasons as perceived by the actors. The main reasons for rejection as they emerged from the cases are a:

- lack of social and/or cultural motivation, i.e., incongruence between the contents of the policy measures, past experiences and/or value system, which leads to internalized rejection; and
lack of material and/or financial motivation in situations where actors do not want to shock change agents, either because of bureaucratic and administrative requirements or social and cultural obligations and values. Such combined reasons lead to skimping.

Internalized rejection is observed in most of the case studies, except in the extension institutions in which rejection is always hidden or unspoken. On the other hand, skimping has been observed in all the cases studied. This means that the process of agricultural development in Benin is full of various forms of hidden and unspoken rejection of the various policy measures issued to improve efficiency and relevance.

Three forms of acceptance have come out from the comparative analysis of the case studies: internalized and compliant acceptance, and opportunity grasping. Reasons motivating acceptance, as derived from the case studies, are:

- a social and/or cultural positive motivation, i.e., a congruence between contents of the policy measures, past experiences and/or the value system. In such a situation, acceptance has been labelled as internalized;

- an avoidance of disciplinary action in administrative and bureaucratic situations, i.e., an expectation of positive or favourable rewards from the change agent. Such motivation leads to a compliant acceptance; and

- a material and financial motivation. In this case, actors are motivated by the profits they can make by accepting the policy measures. Such acceptance is seen as opportunity grasping.

Opportunity grasping has been observed in all case studies in which specific facilities are provided for acceptance. In fact, financial motivation in the form of additional allowances is a structural problem recognized by both the donors and the development civil servants in Benin. Additional allowances have become 'sine qua non' conditions for mobilizing people, even for tasks already related to their job. I will come back to this in the practical conclusions.

Compliant acceptance has been observed in most of the cases, apart from the policy of client-orientation in agricultural research. This compliant acceptance is due to the coercive policy instruments used in these change situations. These coercive policy instruments are related either to control and supervisory visits, administrative disciplinary action, suspension of allowances, or suspension of technical support in the case of the farmers' organizations.

Internalized acceptance also occurred in most of the cases. It has emerged from the analysis of the change situations with regard to professional extension, relevant agricultural education, and more client-orientation in agricultural research. But, the frequency of this coping response varies from one change situation to another, as well as from one group of actors to another. Therefore, the effects of such behaviour on the implementation of the related policy measures vary accordingly.
More visible effects were observed in the case of agricultural research. But, such a coping response did not emerge in the case of the farmers' organizations. In fact, farmers are more inclined to grasp the opportunities provided by the implementation of the related policy measure.

The basic distinctions between these various forms of coping behaviour are summarized in table 8.1.

**Knowledge and information processes** varied according to case study. They have been classified into two categories: directive, and more interactive.

Directive knowledge and information processes as they emerged from the case studies are: training; anticipation or regulation setting; regulation reinforcement; and regulation control. Directive knowledge and information processes have been found mainly in extension institutions characterized by lack of flexibility and initiative taking. No directive knowledge process was actually identified in the implementation of the client-oriented research. In the agricultural colleges, new educational objectives were set as regulations on which the actors, especially students and teachers, have less influence. Such a process is also directive.

Interactive knowledge and information processes which came out of the study are: facilitation; joint learning; and negotiation or consensus building. No interactive knowledge process came out of the case study of extension (see previous section). But, in other change situations studied, mainly interactive knowledge and information processes were used, especially in the client-oriented research in which only interactive processes were identified. Such a situation seems to be due to the nature of the policy measures. In fact, R&D activities call for interactive communication processes at all stages of the research process. But, for the time being, all these interactive processes are not yet that effective.

The main factors which might influence actors' responses to change are either related to individual actors or to the institution in which they are working.

At *individual level*, two main factors have been identified. These are motivation and individual capability.

Many sources of motivation were derived from the case studies: material, financial and socio-cultural motivation. Actors' past experiences also seem to influence their response to change.
### Table 8.1: Distinction between the different forms of coping behaviour

<table>
<thead>
<tr>
<th></th>
<th>Internalized rejection</th>
<th>Skimping</th>
<th>Compliant adoption</th>
<th>Opportunity grasping</th>
<th>Internalized adoption</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reasons shaping the behaviour</strong></td>
<td>Expected behaviour not congruent with value system and lack of social and cultural motivation</td>
<td>Not congruent with value system and lack of materially and financially motivated</td>
<td>Not congruent with value system but avoidance of discipline</td>
<td>Not congruent with value system but a materially and financially positive motivation for achieving personal projects</td>
<td>Congruent with system positive and cultural motivation</td>
</tr>
<tr>
<td><strong>Conditions of occurrence of the behaviour</strong></td>
<td>Irrelevance of expected behaviour to value system and past experiences</td>
<td>Avoidance of shocking change agent because of social, cultural administrative and bureaucratic norms, values and obligations</td>
<td>Discipline and rewards are perceived as relevant</td>
<td>Availability of facilities relevant for the achievement of individual projects</td>
<td>Relevance of expected behaviour to value system and past experiences</td>
</tr>
<tr>
<td><strong>Conditions for discontinuation of the behaviour</strong></td>
<td>Positive perception of social and cultural motivation and/or material and financial motivation</td>
<td>Change or increase in financial and material motivation</td>
<td>Change in perception of discipline and rewards</td>
<td>Suspension of facilities or change in individual projects</td>
<td>Decrease in the positive perception of cultural and social motivation</td>
</tr>
</tbody>
</table>
The lack or insufficient capability to perform the expected behaviour might be due to a low level of formal education, lack of a literacy programme as well as postgraduate and in-service training.

In all of the case studies, motivation seems to be an important factor in shaping actors' responses to change. Internalized rejection and acceptance, skimping, opportunity grasping as well as compliant acceptance, which were labelled as coping behaviours in the case studies, are rooted in particular sources of motivation. Of course, sources of motivation vary from one change situation to another for any given form of coping behaviour. All depends on the sources of motivation which are perceived as crucial by the actors.

Two forms of influence of capability have been identified from the cases. With regard to the first form of influence, actors did not completely accept the contents of the policy measures because of a low level of education, literacy and skills. That was the case of the Village Extension Workers. But, the second form of influence was characterized by the fact that the actors have accepted the contents of the policy measures, even internalized them, without having the practical ability and skills to implement them. They were very enthusiastic about the process and tried to learn by experience. Also, they were willing to receive additional information or training. This was the case of the R&D researchers.

But an exclusive focus on capability building does not always lead to desired results. The case of the extension workers in Benin is an illustration of such a limitation.

At institutional level, autonomy and resources available seem to be important factors in the implementation of most of the policy measures.

Power relations, management of information in decision making and action emerged as the main constraining factors affecting actors' autonomy in the various change situations. For example, the provision of relevant information to, and the organization of more interactive encounters for, farmers have influenced the dynamics of the process of change. Of course, the quality of information and the way it is used by the actors play an important role in this process.

The opportunities which have determined actors' responses, especially coping behaviours, are the material and financial resources provided to them in the course of the implementation of the processes. Their access to these resources and the degree to which these can help them to solve their individual problems seem to be important.

### 8.2 Some additional theoretical remarks

Looking back to the theoretical framework built in chapter 2 shows that we have started the theoretical analysis of actors' responses to policy change with two
perspectives: the planners' perspective and the combination of sociological and socio-psychological perspectives.

The planners' perspective was assuming that policy measures should be implemented by the actors as expected. According to this perspective, specialists from different disciplines work together to coordinate their actions to tackle a perceived problem; officials and scientists work on a strategic plan; and subordinates and/or 'beneficiaries' organize separate activities in the frame of the strategic action designed (see Van Woerkum, 1994). In the frame of this perspective, many policy instruments are used (e.g., regulations, facilities, control, incentives, disciplinary, money, persuasion, i.e., a variety of knowledge and information activities) by the government officials to implement policies.

The combination of the social actors and the reasoned action perspectives assumes that people, as social actors, will try to make the best of the policy measures on the basis of their own objectives. From this perspective, actors, be they officials, subordinates or beneficiaries, are seen as human beings who are quite logical, knowledgeable and who make a systematic use of the information and resources available for them not merely to achieve policy goals, but to realize their own projects. They also consider the (social, technical and economic) implications of their action, for themselves as well as for other people, before deciding whether or not to be engaged in a given expected behaviour. That means, they take reasoned actions.

This second perspective has proven to be realistic, as the major conclusions have confirmed and supported the basic theoretical orientations of the study. In fact, the main knowledge claims that can be formulated on the basis of the various grounded coping responses of actors are summarized in the subsequent sections.

(1) Coping responses in a change situation vary from one actor to another irrespective of the nature of the social, institutional, or the technical context in which the change takes place. In fact, coping with change is an outcome of the way people perceive their immediate environment. As such, in similar changing situations, actors always have different responses that may be based on legitimate reasons. This means that there is always a diversity or plurality of responses in a change situation (Long, 1984; 1987; 1989; Long and Van der Ploeg, 1989; Long & Long, 1992). The main factors that give rise to this plurality of responses are motivation, capability and autonomy or accountability of actors. In other words, this plurality is an outcome of the variety of people's beliefs in a situation. Beliefs are represented as the sum of the 'expected values' of the attributes ascribed to the content of the change (Eagly & Chaiken, 1993). These attributes may be projects or goals (Peak, 1955; Rosenberg, 1960; Carlson, 1955; 1956) or the probability attached to each of these attributes (Fishbein, 1961; 1963). In other words, the plurality of responses of social actors is guided by their evaluation of the costs and benefits of the adoption of the expected behaviour for themselves and for other social actors, as well as the room for manoeuvre available for them to adopt or not adopt this behaviour in a given situation. Room for manoeuvre in this context
may be related to the autonomy and accountability of actors, their knowledge and know-how.

(2) Motivation is an important factor in actors' responses to change. There are many sources for motivation. They can be social or cultural-oriented. In that case, actors take their value system and past experiences as reference for their actions and behaviour. It can also be rooted in the financial and material interests that actors may derive from the implementation of policy measures. These material and financial opportunities are not mainly used towards the success of the implementation but for the realization of individual objectives and projects. Such motivation has proven to be very important in actors' coping behaviour. Thus, for actors, policy measures provide after all a means to reach individual objectives and to solve individual problems.

(3) Responses to policy change are not only a product of existing ability or skills of actors with respect to the performance of the expected behaviour. They are also a product of the readiness or willingness of actors to acquire the relevant ability and skills. In fact, adaptation to change is a matter of having the capability or having access to it. Lack of capability leads to two different responses. Some actors, in a change situation in which they do not have the required capability, simply devise ways to resist this change. In such a situation, their coping behaviour may be rejection, skimping or compliant acceptance. Surely, other factors related to actors' autonomy may intervene in such coping behaviours. This way of dealing with the lack of capability is perceived by social psychologists as a 'low level of perceived self-efficacy' (Bandura, 1977). Such actors do not perceive themselves as capable of acquiring the relevant skills.

Other actors in the same situation may accept the change even though they do not have the required abilities and skills for the performance of the expected behaviour. They look for ways to acquire these abilities and are convinced that they can achieve this objective. Such actors are perceived by social psychologists as having a 'high level of perceived self-efficacy'. In fact, actors accept change, are even very enthusiastic about it without having the capability to implement it correctly. As such, capability building aimed at developing human resources is very crucial in change situations. Capability building may reinforce the expression of self-created autonomy and the use of formalized autonomy.

Capability may be acquired through formal basic education, in-service training or literacy programmes. The experiences gained through this exercise shows that there are two main factors that shape these two forms of perceived self-efficacy: actors' age and their level of education. A low level of perceived self-efficacy was observed with the Village Extension Workers who had a low level of education, while a high level of perceived self-efficacy emerged in the case of the R&D researchers who had the degree of ingenieur. But, at the same time, in each of these categories, there was also a difference between young and old people. Younger extension workers have a high level of perceived self-efficacy while older ones near retirement have a low level of perceived self-efficacy.
Response to policy change is also an outcome of the way actors perceive the degree of freedom (room for manoeuvre) available to them in their attempts to perform the expected behaviours, i.e., the degree of autonomy or accountability. The theory of 'psychological reactance' assumes that people want to feel free to adopt particular positions on issues, or not to adopt any position at all. Under some conditions, changes that attempt to influence them to adopt a particular position may threaten this attitudinal freedom. Moreover, the more and the greater the coercive pressure exerted on the people to adopt this particular position, the greater will be the magnitude of resistance experienced (Eagly & Chaiken, 1993; Brehm, 1966; 1968; 1972; Brehm & Brehm, 1981). Autonomy or accountability is, therefore, important in shaping actors' responses. Although actors try to create their own autonomy for themselves, i.e., some room for manoeuvre (Long, 1984; 1989; Long & Van der Ploeg, 1989), by adopting coping behaviour that they perceive as relevant, the formalization of such autonomy seems to be a requirement for a successful implementation of change. In fact, in situations where actors are too dependent and do not have the formal possibility to make their own decisions and take their own initiative, coping behaviour tends to be in the form of compliant acceptance and skimping, while in more decentralized and interactive situations, i.e., with a greater level of autonomy, coping behaviour is more openly expressed as internalized rejection or acceptance. However, when the degree of autonomy is high in such a way that it may be confused with 'laissez-faire', skimping may be a dominant coping behaviour in situations where actors are not socially, culturally, financially and/or materially motivated. As such, autonomy can be seen as a continuum (from a low level or non-existence of autonomy to a high level of autonomy) in which both extremes can endanger change and innovation. Autonomy as well as material and financial motivation reinforce each other. In fact, for social psychologists, a high degree of autonomy is a positive motivational factor since the theory of psychological reactance is conceived as a motivational theory of resistance to change (Eagly & Chaiken, 1993:568-570).

From the above, we may conclude that response to policy change is influenced by individual motivation, individual capability and the degree of autonomy, freedom and accountability available for individual action. The degree of autonomy or accountability is partly reflected in the type of policy instruments (directive versus interactive, top-down versus participatory). Thus, an optimum degree of autonomy combined with material as well as financial motivation, and capability building, are important factors which may ensure the success of any policy change. This may be seen as the 'triangle' for policy change in agricultural development (see fig. 8.1).
(6) Actors’ coping behaviour in a change situation is difficult to classify or categorize since the differences between the various categories or forms of behaviour are not sharp, and a given actor may move from one form of behaviour to another as soon as new opportunities or motivational conditions are created. Thus, behaviour may be better conceptualized and understood in time as part of a continuum ranging from internalized rejection to internalized acceptance.

(7) For policy implementation in the directive and top-down situations in Benin, the main policy instruments used are regulations, directive knowledge and information activities, control and sanctions. Facilities, in terms of material and financial resources, are provided to actors but, not merely as policy instruments in the planning of the intervention but as facilitation instruments. Directive instruments are perceived by planners as powerful. But in practice, the instruments perceived as powerful are not as successful as the material and financial resources in inducing the expected behaviour, especially when sustainability of performance is considered.

(8) Interactive knowledge and information processes, as policy instruments, are more likely to lead to positive responses to policy implementation than directive processes. Interactive policy instruments are used more and more in Benin although their utilization has not yet been that successful. The intervention tendency is to move from bureaucratic and directive procedures to more interactive policy implementation. Thus, one may claim that Benin is on the right track as far as development issues are concerned. Chances for successful policy implementation are increasing, but motivation and capability building are of great concern.

(9) Considering the increasing tendency of valuation of material and financial motivation by the civil servants in their responses to policy change, policy objectives with respect to the Structural Adjustment Programme (SAP) and the Agricultural Services Restructuring Project (PRSA) may not be achieved, unless alternative ways are sought to generate additional resources for the civil servants. In fact, one of the objectives of the SAP and the PRSA, in Benin, is to decrease
the state’s expenses (see chapter 1). In that respect, attempts are made to reduce the various additional allowances provided to extension workers and researchers. But, these allowances and other material benefits have proven to be crucial inputs in the calculation of these social actors. This leads, automatically, to a dilemma with respect to the adequate policy instruments to be used in order to reach a higher level of effectiveness and efficiency. If material and financial provision is to be one of these instruments; finding alternative solutions for coping with this motivation is necessary. Some actions have been suggested in the practical recommendations.

8.3 Implications and recommendations for practice: reflections on ways to improve agricultural development in Benin

The study of the actors’ responses to change through the case studies concerning making extension more professional, giving more responsibility to farmers’ associations, making agricultural education more relevant for rural development needs, and making agricultural research more client-oriented, shows that responses are shaped by (material, financial, social and cultural) motivation, capability and autonomy. This means that in the Beninese situation, policy change for improving rural development may be achieved if these conditions are closer to reality. On the basis of this general practical conclusion, two main recommendations are formulated:

1. It is necessary to shift from a more centralized and directive extension organization to a more decentralized, and interactive one. In my view, the level of decentralization ought to be the sub-region usually called ‘secteurs agricoles’ in the CARDERs. In such a decentralized organization, Rural Development Officers, the ‘Responsable de Développement Rural (RDR)’ would be accountable for the rural development in their areas.

As such, in the middle-term, contractual extension activities would be developed between the extension officers at the headquarters of the CARDERs and the sub-regional development zones (‘secteurs’). By such contractual extension activities, RDRs would be provided with the required resources and would be judged only on the basis of their results. In the long run, these sub-regional services may generate additional resources to improve the living conditions of the extension workers. These additional resources may be derived from refunds that farmers’ associations and agricultural product exporting companies or bodies would pay to these services as subsidies for their contribution to agricultural development. The importance of these subsidies would, of course, depend on the impact of these development services on the agricultural production and the living standards of farmers. A successful implementation of such a recommendation implies:

1.1 The provision of more power (capability and decision making autonomy) to the RDRs. Such a provision may help them to take relevant action and make decisions as required or in due time with regard to the organization of extension and R&D activities in their ‘secteurs’. It may also make them
more responsible and increase their concern and commitment for rural development.

Such an action requires the preservation of the autonomy of the CARDERs in financial management and, on the middle term, to give more autonomy to the 'secteurs'. But the existing tendency, as observed in the field, seems to concentrate the financial management at the level of the Ministry of Agriculture. Such a concentration may endanger the implementation of development activities and seems to take us twenty years back in the organization of rural development, i.e., the pre-CARDER period (see chapter 3). It will induce a discontinuity in the decentralization process and also, it is in contradiction to the democratization process in Benin.

In addition to the preservation of the financial autonomy for the CARDERs, the already existing links between the R&D teams at regional level and the RDR need to be strengthened. In the middle term, R&D activities may be better combined with extension activities. Such a combination calls for a reallocation of human and financial resources (see also the report of ADE on the PRSA, 1994) in such a way that the current regional R&D units will be linked to these 'secteurs'. But the national R&D coordination unit will be maintained in the 'Institut National des Recherches Agricoles du Bénin'.

Such a decentralization is feasible since it has been experienced previously with relative success with the CARDERs. Only, the sources from which additional resources were derived were not applicable to public institutions (see the process of transfer to farmers’ organizations in chapter 4). But, this is not a reason to move backwards. To guarantee the feasibility and sustainability of such decentralization there must be a political commitment from the government’s financial institutions to unfreeze the budget which is annually allocated to development institutions (mainly the CARDERs) in due time. This is another troublesome problem for which solutions are being explored. Still, additional resources need to be raised for the CARDERs. A solution is also explored in the practical recommendations 2 and 2.1.

1.2 The provision of required resources to RDRs. As such, a specific budget would be allocated to and managed by them. Such an allocation of specific and individual budgets to the 'secteurs' may increase the speed of financial resources mobilization and may enhance a quicker response to farmers’ needs.

Since responses are highly influenced by financial and material opportunities provided to actors, a decentralization of the budget may help each RDR to design a motivation system in his 'secteur' in the form of motivation allowances. These allowances will take into account not only the diplomas but, more importantly, the performance of actors.

Also, most of the VEWs have a low level of education. They must be replaced by people with a higher basic level of education, at least the level
of the lower agricultural colleges, the CETA. This replacement can certainly improve the ability of extension workers to understand and master contents of the various technologies or innovations as well as methods to be used in order to increase farmers’ access to these innovations. It would also improve the level of technical interactions between extension workers and farmers and the countervailing power of the extension workers. The progressive replacement of the Village Extension Workers is feasible since most of them are near retirement. This necessity of replacement is accepted by most of the actors concerned, and other relevant solutions are being sought. Anyway, it is beyond the scope of this book to suggest any solution other than the progressive replacement of the retired VEWs. Other solutions should be designed through an interactive process between the various actors involved in rural development in Benin.

Finally, all the technical staff of the RDR ought at least to have the degree of ‘ingénieur’ specialized in relevant subject matters. RDRs would have a sound multi-disciplinary team for their activities. Also, proper accounting and evaluation systems are necessary to ensure reliable financial management, effectiveness and efficiency and, in so doing, to limit the amount of mismanagement, misappropriation, and opportunity grasping. Such uniformity in the educational level of the technical staff may potentially increase the openness of the interactions between the staff at sub-regional level.

1.3 VEWs must be given more freedom in their activities. They must be perceived as responsible. Thus, the amount of supervision and control, as it is presently carried out in the field, may decrease. Field support would only be used on the request of field extension workers, or they would be at least informed in advance about such actions. Thus, the occurrence of such behaviour as skimping and compliant acceptance which, in fact, have a negative influence on the performance of the extension workers would decrease.

1.4 For the short term, relevant agricultural technologies must be provided by regional R&D activities to ‘secteurs’ on request. These technologies will be adapted directly in the field by the multi-disciplinary team which may also carry out some R&D activities, instead of going through the mediation of R&D officials who are operating from the headquarters of CARDERs. Such an action would increase the integration between extension and R&D activities directly at operational levels.

Also, the major part of the personnel of the CARDERs must be employed in the ‘secteurs’ for field extension activities. In fact, in the prevailing situation, an average of more than 50% of this personnel are working at the headquarters either as extension officials, technical supportive staff, or as administrative staff. In some CARDERs, this percentage increases to 60%. Such human resource allocation led to a heavy administrative and bureaucratic structure, to the detriment of efficiency.
2. It is also necessary to strengthen and empower farmers' associations not only in the regions where cotton is produced, but also in other regions of the country. Such an action may increase the financial power of these associations. Thus, they will be better able to contribute financially to extension and R&D activities. But a successful implementation of such a recommendation requires some pre-conditions which are formulated here as sub-recommendations.

2.1 The development of other marketing chains, the so-called 'filières' is currently necessary to strengthen GVs of non-cotton producing regions. In fact, the results of the case study on the process of giving more responsibility to farmers through the GVs showed that GVs perform better in cotton producing areas than in other regions of the country. The main reasons for this difference in performance are related to the various refunds gained by these GVs through input management and the collection of cotton production (see chapter 4 and especially the conclusion).

Maize is, potentially, the target-crop for a future policy of generating financial resources for the GVs operating in the non-cotton producing areas. In fact, some actions have been recently initiated by the Beninese government to subsidize agricultural inputs for the production of this food crop. This initiative reinforces the actions of Global 2000 in that respect. However, the organization of the marketing of maize through GVs remains an action in need of promotion. But, no real and sustainable success can be gained from such an action unless new industries are created, and/or the existing ones start using local raw materials for their activities. This may help to absorb the maize produced and guarantee a market for farmers' associations.

2.2 The number of the training centers available for farmers, needs to be increased. In that respect, agricultural colleges also have to be oriented towards the provision of casual training for farmers instead of thinking of training students to become farmers. That is, facilities available in these colleges must be used partly to train the substantial number of already existing farmers, rather than seeking to create new categories of farmers. Also, a formal evaluation of the existing 'Centre de Promotion Rurale (CPR)' needs to be undertaken. If results are positive, new CPRs may be created.

All these recommendations can better be summarized in a practical framework for improving agricultural development in Benin (see fig. 8.2).

The two main, basic assumptions on which this practical framework is based are:

1. Present powerful decision-makers in the Ministry of Agriculture in Benin have the will necessary to support the process of decentralization of extension activities, which implies that present structures of CARDERs be reviewed and rethought,
Figure 8.2: A practical framework for improving agricultural development interventions in Benin
and the center of decision-making moved (see ‘Lettre de Déclaration de Politique du Développement Rural -LPDR’ of the Ministry of Agriculture). This might not be easy since various social, material and financial interests should be challenged if the practical framework is to be implemented. Two alternative ways of implementing such a practical framework for a successful restructuring of the rural development organization may be explored:

- the present junior extension officers holding the position of RDR will be maintained. This may help ensure success. Still, it is the more dangerous alternative since the powerless will be made powerful and the powerful will have less power. As such, RDRs may be more powerful than the present decision-power holders. Thus, their opposition will be strong;

- some of the present senior extension officers will be the first to be ‘promoted’ as RDRs. Other senior extension officials may stay at the headquarters of the CARDERs for coordination activities. This seems as a ‘demoting’ of the senior extension officials but from the social actors’ point of view in the Beninese situation, it may be perceived as a promotion. But, such an alternative will displace only the center of the bureaucracy from the headquarters of the CARDER to ‘secteurs’, to the detriment of efficiency, autonomy, and effectiveness, not because senior extension officials are not capable but only because the already established power relations may be reinforced. Interactive discussions should be organized in the Ministry of Agriculture to decide on the relevant alternatives to use to solve the main concerns identified through this study as far as the so-called triangle for policy change in agricultural development in Benin is concerned. This practical framework is only one way of thinking about the issue. It is a suggestion which does not need to be accepted as it stands.

2. A political will on the part of the Beninese government to support the implementation of such a practical framework by creating conditions necessary for the development of new marketing chains. Also, the government must strengthen the existing institutions capable of supporting farmers’ associations in financing agricultural development (e.g., the Subsidizing and Stabilizing Funds for agricultural development, the current ‘Fonds de Soutien et de Stabilisation des prix des produits agricoles’ -FSS).

Finally, the political will of the Beninese government is also related to the facilitation of the recruitment of new graduates as extension workers to enable the required personnel replacement. This might be possible if political will exists because, within the frame of the Structural Adjustment Programme (SAP), casual recruitment has already begun in certain crucial domains such as health and education mainly.
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SUMMARY

This book is about change. It deals with the way in which social actors, be they individuals or groups, involved in the agricultural development of Benin reconstruct for themselves the new policy context in order to develop relevant strategies translating policy measures into practical objectives and concrete actions. The main objectives of the study are to:

1. understand the official definitions of the changing conditions in each of the cases studied and the rationales supporting them;
2. identify the way actors, be they individuals or strategic groups, deal with these formal or abstract definitions, i.e., how they define the situation for themselves;
3. understand the factors that facilitate or shape each response to the change conditions;
4. translate these responses into change, in terms of relevant knowledge and information processes and coping behaviour;
5. see if knowledge processes may vary according to changing conditions, i.e., the context in which they occur;
6. use the experience gained through the study to inform theory;
7. see how far these knowledge processes in each changing condition really contribute to the development of agriculture in Benin; and
8. make recommendations for development practice.

Since 1989, Benin, the former People's Republic of Benin, has been undergoing a great socio-economic and political change. The main changes at the national level are an implementation of a Structural Adjustment Programme (SAP) and a political discontinuity hailed worldwide as a democratic reform having repercussions for all Western and Central Africa.

In this socio-economic and political climate for agricultural development in Benin new policy measures have been designed. The main policy measures that serve as case studies in the present book are:

- professionalizing agricultural extension through a re-orientation of the extension system in the ‘Centres d’Action Régional pour le Développement Rural (CARDER)’ toward information, training and persuasion;
- making farmers responsible for such functions as primary gathering of cotton, inputs and credit management through their associations, i.e., the 'Groupement Villageois (GV)';

- adapting agricultural education to employment or work market/opportunities, i.e., the development needs in Benin; and

- adapting agricultural research to farmers' needs and constraints in Benin, making research more client-oriented.

The study of these four cases started in the Borgou province in 1989, where in-depth interviews, discussions and intensive observations were undertaken. The results obtained were cross-checked with evidence obtained in 1993 in other CARDERs, mainly those of the Mono, the Atacora and the Oueme provinces, as well as in other related education and research institutions.

The data gathered during the field study have been analyzed across three main lines: the knowledge and information processes used as policy instruments; the coping behaviour of the actors involved in policy implementation; and the factors which affect these knowledge and information processes as well as the coping behaviour.

The main results of these case studies show that:

- actors' responses to policy change in Benin have two aspects: the knowledge and information processes initiated by government officials as part of a set of policy instruments chosen for the implementation of the various measures; and the coping behaviours of the actors as adaptive responses either to the change situations themselves or to the knowledge and information processes.

- actors' coping behaviour may be broadly classified into two categories: rejection or acceptance of part or all of the process. Acceptance or rejection is always based on legitimate reasons as perceived by the actors. These reasons are:

  (1) the degree of social and/or cultural motivation, i.e., incongruence between the contents of the policy measures, past experiences and/or value systems;

  (2) the degree of material and/or financial motivation in situations where actors do not want to shock change agents, either because of bureaucratic and administrative requirements or social and cultural obligations and values; and

  (3) the importance given to discipline in administrative and bureaucratic situations, i.e., the expectation of positive or favourable rewards from the change agent.
Five forms of coping behaviour have been derived from the study: skimping, internalized rejection and acceptance, compliant acceptance and opportunity grasping.

- The emergent knowledge and information processes are classified into two categories: directive and more interactive ones. Directive knowledge and information processes as they have been derived from the case studies are: anticipation/regulation setting; training/regulation reinforcement; and regulation control. Interactive knowledge and information processes which came out of the study are: facilitation; joint learning; and negotiation/consensus building.

- The main factors that proved to influence actors' adaptive responses to change are either related to individual actors or to the institution in which they are working.

At individual level, two main response shaping factors are identified. These are motivation and individual capability. Many sources of motivation are identified from the case studies: material, financial, social and cultural motivation. Actor's past experiences also influence their response to change. Lack or insufficient capability is due to low levels of formal education, lack of a literacy programme as well as post-graduate and in-service training.

Two outcomes of the influence of capability emerged from the cases. With regard to the first form of outcomes, actors did not completely accept the contents of the policy measures because of a low level of education, literacy and ability or skills. That was the case of the Village Extension Workers. A second form of outcomes is characterized by the fact that the actors have accepted the content of the policy measures, even internalized them, without having the ability and skills to implement them in practice. But an exclusive focus on capability building does not always lead to results desired. The case of the extension workers in Benin is an illustration of such a limitation.

At institutional level, autonomy and opportunities or resources available are important factors in the process. Power relations, information management in decision making and action emerged as the main constraining factors affecting actors' autonomy in the various changing situations. The opportunities that determined actors' responses, especially coping behaviours, are the material and financial resources provided to them in the course of the implementation of the process. Their access to these resources and the degree to which these could help them to solve their individual problems was crucial.

- As far as the contribution of the study to theory development is concerned, a framework for people's responses to policy implementation in Benin has been designed and nine knowledge claims formulated.
Two main recommendations with the related strong assumptions have been made for development practice.

(1) The need to shift from a more centralized and directive extension organization to a more decentralized, and interactive one. A level of decentralization might be the sub-region usually called 'secteurs agricoles' in the CARDERs. In such a decentralized organization, Rural Development Officers, the so-called 'Responsable de Développement Rural' (RDR) would be accountable for the rural development in their areas.

As such, in the middle run, an extension activities contract would be signed between the extension officers at the headquarters of the CARDER and the sub-regional development zones ('secteurs'). By such contractual extension activities, RDR would be provided with the required resources and would be judged only on the basis of their results.

In the long run, these sub-regional services could generate additional resources to improve the living conditions of the extension workers. These additional resources could be derived from a kind of refund that farmers' associations and agricultural products exporting companies or bodies would pay to these services as subsidies for their contribution to agricultural development. The importance of these subsidies would, of course, depend on the impact of these development services on the agricultural production and the living standards of farmers; and

(2) The need to strengthen and empower farmers' associations not only in the regions where cotton is produced, but also in other regions of the country. Such an action could increase the financial power of these associations. Thus, they would be better able to contribute financially to extension and R&D activities.
SAMENVATTING

Dit proefschrift betreft sociale veranderingen. Het behandelt de manier waarop sociale actoren, individuen of groepen, die betrokken zijn bij de landbouwkundige ontwikkeling van Benin, voor zichzelf de nieuwe socio-politieke context reconstrueren. Dit ten einde relevante strategieën te ontwikkelen om politieke maatregelen om te zetten in bruikbare doelen en concrete acties.

De belangrijkste doelstellingen van deze studie zijn:

- het begrijpen van de officiële definitie van de veranderende omstandigheden in ieder van de bestudeerde gevallen en de redenen die hieraan ten grondslag liggen;

- het identificeren van de manier waarop sociale actoren, individuen of groepen, omgaan met deze formele of abstracte definities, bijvoorbeeld de manier waarop zij hun eigen situatie interpreteren;

- het begrijpen van de factoren, die iedere reactie op de veranderende omstandigheden faciliteren of vormgeven;

- het vertalen van deze reacties op verandering in termen van relevante kennis- en informatieprocessen aan de ene kant en van strategisch handelen aan de andere kant;

- het onderzoeken of kennisprocessen kunnen verschillen ten gevolge van veranderende omstandigheden, bijvoorbeeld de context waarin ze kunnen voorkomen;

- het formuleren van theoretische hypotheses waarbij gebruik wordt gemaakt van de ervaringen uit de case studies;

- het bestuderen hoe deze kennisprocessen in iedere veranderende omstandigheid werkelijk bijdragen tot landbouwontwikkeling in Benin; en

- het formuleren van praktische aanbevelingen ten einde de praktijk van de landbouwontwikkeling te verbeteren.

Sinds 1989, vinden er in Benin enorme sociaal-economische veranderingen plaats, waarvan op nationaal niveau als belangrijkste kunnen worden genoemd: het Structureel Aanpassingsbeleid (PAS: ‘Programme d’Ajustement Structurel’) en de democratisering van de overheidsinstellingen. Ook in de agrarische sector verandert er veel. Voor de rustele sector zijn een nieuwe ontwikkelingspolitiek en een herstructureringsproject ontworpen. De belangrijkste maatregelen van deze politiek dienen als case studies voor dit proefschrift. Deze maatregelen houden het volgende in:
het professionaliseren van de landbouwvoorlichting door middel van een heroriëntatie van het voorlichtingssysteem in de CARDER's (Centres d'Action Regionale pour le Développement Rural) betreffende de activiteiten op het gebied van informatie, training en overreding;

het verantwoordelijk maken van boeren via dorpsgroepen voor activiteiten zoals het inzamelen van katoen, inputs en krediet management;

het aanpassen van het agrarisch onderwijs aan de vraag van de arbeidsmarkt;

het aanpassen van het landbouwkundig onderzoek aan de behoeften en mogelijkheden van boeren.

Het onderzoek is gestart in de provincie Borgou in 1989. Hier zijn samen met voorlichters, boeren, leden van dorpscomités, scholieren, onderzoekers etc. verschillende diepe - interviews en observaties uitgevoerd alsmede meerdere discussies gehouden. De resultaten van dit onderzoek zijn in 1993 geverifieerd met vergelijkbare studies in andere provincies waar CARDER ook intervenieert, met name in Mono, Atlantique, Atacora en Oumémé, tevens in andere vergelijkbare onderzoeks- en onderwijsinstellingen.

De gegevens die zijn verzameld zijn geanalyseerd op basis van de volgende punten: 1) kennis- en informatieprocessen gebruikt als beleidsinstrumenten, 2) het strategisch handelen van de sociale actoren, die betrokken zijn in de uitvoering van dit beleid, en 3) de factoren die de kennis- en informatieprocessen alsmede het strategisch handelen beïnvloeden.

De belangrijkste resultaten van de case studies laten het volgende zien:

- de reacties van de sociale actoren op veranderingen in het beleid in Benin betreffen twee aspecten. Dit zijn enerzijds de kennis- en informatieprocessen geïnitieerd door rijksambtenaren als deel van een pakket van beleidsinstrumenten voor de uitvoering van de verschillende maatregelen. Anderzijds is dit het strategisch handelen van de sociale actoren als reactie op de veranderende situatie of als resultaat van de kennis- en informatieprocessen;

- het strategisch handelen van sociale actoren kan grofweg worden onderverdeeld in het, geheel of gedeeltelijk, verwerpen of het accepteren van nieuwe beleidsmaatregelen. Vanuit de sociale actoren gezien is dit handelen gebaseerd op gegrondde redenen. Deze redenen zijn de volgende:

(1) de mate van sociale en/of culturele motivatie, dat wil zeggen de mate waarin de inhoud van de maatregelen overeenkomt met het waardesysteem van de actoren, hun referentiekader en hun eerder opgedane ervaringen;
(2) de mate van materiële en/of financiële motivatie in situaties waarin sociale actoren de persoon die veranderingen stimuleert niet willen teleurstellen, vanwege bureaucratische en administratieve vereisten of sociale en/of culturele verplichtingen en/of waarden; en

(3) het belang dat gehecht wordt aan sancties, aan aantrekkelijke beloningen en aan de normen die gelden in administratieve en bureaucratische instanties.

Op basis van deze redenen zijn vijf vormen van strategisch handelen geïdentificeerd namelijk: 1) passief verzet, 2) innerlijke afkeuring, 3) innerlijke acceptatie, 4) meegaande acceptatie en 5) het grijpen van kansen.

- de kennis- en informatieprocessen zijn onderverdeeld in directieve en interactieve processen. De directieve kennis- en informatieprocessen die uit de case studies naar voren komen zijn: anticipatie/ vaststellen van richtlijnen, training/ versterking richtlijnen, en controle van richtlijnen.

De interactieve kennis- en informatieprocessen, die uit de studie voortkomen zijn: facilitatie, gezamenlijk leren, onderhandelen/ komen tot consensus en vergroten van weerbaarheid.

- de belangrijkste factoren die bij verandering het strategisch handelen beïnvloeden zijn gerelateerd aan zowel de motivatie en bekwaamheid van de individuele actoren als aan de mogelijkheden om te manoeuvreren binnen de instanties waarin zij werken.

Ten aanzien van de motivatie van sociale actoren kan gezegd worden dat deze kan worden beïnvloed door sociale, materiële, culturele of financiële aspecten. Ook eerder opgedane ervaringen dragen bij aan de reactie op verandering.

Een laag niveau van het basisonderwijs, een gebrek aan alfabetiseringsprogramma’s alsmede onvoldoende post-universitaire opleidingen en interne scholingsmogelijkheden zijn als oorzaken aan te wijzen voor de geringe bekwaamheid (of het volledig afwezig zijn hiervan). De case studies laten twee gevolgen zien van een te geringe bekwaamheid. In het ene geval accepteerden de actoren slechts gedeeltelijk de inhoud van de beleidsmaatregelen, als gevolg van een laag opleidingsniveau, van een lage alfabetisatie graad, en door geringe vaardigheden. Dit kwam vaak voor bij de lokale voorlichters. In het geval van onderzoekers, namen de actoren vaak de inhoud van de maatregelen aan en vereenzelfdigden zich zelfs met deze regels zonder het vermogen of de vaardigheden te hebben ze uit te voeren.

Machtsrelaties en management van informatie in besluitvormingsprocessen kwamen als belangrijkste beperkende factoren naar voren die de autonomie van een actor in de verschillende veranderende situaties beïnvloeden. De mogelijkheden die de reactie van de sociale actoren hebben bepaald, met name dus het strategisch handelen, zijn de materiële en financiële middelen die aan hen gedurende de implementatie van het proces ter beschikking zijn gesteld. De toegang tot deze middelen en de mate waarin deze middelen kunnen helpen om hun individuele problemen op te lossen bleek cruciaal.

wat betreft de bijdrage van deze studie aan de ontwikkeling van theorie kan gezegd worden dat een raamwerk is ontworpen voor de reacties van mensen op beleidsuitvoering in Benin en bovendien zijn er negen hypothesen op het gebied van kennis geformuleerd.

er zijn twee aanbevelingen voor de ontwikkelingspraktijk gedaan, met de daarbij behorende vooronderstellingen namelijk:

(1) het belang om van een gecentraliseerde en directieve voorlichtingsdienst over te gaan naar een gedecentraliseerde en interactieve dienst. De decentralisatie kan plaatsvinden op het niveau van de zogenaamde sub-regio’s (genoemd 'secteurs agricoles'), binnen de CARDER’s. In een dergelijke gedecentraliseerde dienst kunnen de verantwoordelijken voor de plattelandsontwikkeling (genoemd 'Responsable de Développement Rural': RDR) zelfstandig werken op het gebied van management en het in werking stellen van landbouwprogramma’s. Als gevolg hiervan zal, op de middellange termijn, een contract tussen de voorlichters op het hoogste niveau binnen CARDER en de voorlichters op het niveau van de sub-regionale ontwikkelingszones ('secteurs') voor voorlichtingsactiviteiten worden afgesloten. Als resultaat van dergelijke voorlichtingsactiviteiten op contract basis zullen de RDR’s voorzien worden van de benodigde middelen en zullen de RDR’s uitsluitend worden beoordeeld op basis van hun resultaten.

Op de lange termijn kunnen deze sub-regionale diensten additionele middelen generen om de leefomstandigheden van de voorlichters te verbeteren. Deze additionele middelen kunnen voortkomen uit betalingen aan deze diensten door boerenorganisaties en exportbedrijven van landbouwprodukten. Deze betalingen kunnen gezien worden als subsidies voor de bijdragen die de dienst levert aan landbouwontwikkeling. De hoogte van deze subsidies hangt natuurlijk af van de impact van deze diensten op de agrarische productie en de levenstandaard van de boeren; en

(2) het belang om boerenorganisaties te versterken en weerbaar te maken, niet alleen in de gebieden waar katoen wordt verbouwd maar ook in andere delen van het land. Dit zal ook de financiële mogelijkheden van deze boerenorganisaties vergroten. Op deze manier zullen ze meer mogelijkheden hebben om financieel bij te dragen aan voorlichting en toegepast onderzoek.

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RESUME

Ce livre concerne le changement social. Il s’intéresse à comment les acteurs sociaux, individuellement ou en groupes d’intêrêts, se reconstruisent le nouveau contexte socio-politique afin d’élaborer des stratégies pertinentes pour la traduction en actes concrets de nouvelles politiques de développement agricole. Des changements dans le domaine du développement agricole au Bénin ont été choisis à cet effet. Les objectifs principaux de cette étude sont les suivants:

(1) identifier comment les acteurs sociaux interagissent avec les nouvelles mesures de politique, i.e., l’interprétation qu’ils en font;

(2) comprendre les facteurs qui facilitent ou conditionnent les différentes réactions des acteurs sociaux;

(3) traduire ces réactions au changement en termes de processus de connaissance et d’information d’une part et de comportements stratégiques d’autre part;

(4) formuler des hypothèses théoriques à partir de l’expérience acquise des différents cas étudiés; et

(5) analyser l’influence des différents comportements stratégiques sur le développement agricole au Bénin afin de formuler des recommandations pratiques en guise de contribution à l’amélioration de la pratique du développement agricole.

Depuis 1989, le Bénin traverse une vague de changements politique et socio-économiques dont les principaux au niveau national sont: le Programme d’Ajustement Structurel (PAS) et la démocratisation des institutions de l’Etat. Dans cet environnement en changement, le secteur agricole n’a pas été épargné. Une nouvelle politique de développement et un projet de restructuration ont été élaborés pour le secteur rural. Certaines des mesures de cette politique ont fait l’objet de cette étude, notamment:

- la professionnalisation de la vulgarisation à travers une réorientation du système de vulgarisation rurale vers les activités de formation, d’information et de persuasion (conception et mise en œuvre d’un système national de vulgarisation);

- la responsabilisation des paysans à travers les Groupements Villageois (GV) par le transfert d’un certain nombre d’activités (exécutées dans le passé par les agents de vulgarisation, i.e., les services publics) aux paysans;

- adaptation de l’éducation agricole aux besoins du marché de l’emploi au Bénin; et
adaptation de la recherche agronomique aux besoins et réalités des paysans.

La présente étude a démarré dans le département du Borgou depuis 1989. Dans cette province et plus particulièrement dans la sous-préfecture de N'dali. Des interviews, observations et discussions assez intensives ont été menées avec les agents de vulgarisation à différents niveaux, des paysans, des membres de Comité d'Administration des GV's, des élèves et enseignants, des chercheurs, etc... Les résultats obtenus à travers cette étude intensive ont été vérifiés dans d'autres départements (Mono, Atlantique, Atacora et Ouémé) en 1993 ainsi que dans d'autres institutions de recherche et d'éducation agricole.

Les données recueillies à travers l'étude ont été analysées à travers les points suivants: les processus de connaissance et d'information utilisés comme instruments d'exécution des différentes mesures de politique de développement étudiées; les comportements stratégiques des différents acteurs sociaux; et les facteurs qui influencent ou conditionnent ces différents comportements et instruments de politique.

Les principaux résultats de l'analyse comparative des cas étudiés sont les suivants.

Les réactions des acteurs sociaux au changement de politique concernent aussi bien l'utilisation de divers instruments pour mieux introduire (processus d'information) et exécuter (processus de connaissance) les différentes mesures, que les comportements stratégiques adoptés par les individus;

Les comportements stratégiques des acteurs sociaux peuvent être l'acceptation ou le rejet (total ou partiel) des nouvelles mesures de politique. Ces comportements sont basés sur des raisons bien fondées du point de vue des acteurs. Ces raisons ont été classées 'grosso modo' en trois catégories:

(1) le degré de motivation sociale et/ou culturelle, i.e., le degré de compatibilité des mesures avec le système de valeur, le cadre de référence et les expériences passées des acteurs;

(2) le degré de motivation matérielle et financière; et

(3) l'importance accordée aux sanctions, aux promotions, et aux normes dans les institutions administratives et bureaucratiques.

Sur la base de ces raisons, cinq formes de comportement stratégiques ont été identifiés: la routine déguisée, le rejet intériorisé, l'acceptation par contrainte, le courtage, et l'acceptation intériorisée.

Deux types de Processus de Connaissance et d'Information (PCI) ont été identifiés: les processus directifs et les processus interactifs. Comme processus directifs, on citera la formation ou renforcement des directives, l'anticipation, et le contrôle des directives. Les processus interactifs identifiés se rapportent à l'apprentissage/formation mutuel, la facilitation, la négociation ou recherche de consensus, et le développement de contre-pouvoir.

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Les principaux facteurs qui influencent les comportements stratégiques des acteurs sont au niveau des individus la motivation et la capacité des acteurs, et au niveau institutionnel la marge de manœuvre et les opportunités offertes par l'institution aux acteurs dans le cadre de la mise en œuvre des mesures de politique. La motivation des acteurs sociaux peut être d'ordre social, matériel, culturel ou financier. L'insuffisance de la capacité des acteurs à exécuter les mesures de politique est essentiellement due soit au bas niveau d'éducation de base, au manque de programme adéquat d'alphabétisation, et au manque de formation-recyclage ou de formation post-universitaire. Deux types d'influence de l'insuffisance de la capacité sur les comportements des acteurs sociaux ont été décelés. En effet, le manque de connaissance peut conduire soit au rejet ou à l'acceptation des mesures de politique. Dans le second cas, les acteurs concernés intègrent même les mesures et cherchent les voies et moyens pour acquérir la formation nécessaire. Le premier type d'influence a été surtout observé chez les Agents Polyvalents de Vulgarisation (APV), alors que le second type d'influence s'observe chez les chercheurs de la Recherche-Développement. 

Mais une concentration des efforts uniquement sur le développement des capacités des acteurs sociaux par la formation ne permet pas souvent d'atteindre les objectifs escomptés. Le cas du service de vulgarisation en a été une illustration. La marge de manœuvre accordée aux acteurs sociaux se rapportent surtout à leur responsabilisation et l'autonomie de prise de décision. Ces conditions créent un environnement qui augmentent la probabilité d'acceptation de nouvelles mesures dans le domaine de la politique de développement agricole. L'influence des facilités matérielles et surtout financières a été prépondérante dans l'adoption des comportements stratégiques par les acteurs sociaux. L'accès à ces ressources et son importance dans la réalisation des objectifs personnels des acteurs sembleraient être des facteurs qui peuvent augmenter la chance d'acceptation de nouveaux changements par les acteurs.

En ce qui concerne le contribution de cette étude au développement des théories, l'étude a montré que la réaction des acteurs sociaux face à la mise en œuvre des mesures de politique dans le domaine du développement agricole dépendent de leur motivation, de leur capacité et de la marge de manœuvre et de responsabilité qui leur est offerte. Aussi, un certain nombre d'hypothèses théoriques ont été formulées.

Enfin, deux principales recommandations ont été formulées pour la promotion du développement agricole au Bénin. Il s'agit de:

- la nécessité de changer les structures actuelles de vulgarisation qui sont plus centralisées et plus directives en des structures plus flexibles et interactives. Le niveau de mise en œuvre d'une telle structure serait le secteur agricole. Dans ce cadre, les Responsable du Développement Rural (RDR) auront une autonomie de gestion et de décision dans la conception et la mise en œuvre de leur programme de développement agricole. Le budget de fonctionnement à allouer à chaque secteur tiendra compte des performances de celui-ci. A moyen et long terme, pour garantir un revenu additionnel pour leurs agents,
les secteurs seront amenés à signer des contrats de prestation de service avec les organisations paysannes de leur zone. Au titre de ce contrat, ils fourniront aux paysans des services appropriés et sollicités par les paysans. En retour, les organisations paysannes prélèveront une partie des ristournes obtenues pour subventionner les services de vulgarisation. L'importance de cette subvention dépendra du niveau de leur contribution à l'augmentation des ristournes des organisations, et de ce fait des revenus individuels des paysans. Les sociétés exportatrices de produits agricoles ou importatrices d'intrants agricoles peuvent contribuer à cette subvention.

Une telle recommandation s'inscrit parfaitement dans le cadre de la Lettre de Déclaration de Politique de Développement Rural (LPDR);

- la nécessité de renforcer les organisations paysannes, non seulement dans les zones productrices de coton, mais également dans les autres régions du pays. Ce renforcement se fera à travers la formation et le développement du contre-pouvoir dans ces associations, ainsi que l'amélioration de leur position par rapport aux services étatiques; et enfin

- la nécessité d'une volonté politique pour garantir les conditions d’application de ces recommandations par la promotion de nouvelles filières de produits agricoles.

Les conditions d’application de ces recommandations ont été précisées et résumées en un cadre pratique de promotion du développement agricole en République du Bénin.
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From April to October 1985, he was an employed member of the Promotion of Rural Youth unit in the department in charge of cooperative matters within the Ministry of Agriculture. In that unit, he was in charge of the design and execution of training programmes for young people in the rural areas.

In November 1985, he began his university teaching career as Junior Lecturer in the Faculty of Agriculture at the National University of Benin. His main teaching interests are rural extension and particularly, communication and behaviour change. In line with his professional career development he completed, in 1989, a two-year MSc-course in the field of Management of Agricultural Knowledge Systems (MAKS) at Wageningen Agricultural University with distinction.

While continuing with his professional activities, he began this PhD research programme in 1990.

In addition to his scientific and teaching activities, he has been involved in many development activities and consultancies.
Map 1: BENIN: Headquarters of the various provinces/CARDERs and research locations