

it should be linked to ongoing research efforts. Failure to do this is an imposition on the farmers, especially in popular, highly visible development programs like the PNGT and the former AVV. With rare exception, the final stage of any research project should include the translation of research findings into graphic illustrations that can be discussed with village land management groups.

Researchers need to emphasize the incorporation of settlers in the design and implementation of research studies. Old "top down" research models, that many of us still use, date from a period when primary education levels were low and it was difficult to find individuals within the village who could help carry out surveys. This is no longer the case in most villages. If the inhabitants see the practicality of a research project and they trust the individuals conducting and supervising the survey to keep their responses confidential, the quality and policy significance of the research can increase dramatically. Research with high levels of farmer direction is also more likely to reflect the evolving needs and concerns of settlers and hosts as their economic conditions improve. Failure to report findings to the sponsoring village groups can jeopardize their willingness to cooperate in future research efforts.

Planning Surveys

While village land management committees (as with the PNGT approach) appear to have considerable development potential, it is important to incorporate them within wider regional, national and even international land use planning. As part of the initial planning for the OCP, each of the seven core control countries received a \$500,000 UNDP grant to prepare a proposal for how best to incorporate its OCP areas into national development planning. Some countries used these initial grants to conduct additional aerial, soil, hydraulic, and socioeconomic surveys to help classify the affected river basins according to soil type and recommended land use practices. On the basis of these initial surveys, some of the OCP states, such as Burkina, developed tentative plans for a series of settlement, forestry, and livestock projects. This preliminary planning and zoning is a vital and essential first step and needs to be encouraged at regional, national, and international levels.

Vital Role of National Fuelwood Policies

National policies that determine the urban price of fuelwood and of alternative energy sources will play a crucial role in reinforcing local land management programs. For example, although the industrial wood plantation at Wayen was successful in organizing regular harvests and markets, the project did not become self-sustaining and profitable until national legislation was introduced after 1984 that restricted illegal cutting and raised the price of imported fuelwood. Important complementary policies included:

- (1) The "3 Luttés" (the Three Battles), launched 22 April 1985, against bush fires, animal depredations to forest, and abusive wood cutting;
- (2) The strict regulation of fuelwood and charcoal organized at three levels, (the small transporter, the wholesale transporter, and urban merchants) that began in 1985;
- (3) The development of a National Commission to Fight Against the Effects of the Drought (*Commission Nationale de Lutte Contre les Effets de la Sécheresse*) (CNLCES); and
- (4) The adoption of a National Plan for Fighting against Desertification (*Plan National de Lutte Contre la Désertification*, July 1986) whose goal was to restore the environment in keeping with national goals for energy, fuel and construction wood, and national food self-sufficiency.

These national policies have helped to empower local administrators and committees to enforce land management programs. Yet, none of these policies can be fully successful until an alternative, inexpensive source of cooking fuel is made available to urban dwellers. One possibility would be to remove the current 32 percent government tax imposed on butane gas to encourage its use by urban dwellers as a cooking fuel. In 1989, despite various taxes and control on wood imports to the city, fuelwood was still 40 percent cheaper than all other sources of fuel in Ouagadougou. As long as there is such a huge market, with few alternative sources, no amount of control will be truly effective. Policymakers must weigh this fact in any decision concerning the development of improved transportation into the valleys. Roads attract woodcutters long before they attract settlers.

11

National Management Institutions

The type of assisted spontaneous settlement advocated by the OCP Land Settlement Review and Burkina's National Program for Village Land Management (PNGT) requires planning and management at multiple levels (McMillan, Painter and Scudder 1990). While negotiating the "village contract," villages request roads, wells, and health and educational facilities, as well as special surveys of water, soil, societies, and vegetation. Under the existing administrative structure of most African countries—indeed most countries in the world—each set of tasks is coordinated by a separate ministry or ministry branch. At the same time, phasing projects over a long period of time as recommended by the Land Settlement Review and the PNGT, requires that this assistance be coordinated. Not only must the administrative tasks be coordinated, they must be coordinated in such a way that they respond to and complement a strong base of local institutions and initiative. The sheer volume and complexity of the tasks involved has led many governments throughout the world to advocate special, autonomous management structures to coordinate development activities in areas of new land settlement or resettlement.

Burkina Faso was the only one of the original seven OCP countries to establish a management institution to supervise development planning and interventions in its OCP river basins from the start. Thus, the history of that institution—the AVV—provides other countries with an interesting vantage on the potential benefits, as well as costs, of adopting this strategy.

Creation of the Autorité des Aménagements des Vallées des Volta (AVV), 1974

The official mandate of the *Autorité des Aménagements des Vallées des Volta* or AVV was to study, promote, coordinate, and execute (or control the execution of) the operations necessary for the economic and social development of the land officially placed under its administration (AVV 1985d). The agency's goal was the optimal development of natural resources (soil, forests, pasture, water, and wildlife) in the underpopulated areas of the Volta Valleys and their major tributaries. Special emphasis was put on the conservation of soil resources in connection with the area's best land use (*ibid.*). This official mandate was declared for a twenty-year period. The AVV's activities then would be placed under the established structure of regional and national development agencies (Ministry of Education, Ministry of Rural Development, Ministry of Health, Regional Development Organizations, for example).

A complex planning process in which the project would conduct comprehensive topographic, hydraulic, and sociological surveys was central to the AVV planning model. On the basis of these surveys, each valley was divided into five broad categories of land use (AVV 1985c:17):

- areas suitable for dryland agriculture with a high proportion of good soils suitable for planned settlements;
- areas suitable for irrigated agriculture and dam construction;

- areas suitable for intensive livestock or feed programs;
- areas most suitable for natural wildlife parks and tourism development; and
- forest reserve areas, including areas for commercial wood production near major population centers.

Early Emphasis on Planned Settlement as a Strategy for Development of the Valleys

The Planned Settlement Model

The early AVV program focused on the design and implementation of groups of model settlements in areas with good agricultural potential and a few more specialized industrial or irrigation projects. The first settlements were created in the Nakambe and Nazinon river basins (ex-White and Red Volta) (Table 11.1 and Map 23854).

Once an area was determined suitable for agricultural settlement, the project was responsible for the selection of village, field, and house sites; installation of basic infrastructure (wells, roads, bridges, extension worker housing); and coordination of economic services. In the very first years

Table 11.1 Activities of the AVV, 1973–1981

<i>Activity</i>	<i>Basin</i>	<i>Year created</i>	<i>Number of villages</i>
Planned Settlements			
Linoghin	Nakambe	1973	8
Mogtedo	Nakambe	1974	6
Kaibo Sud	Nakambe	1974	6
Kaibo Nord	Nakambe	1975	4
Tiebele	Nazinon	1975	4
Djipologo	Bougouriba	1977	6
Bombore	Nakambe	1979	7
Manga Est	Nakambe	1979	4
Rapadama	Nakambe	1979	8
Other Projects Started			
Industrial Wood Project Wayen		1976	
Pilot Irrigation Project Bagre		1980	
Planning Studies Undertaken			
Livestock Project Nouhao			
Hydro-electric Dam Bagre			
Hydro-electric Dam Komienga			
Hydro-agricole Development Vallée du Sourou and Haute Vallées de la Volta Noire			
Project for Irrigation Development Along the Black Volta			
Project for the Tourism Development of Po			

of installation, settlers had to be encouraged to immigrate; therefore, special agents recruited settlers from the overpopulated areas most severely affected by the 1968-1973 drought.

To encourage settlers to move, they were provided transportation to the site, assisted with field clearance, and provided a monthly ration of grain, oil, and fish until they harvested their first crops. Each settler household was entitled to one, or in the case of an extremely large labor force two, ten hectare farms that consisted of six 1.5 hectare bush fields and a one hectare plot on which to construct a house. The project was also responsible for the design, testing, extension, and evaluation of a new intensive dryland cropping package—one that would presumably allow farmers to increase yields while retaining soil fertility (Chapter 7).

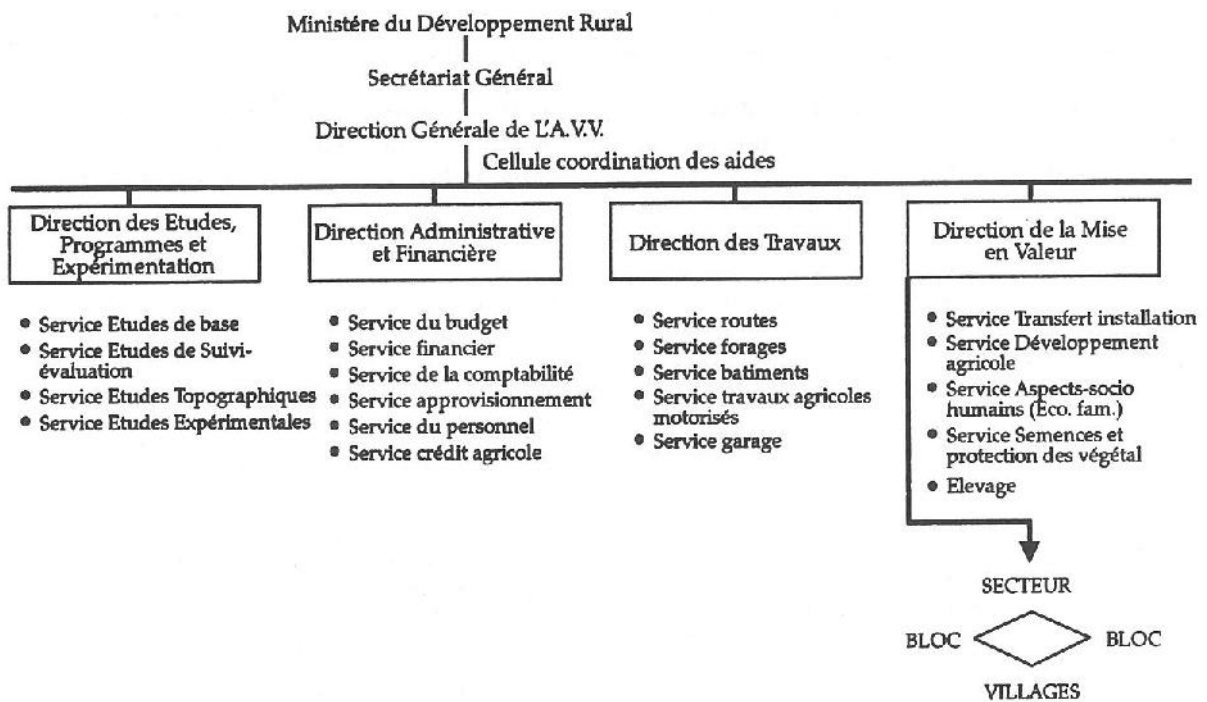
In addition to the planned settlements, the AVV undertook a number of sectoral development projects as well as the planning of a series of dams and irrigation schemes (Table 11.1).

Administration, Costs, and Anticipated Benefits

The original AVV project plan foresaw the evolution of the AVV planned settlement program in terms of: an annual increase in planned villages, the type and level of infrastructure, and special livestock and forestry projects. Although the proposed agricultural program required a greater outlay of cash and labor than the settlers were accustomed to, it was anticipated that these costs would be offset by higher yields. Moreover, it was assumed that the settlers per capita food production and cash income would increase every year. During the first three years, the annual addition of a new field would make this increase possible. After the third agricultural season, any subsequent increase would come from the greater use of fertilizer and labor on the existing crop area and the expansion of the settlers' livestock activities, rather than the addition of new fields.

To coordinate these activities, the AVV operated its own heavy equipment for land preparation and road building, hydraulic development, and extension services. The development program was coordinated through an elaborate centralized organization divided into five directorates: General, Finance and Administration, Planning, Construction, and Agricultural Development (Figure 11.1). Each of these directorates was broken into divisions and subdivisions. The agency

Figure 11.1 Organigram of the AVV administrative structure, 1974-1982



Source: AVV 1985c:37.

was presided over by a board of directors that included several high level government administrators and was chaired by the Minister of Planning. The General Director of the AVV was appointed by cabinet decree. (see AVV 1985c for a more detailed explanation of the activities of the different directorates).

Some of the projected benefits of the AVV planned settlement program over a 20-year period were: (a) to settle an estimated 650,000 persons in planned villages—290,000 persons, or 38,000 families, in rainfed agriculture and another 360,000 in irrigated agriculture associated with project plans for dam construction; (b) to reduce population pressure in some of the more densely settled areas of the plateau; (c) to control settlement and development in the valleys in order to minimize the negative consequences of these higher population densities through project attempts to link access to project lands with the adoption of intensive farming practices; (d) to provide a regional grain surplus, that would allow the country to offset a large part of its projected food deficit; (e) to triple Burkina's production of the export crop, cotton; and (f) to improve the standard of living for the 15-20 percent of the country's population who would be living in project areas (AVV 1974, Ouedraogo 1976, Nikyema 1977).

The 20-year cost of the AVV development program (1973-1993) was estimated at 60 billion CFA (US \$240 million) in the 1971 planning paper (AVV 1974). This amounted to a project cost of 828,571 CFA (US\$ 3,300) per family installed in an AVV farm, 35,024 CFA (US \$139) per hectare and 56,000,000 CFA (US \$221,306) per village for the Nakambe and Nazinon valleys, which were foreseen as the major area of intervention. In 1978, approximately 3 percent of the budget came from the Burkina government, 12 percent from funds that the AVV generated through its own commercial activities, and the remaining 85 percent from foreign donors—mostly France, the Netherlands, and the European Economic Community (see AVV 1985c for a more detailed discussion of actual project costs, funding, and achievements from 1973-1984).

Early Results of the AVV, 1973-1979

By 1979, criticism of the AVV at the national and international level was increasing. In particular, it was becoming difficult to justify the high costs of

the project, estimated to have increased to \$12,000-\$15,000 per settler household installed (Table 11.2).

Other areas of concern included:

- *Limited Adoption of the Proposed Extension Package.* Settlers were not practicing the proposed package of intensive cultivation techniques. Specifically, Murphy and Sprey (1980) found: (a) settlers who had been at the project for shorter periods of time followed the extension package more closely than those who had been there long-

Table 11.2 Cost to the AVV of Settling One Family according to the BEI-Agrer Report (February 1978)

	CFAF	Percent of total	Subtotals %
1. Preliminary studies			
Pedology 1/20,000 (4,000 ha a year)	30,800	1.18	
Geohydrology 1/20,000 (40,000 ha a year)	45,000	1.72	
			2.90
2. Settling the farmers			
Recruiting and moving	50,000	1.91	
Transportation WPF food	19,900	0.76	
Marking location of villages and fields	61,425	2.34	
Preparing master plan for bloc	2,000	0.08	
			5.09
3. Infrastructure			
Roads	557,000	21.31	
Equipment and personnel	139,900	5.35	
Technical assistance	45,700	1.75	
			28.41
Housing	187,600	7.18	
Equipment and personnel	23,000	0.88	
			8.06
Wells	81,600	3.12	
4. Land preparation			
Land clearing (53,000)			
Deep plowing (212,100)	368,700	14.10	
Harrowing (103,600)			
5. Equipment and supplies	40,700	1.56	
6. Field personnel for 3 years	138,000	5.28	
7. Update cars and furniture	34,200	1.31	
8. General Expenses AVV	491,700	18.81	
9. Technical assistance (10 experts for 3 years)	297,000	11.36	
Total	2,614,225	100.00	
	(about \$12,500)		

Source: BEI-Agrer, Report on the AVV Program, 1978-1982, cited in Murphy and Sprey 1980:86.

er; and (b) cotton was the only crop on which the recommended package of cultivation techniques, including monocropping, pesticides, planting in rows, fertilizing, thinning, timely weeding, and animal traction, was consistently applied.

- *Slow Rate of Planned Settlements.* By 1979, only 1,834 of the anticipated 9,700-13,700 households were actually settled (Table 11.3). After the first year, the delay had nothing to do with the lack of suitable candidates. It was, instead, due to the administrative and financial difficulty of creating sponsored settlements in large enough numbers to satisfy the growing demand.

- *Increasing Conflict with the Indigenous Inhabitants in some Project Areas.* By 1979 the project was experiencing increasing pressure from various indigenous and immigrant groups who, under the national land laws (see Chapter 5), could claim preexisting or present rights to cultivation and settlement sites. The problem was especially acute in the Nakambe Basin, near the paved highway to the east of Ouagadougou.

- *Increasing Rates of Illegal, Unassisted Immigration onto Project Lands.* Almost immediately the planned settlements attracted massive amounts of spontaneous settlers that quickly equaled and then surpassed the number of sponsored settlers in many areas of the Nakambe and Nazinon (Nana and Kattenburg 1979; AVV 1988; Savadogo 1988b). It was soon clear that large areas of river basin would be settled spontaneously before the sponsored settlements that were planned for those areas could ever begin.

Reorientation of National Planning for the OCP River Basins, 1983-1990

From 1981-1983 the AVV donors and administration reorganized the agency's administrative structure and programs. The overall goals of "coordinated action and planning for the development of the zones liberated of onchocercia-

sis," as well as the emphasis on increasing food production, were maintained, but the priorities were changed to: (1) interacting harmoniously with the indigenous people; (2) increasing the project's integration with regional development organizations; (3) shifting the earlier emphasis on agriculture to the more balanced development of all available resources in a region; (4) collaborating with the local people and settlers to develop infrastructure that would serve a much wider zone than the original planned settlement area; (5) reducing the amount of infrastructure to be implemented by the project; (6) de-emphasizing long distance recruitment and emphasizing instead the recruitment of indigenous inhabitants; and (7) shifting the responsibility for infrastructure and development programs to settler *groupements* (AVV 1981a, 1981b; Vayssie 1982; Kabore, Brilleau and Badolo 1985; Baris, Bonnal and Pescay 1983; Yanogo 1988).

New AVV Administrative Structure, 1983

In the reorganized model, the administrative structure changed to reflect a separation of the functions of infrastructure development and planning (*aménagiste*) from that of project coordination (realization of particular projects within a short, defined period of time) (Figure 11.2).

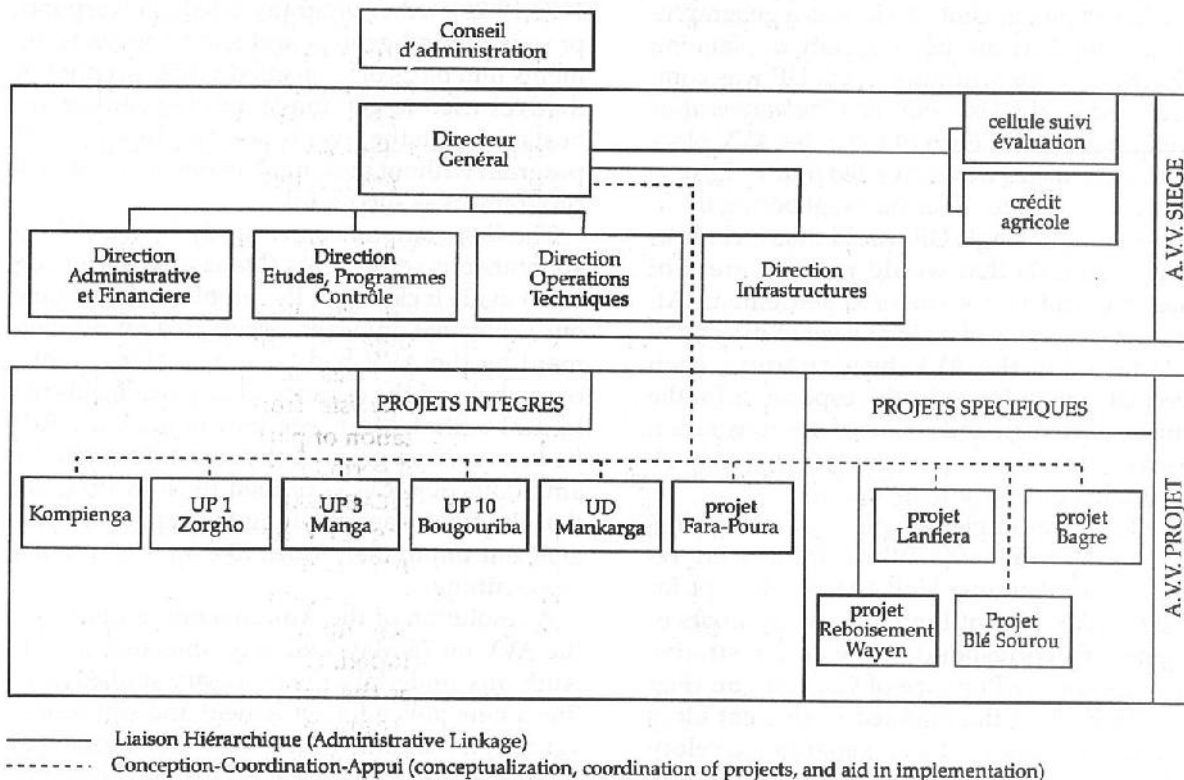
THE AVV HEADQUARTERS—CENTRAL ADMINISTRATION. The AVV headquarters in Ouagadougou continued to coordinate central administration, planning, coordination, and support services for all the AVV projects. These activities included: (1) general planning and coordination for the valleys and surrounding areas; (2) the identification, conception, and programming of activities for geographically defined planning units (*Unités de Plannification* or UPs) with the relevant ministries and other administrative structures; (3) financial account-

Table 11.3 A Comparison of the Actual and Projected Rates of Planned Settlement at the AVV, 1973-1979

	1973	1974	1975	1976	1977	1978	1979	Total
Scheduled ^a	200	300	600	900	1,700	3,000- 5,000	3,000 5,000	9,700- 13,700
Actually Settled	9	195	173	287	302	302	556	1,824

a. According to Upper Volta Five Year Plan, 1972-1976, and 1977-1981.
Source: Murphy and Sprey 1980:76.

Figure 11.2 Organigram of the AVV administrative structure, 1982-1989



Source: AVV 1985c:36

ing and relaying financial information to the UPs; (4) assisting the UPs with the construction of basic infrastructure, installation of migrants, and coordination of credit; (5) and monitoring (*suivi-évaluation*) the interventions carried out by the UPs and special projects.

Project administration also was responsible for the administration of special projects. Two types of projects were envisioned: (1) integrated regional development programs; and (2) special projects such as irrigation schemes, pastoral zones, or industrial forests.

THE UPS—ADMINISTRATIVE UNITS FOR REGIONAL DEVELOPMENT PROGRAMS. The administrative unit for the regional development programs was the UP or Planning Unit. A UP was a geographical unit with a certain homogeneity of planning problems and opportunities. Each UP was composed of several UD (*Unité de Développement* or Development Unit). Each of the older AVV blocs of planned villages was converted into a UD; new UDs were created to cover the neighboring traditional regions. A single UP would thus include as many as 10 UDs that would regroup areas of sponsored and non-sponsored settlement. Although the Director of a UP answered directly to the Director of the AVV headquarters, each project UP was independently responsible for the technical execution and financial administration of its activities. The original goal was for each UP to be funded by one or more donors.

In 1983, for example, the planned settlements along the Nakambe (ex-White Volta) were regrouped into Planning Unit 1 (UP1). Except for the older AVV bloc of Linoghin, the frontiers of the new UP1 correspond to the administrative boundaries of the Province of Ganzourgou (Figure 11.3). Each of the planned settlement blocs was then administered as a separate Development Unit (UD) within the planning unit (UP). The UP administration was headquartered at Zorgho, the provincial capital.

In 1989, the AVV-UP 1 grouped together 11 UDs. Seven of the UDs are former groups of planned settlements or blocs (Linoghin, AVV-Mogtedo, Mogtedo-Bombore, Rapadama, Ouayalgui, Tanema and Mankaraga); the other four UDs (Meguet, Mogtedo [town and surrounding region], Boudry, and Zorgho) coordinated extension and development for groups of indigenous villages in the non-basin plateau region (Figure 11.3). A twelfth planned settlement group at Dakongo is still in the planning stages. The agropas-

toral zone at Gadeghin also was part of the decentralized AVV-UP1.

Assisted Settlement Programs Incorporating Spontaneous Settlers in Sponsored Settlements

Early Responses to Spontaneous Settlement

Early responses to the "problem" of uncontrolled spontaneous settlement into areas designated for sponsored settlements included various attempts to induce the spontaneous settlers (or *migrants sauvages* as they were referred to at the time) to relocate to the newly created sponsored settlements (Nana and Kattenberg 1979:19-26). Other programs tried to incorporate preexisting indigenous and spontaneous settlements into blocs of sponsored villages. Other initiatives tried to get non-sponsored settlers and hosts living in the river basins to adopt the AVV program without moving. Not one of these early programs was successful.

The first comprehensive study by the AVV of spontaneous settlements (Nana and Kattenberg 1979) made it clear that the problem of spontaneous settlement onto land designated for development by the AVV had become so large that it overwhelmed the capacity of any one institution to deal with it. Moreover, they argued, the AVV had never been granted the power to attain the ambitious objectives outlined for it in 1974, and that the state was unwilling to grapple with urgent but unpopular issues like land tenure and woodcutting.

A resolution of the Administrative Council of the AVV on 26 May 1982 recommended that the Authority undertake the necessary studies to define a new policy for settlement and soil conservation. At the same time, a new Commission on Spontaneous Migrants was created. The Commission's goal was to define a global method of working with spontaneous settlers to allow them to participate more fully in AVV programs. In June 1984 a report was issued outlining the Commission's research findings and proposals for a new approach.

The announcement of the Act of Land Tenure and Agrarian Reform in August 1984 provided the national support that this new approach to assisted spontaneous settlement required. The Reform Act created strong national level recognition of the rights of AVV settlers as well as the rights of the spontaneous settlers—something that had

BURKINA FASO
 THE AVV PLANNING UNIT 1 (AVV-UP 1)
 UNITE DE PLANIFICATION 1 (AVV-UP 1)



This map has been prepared by The World Bank's staff exclusively for the convenience of readers and is for the internal use of The World Bank Group. The denominations used and the boundaries shown on this map do not imply, on the part of The World Bank Group, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.



been missing in earlier AVV programs. Subsequently, the PNGT model of village land use committees, created in 1986, provided a nationally recognized local institution for integrating settlers with indigenous people in a framework that would recognize the legitimacy of land rights of both spontaneous and sponsored settlers. This model was compatible with—and indeed heavily influenced by—the recommendations of the 1984 AVV commission.

New Models for Assisted Spontaneous Settlement

The first large scale experiment to incorporate spontaneous settlers under the new PNGT village land management model began at Rapadama in January 1988. This program was one of the test sites for the national PNGT program (AVV 1988). Both Rapadama and Linoghin, the two blocs closest to Ouagadougou, experienced high rates of immigration between 1974 and 1987. Preliminary research in 1987 showed 697 agriculturalist and 55 pastoralist families within the UD of Rapadama alone (AVV 1988). Only pastoralists who cultivated in the area (i.e., were permanent as opposed to transhumant) were considered to have settlement as well as pasture rights, in the newly defined UD.

In theory, the basic methodology for the assisted settlement program was simple. Instead of requiring the settlers to relocate to an AVV village, the spontaneous settlers (both agriculturalist and pastoralist) were invited to drop their separate status and to join the program on an equal footing with the sponsored settlers. In return for subscribing to the program, the spontaneous settlers received access to the same extension program—including credit, training for animal traction, and inputs from the AVV warehouses. They were also able to have an equal voice in the UD administration.

The Rapadama program proceeded in stages. During the first stage (January-February 1987), the residents of each of the Rapadama planned settlements worked with extension staff, topographers, and representatives of neighboring villages, to delimit the village boundaries. During the second stage, these boundaries were recorded on a topographic map (January-February 1987). In an overlapping third stage, complementary to the second, enumerators working with a sociologist conducted a census of all the migrants living within the designated village zones. During a fourth overlapping stage, the sociologist and rep-

resentatives of the UP1 held information sessions to explain the new program to sponsored and nonsponsored settlers in each zone.

While the village sociological and boundary surveys were being completed, the AVV collaborated with the UP1 on hydraulic and soil surveys to determine the best and highest use of the adjacent soils for agricultural, livestock, forestry, or protected lands. Based on the soil surveys, the number of hectares of land suitable for agriculture in the area of each village were indicated on the map. This calculation, minus the land in a given AVV village that was already allocated, was considered to be the amount of land available for distribution (Table 11.4). Other land uses—*bas fonds* (low-lying areas with potential for irrigation), agropastoral, and protected lands—were calculated to indicate the total land area for each village (Table 11.4). This total amount of available agricultural land was divided by six hectares (the recommended area of bush fields per family) to estimate the maximum agricultural carrying capacity of each village (Table 11.4).

To illustrate this system of calculation, V1 was considered to have 1,766 hectares of land suitable for cultivation in the immediate area surrounding it; 450 hectares of this land were already allocated to AVV farmers, leaving 1,316 hectares (Table 11.4). This 1,316 hectares was divided by six hectares (the area designated for a project farm) to estimate the village's maximum carrying capacity—219 families if only the areas suitable for dryland cultivation are included; 366 families if the lower *bas fonds* as well as higher dryland areas were included in the calculation. The census showed that 43 AVV families and 170 spontaneous settler families were already living in the area (Table 11.4). The village could thus presumably accommodate only an additional six families using the lower estimate of carrying capacity (219), or 153 families using the higher (366).

Once the carrying capacity of each village was estimated, plans were made for expanding the earlier base of AVV infrastructure. Boundaries of the now expanded village unit were marked and indicated on the map.

Responsibility for land management and extension services in the newly expanded unit was vested in a single land management committee, made up of elected members from each of the major social groups (settlers whose immigration was sponsored by the AVV, spontaneous settlers, and pastoralists farming in the region). Coordination

Table 11.4 Method of Calculating Carrying Capacity in the AVV-Assisted Settlement Program at Rapadama

Village territory	Land (hectares)										Spontaneous settlers			Estimated carrying capacity	
	Total land area	Already attributed to AVV settlers	Available rainfed land	Available basofond land	Available pastoral lands	Reserve area	Total territory	Number sponsored settlers	Total	Permanent	Temporary	Rainfed	Basofond		
V1	1766.30	450	1316.30	887.66	69.60	913	3,636.56	43	170	143	27	219	366		
V2	830.35	450	380.35	576.80	—	664	2,071.15	48	54	38	16	63	159		
V3	815.75	466	349.75	55.50	6.19	147.61	1,025.05	45	12	10	2	58	67		
V4	2347.70	675	672.70	360.85	271.20	709.60	4,689.35	63	221	91	130	278	338		
V5	1338.50	450	888.50	584.01	321.50	181.85	2,425.86	44	90	49	41	148	245		
V7	2035.75	675	360.75	634.93	223.15	723.67	3,617.50	65	92	52	40	226	331		
V8	845.90	450	395.90	362.30	11.15	88.80	1,308.15	45	15	15	0	65	125		
V9	906.56	454.50	452.06	326.06	—	54.78	1,287.40	49	43	43	0	75	129		
Total UD	10,886.81	4,070.50	6,816.31	3,788.11	902.79	4,483.31	20,061.02	402	697	441	256	132	1760		

Source: AVV 1988.

of the different village committees was carried out by an elected regional land management committee. Once incorporated into the new program, settler households (pastoralist as well as agriculturalist) received one or more blocs of land that were registered on a topographical map. In some cases they were allowed to keep their former fields; when fields were not located in the village area designated for crops, they were asked to move. Spontaneous settlers were usually allowed to keep their former house sites. New pumps were installed to accommodate the additional settlers—more than double the official number of settlers being served by the original AVV-created infrastructure and extension services.

In 1989 and 1990, similar programs to incorporate spontaneous agriculturalists and “settled” pastoralists were undertaken in all of the older AVV sponsored settlements of the AVV-UP1.

Current Reorganization of the AVV, 1990

Reorganization of the AVV into ONAT (Office National d'Aménagement des Terroirs)

On 9 August 1989, the Burkina Faso government announced another restructuring of the AVV. The new plan transforms the AVV from a structure with a special mandate for integrated development planning in the OCP river valleys to a structure specialized in land use planning and the realization of development projects in rainfed agricultural areas (Djigma 1989; AVV 1989a). Under the new administrative model, many of the project responsibilities once assumed by the AVV—including crop and livestock extension, agricultural credit, reforestation projects, training, and rural cooperative development—are being returned to the appropriate line ministries.

Under the new decentralized model, the AVV ceases to have any special mandate for planning for the OCP river basins. The new mandate involves shifting the extensive expertise of the AVV in forestry, livestock, and dryland crop development throughout the OCP valleys, to the design and early implementation of similar projects throughout the country. This function includes the conceptualization of regional development plans (*schema directeur d'aménagement*) for different areas and the implementation of land management programs under the new PNGT model. Currently under discussion is to what extent the AVV will retain its former capacity to construct

such basic infrastructure as roads, wells, and extension housing.

The newly reorganized AVV is known as ONAT (*Office National d'Aménagement des Terroirs*, or National Office for Land Development). In the administrative category of an *office* under the Ministry of Agriculture and Livestock, ONAT can consult within its own and other ministries in the design and implementation of special projects. Many of these projects will undoubtedly continue to be in the OCP basins.

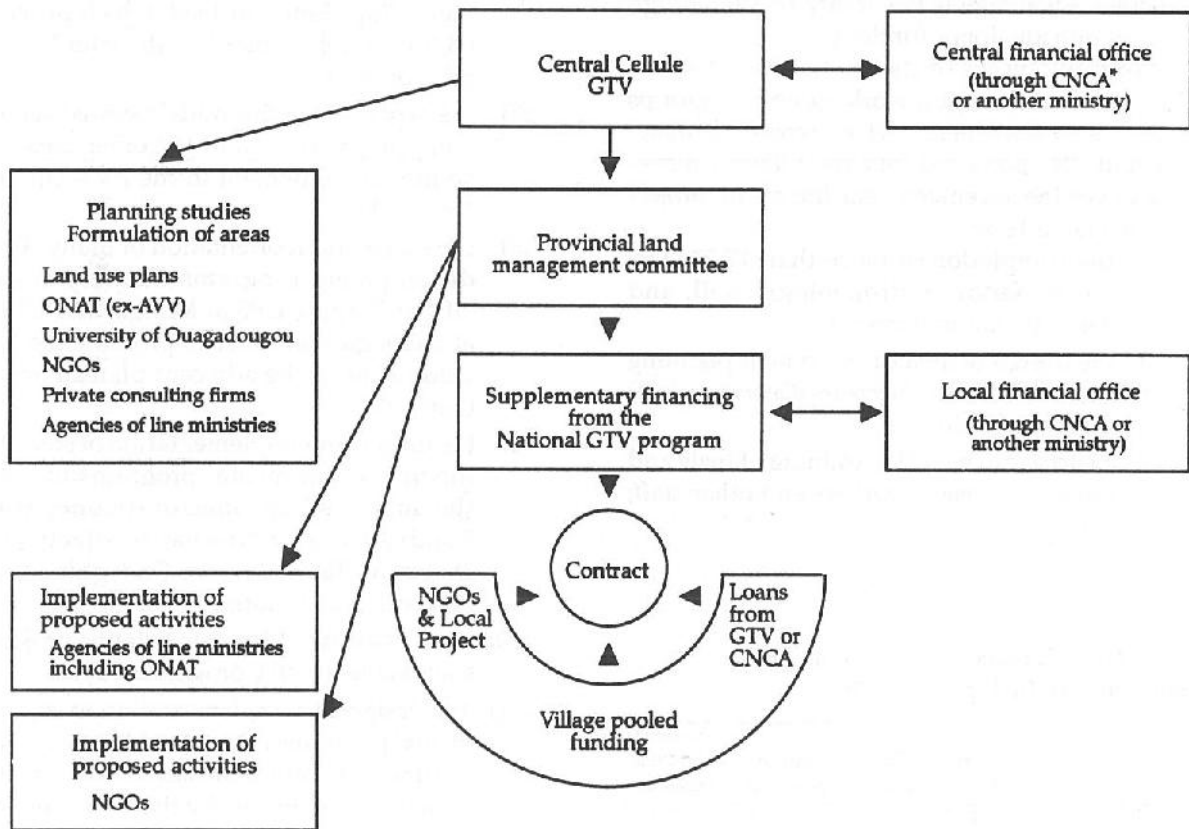
Special regional development projects to plan and facilitate in areas of new lands settlement will still exist. The new regional projects will probably be a cross between the old UP structure established in 1983 and the PNGT structure. The key difference is that ONAT will cease to have any direct relationship to these special planning units, except as a consultant. In regard to the latter, ONAT can be contracted to conduct the necessary surveys for the development of an area land use plan. If ONAT retains the AVV's construction equipment, the *office* might also be asked to intervene in the realization of particular types of infrastructure.

Projected Relationship of ONAT (ex-AVV) to the PNGT

Responsibility for land use planning in the basins will presumably be taken over by the National Cellule of the PNGT, under the Ministry of Agriculture. The precise organization of the National Cellule and PNGT program, and its relationship with ONAT are still under discussion. A tentative plan shows the AVV as one of several government, university, or NGO institutions that could work as a consultant to the *Direction Administrative et Financière* (DAF) of the GTV (*Gestion des Terroirs Villageois*) planning cellule in the design of planning studies (Figure 11.4)

Under the PNGT model (Chapter 10), the provincial PNGT land use committees work in concert with village land use committees. Funding for specific interventions is to come from a variety of sources, including NGOs and local projects, village contributions, loans from the *Caisse Nationale de Crédit Agricole* (CNCA), as well as special grants from the national program. The contract signed by the village land management committee represents the contractual obligations of the state to assist with the realization of these interventions. In all of this, the role of the national planning cellule is seen as one of facilitating the sorts of interministerial and

Figure 11.4 Relationship of ONAT (ex-AVV) to the functions and financial linkages of the PNGT/GTV



* CNCA National Offices for Agricultural Credit

interagency collaboration that will be necessary to realize the village contracts.

Lessons Learned and Potential Applications

Advantages of an Autonomous National Agency

The history of centralized, national planning for Burkina's OCP river basins highlights the fact that a separate autonomous agency has definite advantages in early planning for settlement related development. In particular, if properly funded, it allows the government to organize a complex assistance package much more quickly. A further advantage is the ability to attract high levels of outside donor funding.

Within two years of its creation in 1974, the AVV had already begun working on five groups of sponsored settlements, which would ultimately include 24 sponsored villages. Other achievements over the seventeen year life of the project include (Table 11.5):

- (1) the completion of more than 17,237,000 ha² of aerial, hydrogeologic, soil, and social planning surveys;
- (2) the design of area development planning models (*schemas directeurs d'aménagement*) for 1,700,000 ha²;
- (3) a successful record in training of male and female extension workers and other staff; and

Table 11.5 Census of AVV Areas of Intervention during 1987-1988

AVV extension areas	Number of villages	Total population	Active population	Number of agricultural households
UP1 - Zorgho	154	193,735	131,201	22,104
UP3 - Manga	148	140,072	70,027	18,146
UP4 - Tiebele	4	1,372	742	177
UP8 - Bane	4	1,844	988	164
UP10 - Diebougou	11	4,788	2,647	542
Sondré - Est	1	1,169	530	76
Fara - poura	22	19,305	11,041	1,933
Lanfiéra	1	4,707	2,396	465
Bagré	1	1,019	350	109
Kompienga	13	5,370	2,869	1,398
Nouhao	53	47,554	25,720	7,878
TOTAL AVV	412	420,935	248,511	52,992

Source: AVV.

- (4) the implementation of a reliable system of rural warehouses providing farmers with fertilizer, animal traction equipment, spare parts, and supplementary feed for draft animals which can be purchased on credit.
- (5) the implementation of a reliable system of rural short- and long-term credit during the first five years, the repayment schedule for which was much higher than for similar types of credit programs in neighboring regional development authorities, (Barrett *et al.* 1981);
- (6) the design and implementation of the first program for assisted spontaneous settlement (Rapadama) in 1988, which provided the model for many of the later PNGT pilot projects;
- (7) the expansion of this initial assisted settlement program to all of the other areas of sponsored settlement in the AVV-UP1 in 1989-1990;
- (8) the successful reorientation of many AVV development programs (notably at the UP1 at Zorgho, UP3 at Manga, and UP10 at Diebougou) in order to promote the development of the adjacent plateau areas (Table 11.5);
- (9) the design and implementation of some of the new experimental programs for settler managed agropastoral zones (the Sondré-est and Nouhao Projects are shown on Table 11.5; the Gadeghin agropastoral zone is not);
- (10) a successful record for reforestation projects such as the forestry project at Wayen;
- (11) the design and implementation of experimental programs in functional literacy that became a model for the later development of national programs by the new government that came into power after 1983;

Viewed in tabular form, over a seventeen year period, the achievements are major (Table 11.5).

Negative Aspects of an Autonomous Agency

HIGH COSTS. The chief disadvantage of a separate national agency is cost. In 1979 the cost of settling one family at the AVV was estimated to be between \$12,500 and \$15,000 (Table 11.6). This figure includes only the direct costs of settlement in 1978 terms. How does one calculate

the wider impact of this funding on an area over a seventeen year period? Total costs of the AVV in 1988 (Table 11.6) were estimated at 23,554,857,000 CFA francs. The project was then active in 412 villages (figure includes sponsored and unsponsored settlers as well as indigenous hosts) (Table 11.5), and one industrial wood project, with 420,935 inhabitants. If these figures are used, then the total cost per beneficiary village was 57,171,000 CFA (\$191,000, at 297.9 CFA=\$1) if averaged out over the entire region. This includes the costs of industrial wood projects and other reforestation schemes that would not directly effect individual villages. The cost per individual, using the same set of figures, is 55,958 CFA (\$188.00) or 447,664 CFA (\$1,505) for a hypothetical "average" household of eight family members. Again, this does not include isolated costs of individual figures but is averaged out over the entire area of activity.

FISCAL AND ADMINISTRATIVE DEVOLUTION. Another disadvantage of a separate national agency is fiscal devolution. In the original project plan, the AVV administrative structure was to end after a fifteen to twenty year period, after which time the preexisting network of administrative and extension services would assume responsibility for its various projects.

This has proven to be far more complicated than originally expected. The very success of the AVV in attracting donor financing, and the extremely high level of services in the planned settlements versus adjacent "indigenous" zones created jealousies with other government agencies. These jealousies were exacerbated by the fact that the national ministries were expected, in most cases, to pick up the long-term recurrent costs of maintaining the extension, education, and health services as well as basic infrastructure (wells, roads) that the AVV created and over which they'd had little original input.

These difficulties were exacerbated by the fact that the local people and leaders often perceived the AVV as having forcibly siezed their land while paying little if any attention to their needs or concerns. Although the AVV expanded its program to embrace the indigenous villages in the basins after 1983, these early resentments have remained.

ADMINISTRATIVE DIFFICULTY IN ADJUSTING SETTLEMENT AND EXTENSION PROGRAMS. The centralized AVV administrative structure may have

been adaptive in the early stages, but as planned and spontaneous settlement increased, and as the AVV expanded its programs to respond to this increase, the administrative structure became increasingly cumbersome and less able to deal with the growing complexity of planning issues (AVV 1985c:21). The high concentration of administrative and fiscal services in the capital created problems for the fiscal management of projects as well as for obtaining authorization for necessary program changes. The same concentrations of personnel in the capital made it difficult for the central administration to be fully appreciative of the need to adjust certain programs (e.g. the proposed package of intensive cultivation methods) to the evolving land use patterns, needs, and concerns of both settlers and hosts.

Lessons for Future Management Structures

Due to the high cost and long-term administrative problems associated with a highly centralized administrative structure, no one, including the ONAT (ex-AVV) administration, would recommend the recreation of the early AVV administrative structures in the other OCP countries. Nevertheless, the history of the AVV does highlight: (1) the solid achievements that can result from sustained commitment to special planning for settlement related development; and (2) the vital importance of having key administrative personnel involved in actual interactions with beneficiaries at the village level. The insights gained by the AVV were earned by designing, testing, and then evaluating what did and did not work. These are valuable lessons for the upcoming PNGT program.

While the actual administrative structure and focus on planned settlement may have been flawed, the basic concept (i.e., the need for informed area planning) was a good one. Based on the AVV experience, we can predict that some similar sort of sustained donor commitment over a fifteen year period will be necessary in order to realize the full potential of Burkina's national PNGT program. Second, we can predict that the PNGT program will encounter many unforeseen problems in achieving the sort of decentralized administration and funding that it espouses.

Whatever problems were encountered under the early AVV, the institution has an immense experience with land use planning, zoning,

Table 11.6 Financing of the AVV, 1972-1988 (FCFA 000's)

Source of financing	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1988*	TOTAL	%
<i>Burkina Faso</i>																		
State support	-	-	-	50,000	111,958	58,500	58,000	46,350	78,000	30,000	-	10,000	5,000	-	-	-	447,808	2
Treasury advance	-	-	-	-	200,000	-	-	-	20,000	-	-	-	-	-	-	-	220,000	0.9
Loan from state/CCCE	-	-	-	-	700,000	-	-	-	300,000	1,100,000	1,840,000	1,050,000	-	-	860,000	-	5,850,000	24.8
Rural development fund	-	-	-	-	-	-	-	-	-	-	30,000	-	-	-	-	-	30,000	0.1
P.T.P. - Komienga -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	986,547	986,547	4.2
Subtotal	-	-	-	50,000	111,958	968,500	58,000	46,350	398,000	1,130,000	1,870,000	1,060,000	5,000	-	860,000	986,547	7,534,355	31.9
<i>Outside sources</i>																		
FAC	110,100	202,000	271,500	535,000	711,500	520,000	530,000	618,000	530,000	510,000	390,000	775,000	475,000	165,000	-	-	6,343,100	27
FED	-	-	-	-	84,136	5,544	519,960	-	70,723	-	1,350,000	-	-	-	-	-	2,030,363	9
RFA	-	-	-	-	-	-	66,000	214,500	253,096	-	-	-	-	-	1,285,000	-	1,818,596	8
USAID	-	-	-	-	-	126,125	84,460	-	200,640	-	-	-	-	-	-	-	411,225	2
CEAO	-	-	-	-	-	-	30,960	-	44,685	-	-	-	-	-	-	-	75,645	0.3
Netherlands	-	-	-	-	239,345	217,791	544,174	756,000	672,000	-	-	50,000	-	-	-	-	2,479,310	11
UNDP	-	-	87,000	174,810	115,230	99,725	-	-	-	-	-	-	-	-	-	-	476,765	2
World Bank	-	-	-	-	-	-	-	-	-	-	-	130,000	-	-	-	-	130,000	0.6
Italy	-	-	-	-	-	-	-	-	-	-	-	2,244,000	-	-	-	-	2,244,000	10
Projct UPV/80	-	-	-	-	-	-	-	51,438	-	-	-	-	-	-	-	-	51,438	0.2
Subtotal	110,100	202,000	358,500	709,810	1,150,211	969,185	1,775,554	1,639,938	1,771,144	510,000	1,740,000	3,199,000	475,000	165,000	1,285,000	-	16,060,442	68
Total	110,100	202,000	358,500	759,810	1,262,129	1,977,685	1,833,554	1,686,288	2,169,144	1,640,000	3,610,000	4,259,000	480,000	165,000	2,145,000	986,547	23,594,797	100
Percentage	0.5	0.9	1.5	3.2	5.3	8.2	7.8	9.0	9.2	7.0	15.3	18.0	0.2	0.1	9.1	4.2	100	

*No new financing in 1987.

Source: AVV, DEFC, 1990.

infrastructure development, extension agent training, industrial wood plantations, and agro-pastoral zones, which is useful to Burkina and indeed to the entire eleven country OCP zone. It is especially important at this juncture, after

the AVV reorganization, that steps be made to document this rich legacy, and to formalize what relation the new *office* will have to the PNGT planning cellule and national planning for the OCP areas.

12

Local Participation and Institutions

Burkina's new program for village land management supports the development of strong, democratically elected village land management committees that represent each of the major social groups—immigrant and indigenous agriculturalists as well as pastoralists. Whether these innovative committee structures succeed will be determined by the villagers' ability to see any real benefits from their efforts. These benefits must necessarily be in the form of government programs to channel resources to villages. This sort of *de facto* decentralization of resources reinforces the *de jure* authority of the village land management committees to provide leadership in working with extension agents and local administrators. Therefore donors, NGOs and the national government need to route as much aid as possible through the local land management committees.

Local leaders are well aware that earned authority, rather than their power to enforce, will be the secret to success. At the same time, it is unrealistic to expect the village land management committees to earn the needed authority and respect overnight. Too rapid implementation and literal interpretation of the reform texts can lead to village fragmentation, such as we now see in the Solenzo region, where large immigrant cultivation hamlets have seceded from their mother villages. Moreover, the experience of the AVV sponsored settlements shows that the hostile feelings created by recourse to legal edicts to enforce settlers' land rights can block settler economic integration and actually work against development.

To implement this sort of innovative "bottom-up" development planning requires a radical rethinking of the way development projects are carried out. In the past, most projects were conceptualized by planners at the regional and national levels. They were then taken to the local *groupements* who were responsible for implementation. The role of the extension agent and technician was to ensure that local perspectives were considered in the design as a means of facilitating implementation. One goal of the PNGT, and a goal that we consider to be absolutely vital to its success, is for the local land management committees to see strong evidence that they can actively determine which sorts of projects will be carried out in their village. Under this model, the role of the local government agent should be one of education and arbitrage as opposed to one of enforcing or communicating top-down government edicts.

In this chapter we provide a brief review of the factors that contributed to or detracted from the development of effective local institutions at the study sites. In view of their centrality to the current PNGT program, we focus mostly on the farm extension groups or *groupements*.

Centrality of Village Extension Groups in Crop Extension Programs

Early in Burkina Faso, as throughout francophone Africa, it was felt that extension programs should be tied to the development of cooperatives. Membership in a village *groupement* was required

for an individual to get credit for a plow, fertilizer, and pesticides. Membership was accorded to individuals who were classified as permanent residents of the village. Since *groupement* members were jointly liable for the debts incurred by any member of the group, there was pressure not to admit unreliable persons who might not repay their debts. The *groupement* was also the focal point for extension programs.

Evolution of the AVV Groupement Model

When the AVV was created in 1974, the planned settlement scheme attempted to build on this earlier model of *groupement* organization for the creation of village institutions. Each planned settlement was to elect officers. Village *groupements* were presided over by bloc committees. The village *groupement* was the principal organ through which AVV directives about new extension themes were issued.

A second *groupement* was established for the women. The women's *groupement* led by an *animatrice*, or female extension agent. Regular meetings with the women focused on maternal health, child care, nutrition, and handicrafts.

When the settlers arrived in the planned settlements, their first task was to clear trees for their home sites and bush fields. As the new settlers typically knew only a few families from the same home region, the extension agents usually appointed the first village *groupement* president and other officers. The wife of the *groupement* president or another older woman was usually made leader of the women's group. Although the newly appointed president was often the first settler to arrive, extension agents also used a combination of age and first impressions about leadership ability to make the appointment. One of the principal concerns of the project was to convince settlers that the presidency was not a village chieftaincy to be held permanently by one family or person. Despite this, a majority of the first presidents were subsequently reelected, some for as long as a decade.

During the first two years of planned settlement, the settlers received almost weekly instruction from the extension agents on new agricultural themes. The sound of an extension agent beating an empty metal drum to call male heads of households to village meetings was a regular part of life in the early days of AVV. Settlers were told where to plant, what to plant,

how much, and what cultivation methods to use. Food aid was also distributed primarily through the *groupement*.

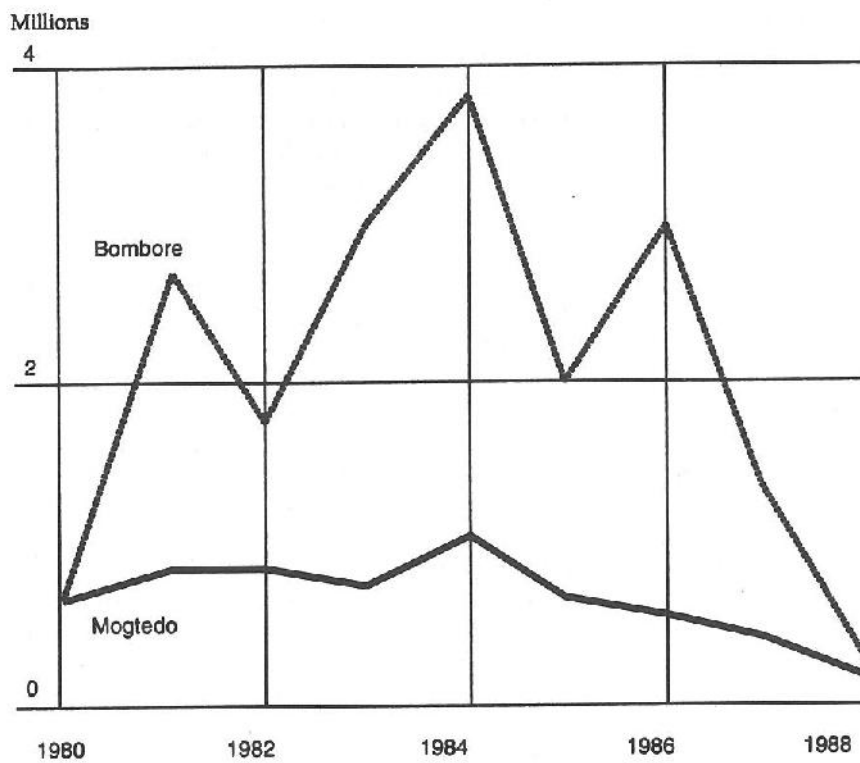
One of the first illustrations that settler institutions were taking on a more independent stance took place at V3 Mogtedo during the 1979 cotton sales (in January 1980), when settlers refused to sell their cotton on the day scheduled by the project. At this point they had been living in the project village from three to five years. The strike illustrated the settlers' growing desire to take an active role in controlling village relations with the AVV.

The institution of farmer managed markets (*marchés auto-gérés*) for cotton in 1980 was a major turning point in the development of local institutions. Farmers' representatives would weigh the cotton and calculate the money owed to each farmer. Under the new system, the *groupement* received a percentage of the total cotton sale as *ris-tournes*. The total returned to the *groupement* could be over one million CFA (\$3,000) in good years or as low as 200,000 CFA (\$670) in bad years. The level of returns as well as the total value of cotton sales varied widely among planned settlement groups (Figure 12.1). Creation of the farmer managed markets empowered local institutions, providing them with funds under their own control. Each year the farmers decide, together with the extension agent, how the returns were to be used.

After the 1982 reorganization of the AVV, the village *groupement* remained the most important village institution for regulating disputes, orchestrating extension activities, and creating and maintaining basic infrastructure. Each collection of planned settlements (UD) has three types of village *groupements*: a village committee (*groupement villageois*), a women's *groupement*, and a youth *groupement*. Representatives of all three groups form the village committee of the UD.

Wide variation among the three UD's studied (Linoghin, Mogtedo, and Mogtedo-Bombore) has characterized the success of the village *groupements* in carrying out group projects. The Mogtedo *groupement*, for example, has managed to realize only three economic units—an ambulance, a cereal bank, and a mill. The mill has never been adequately maintained and runs for only a few months each year. The cereal bank has been virtually abandoned. The head extension agent has had to take a major role in supervising the activities of all three enterprises.

Figure 12.1 Returns from farmer-managed cotton markets returning to AVV settlement groupements (CFA)



Source: AVV UD extension records.

Groupement structures have been more successful at Mogtedo-Bombore. There they have realized a village pharmacy, a library, a popular bank, a cereal bank, and a small water barrage. In the past few years the village *groupement* has explored new avenues for earning cash. Most recently the committee used one million CFA of its funds from cotton returns to purchase cereals, which were then sold to two other village groups.

If success is measured in terms of the realization of particular projects, the most successful of the AVV village *groupement* is at Linoghin (Guira, F. 1989). At least part of this success can be attributed to the early involvement of the group, usually led by the extension agent, in the creation of a successful market. The success of the Linoghin market in attracting large numbers of people and in generating revenues gave the settlers an early sense of success, which they have transferred to other activities.

The *unités économiques* (economic units) run by the Linoghin *groupements* were plagued by corruption in the early years. As at Mogtedo and Mogtedo-Bombore, the collectively run mill was the worst run of the different enterprises (Guira, F. 1989). The principal reason for this was the inability of a *groupement* to keep accurate records of funds. In recent years, however, the Linoghin *groupement* has been more successful in the realization of specific projects including a village drugstore, cereal bank, popular bank, library, village store, and grinding mill (Guira, F. 1989). The *groupement* collaborated with the AVV to construct the drugstore building and a small dam. The base funding for these enterprises came from the cotton sales *ristournes*.

Evolution of the Solenzo Groupement Model

The Solenzo *groupement* model is a direct outgrowth of the southwest cotton program. To get access to credit, immigrants and hosts in the southwest cotton areas have always been required to belong to a *groupement*. National policy discouraged the multiplication of *groupements* in areas of new lands settlement. Consequently, new settlers generally had to join a village group in one of the older settlements.

As at the AVV, the new national program of farmer managed markets marked an important turning point in the functioning of these groups. With the creation of these markets, the groups ob-

tained the resources to construct schools and wells.

- Factors That Contributed to or Detracted from the Success of Settler Organizations at the AVV Planned Settlements and at Solenzo

- *The existence of cooperatively run, income-producing economic units.* A recently completed study of farm extension groups in the Haut Bassin and Mouhoun CRPAs measured the socioeconomic impact of extension groups in terms of their contribution to increasing agricultural production and creating village infrastructure (Nana 1989f). Two factors proved to facilitate the effectiveness of village groups: access to semiautonomous funds for group projects; and the ability to manage these funds.

- *Role of leadership turnover and education.* Adequate management of funds was largely influenced by whether a *groupement* experienced a turnover of elected officials like the president or treasurer (Nana 1989f). Funds tended to be mismanaged where groups had little leadership turnover.

The educational background of village leaders was another key factor that influenced the effectiveness of village groups. When education was concentrated in only a few leaders, it was much more difficult to manage funds correctly (Nana 1989f). Groups were more effective when there was a wider base of education that allowed for more accountability of the elected leaders.

- *Complexity of Administration.* The most successful group projects at all of the sites were those in which the *groupement* funds could be used to develop and repair basic infrastructure. The most unsuccessful projects were those that required high levels of day-to-day management.

The village mills were notorious examples of this problem. Accurate accounting was made difficult by the rapid turnover of individuals running the mills. The person in charge was usually a literate son or occasionally an older literate settler. The position was poorly paid and poorly supervised. Even without deliberate intent, it was easy for the mill manager to misuse funds, and, even if the funds were not mismanaged, the manager was constantly under suspicion. As a result, the position was unattractive and generally taken only as a last resort.

One result of the financial mismanagement and rapid turnover in staff was that little if any provision was made for repairing the equipment. Throughout all the AVV planned settlements, the

cooperatively run mills tend to be broken down. One possible solution to the problem that was being considered in 1990 was to give responsibility for the mills to women's groups, because "they would presumably be more honest."

- *Social problems.* Social problems among settlers, in particular the animosity between groups of settlers from different regions, contributed to the lack of effectiveness of local institutions at Mogtledo. These problems appear to have been exacerbated in one village by the high concentration of settlers from a particular home village. The initial result was to give this group an advantage over others in taking on village leadership positions. Later, growing income inequalities created jealousies within the group, as the success of certain families from the same home village outstripped that of others. In general, however, these problems were secondary factors related to the more general economic malaise that characterized economic development in the AVV planned settlements.

- *Settler feelings of dependency.* A key problem associated with planned settlements like the AVV is the sense of settler dependence on the project administration for solving day-to-day social and economic problems. The early days at the AVV were characterized by a high level of dependence on the project administration. After the fifth year, however, the settlers began to take a more independent stance in dealing with the administration and in dealing with one another.

- *Social and economic linkages between settler institutions and external parallel structures.* High settler dependency on project administration for handling specific problems is a natural consequence of extension and aid programs that are "top-down" or *directive*. When there is a problem with the program, settlers look to the agency to resolve it.

The AVV has been extremely critical of the *directive* nature of its early extension programs. These rigid lines of communication, in which the AVV told the farmers exactly how to plow, when to plant, how much fertilizer to apply, when to weed, and when to sell, continued long after they might have been considered necessary for training purposes. Settlers were given little role in the design or administration of village projects until 1980 when the AVV switched to farmer managed markets. It is only in the last few years that these same settler organizations have been given the power to reallocate the field

areas assigned to settlers who have resigned from the project. In retrospect, had the AVV given them more responsibility for these and similar activities earlier in the project, it might well have increased the settlers' sense of proprietorship in the new area.

The AVV settlements created at Mogtledo-Bombore benefitted from lessons learned earlier in the project. The system of farmer managed markets was instituted only one year after AVV-Bombore was created. The income from the farmer managed markets was used for various group projects. There was, then, from an earlier date, a much stronger tradition of farmer initiative in the implementation of projects than we saw at Mogtledo. This stronger tradition of farmer organizations may be partly responsible for the lower rate of out-migration from the Bombore planned settlement. A comparison between farmer organizations at Mogtledo and Bombore needs additional investigation.

Although the UDs of Linoghin and Mogtledo were created at about the same time (1973-1974) and with the same pattern of early institutional development, the village *groupement* at Linoghin became more strongly involved with the administration of the market after the second year. The market generated revenues and created a wide range of opportunities and problems that required group decisions.

- *National policies.* National policies that contributed to the development of effective local institutions were: (a) extension policies that created only one extension group per village with joint migrant-host membership; (b) policies to decentralize responsibility for cotton markets, thus giving the local village *groupements* operating funds for village projects; (c) programs that created a local, regional, and national administrative position for the village revolutionary committees (CRs).

A key policy that worked against the development of local institutions involved land tenure changes introduced in 1984 that provided an administrative mechanism for cultivation hamlets to break with the villages that originally loaned them land. Under the new laws, once recognized as an independent village, the settlers had the right to form their own *groupement*, and no longer had to collaborate with the hosts. These secessions have in many cases created conflict with the indigenous inhabitants and done away with the former integrative role of the village *groupement*.

Early Development of Settler Organizations at Kompienga

The significance of these different local and national factors variables is especially striking at Kompienga where effective, local community institutions were fully operational only three years after large-scale settlement began, with very little direct intervention from the outside. This legacy of cooperation dates back to dam construction, when the dam authority relied very heavily on the CRs in its dealings with the workers. These linkages facilitated the resolution of concrete problems like housing, water, health, and education. The linkages were reinforced by resource flows. National and donor financing was used to create wells; to delineate house sites; and to create a market, primary school, hospital and community center. The administration also worked with the CRs to organize social events.

One could argue that the dam administration had a strong economic motivation for keeping the workers happy. The net result, however, was to create—very early in the settlement experience—a tradition of active settler representation in decisions made by the local administrators in the town and department headquarters at nearby Pama. This tradition continued after the dam authority turned over its administration of the town to local representatives of the different ministries. In early 1990, the leadership of the Kompienga CR continued to have a large number of former dam workers complemented by local merchants who were not dam workers. The CR leaders were vocal in expressing their aspirations and concerns for the new community. One of their first activities, after inauguration of the dam, was to reorganize the market so that it would be held on two fixed days each week in the hope that this would attract greater trade from Togo.

During the 1990 dry season, Kompienga lost about 100 males (not all of them household heads) who immigrated to the proposed site for the new Bagre Dam. One of those who left was the charismatic CR head delegate. As of April, only twenty had allegedly found work. The rumor was that because of the much greater difficulty of obtaining land in the Bagre region (due to the high population densities of the indigenous Bissa of the area), most of the unemployed migrants would return to Kompienga for the rainy season.

Despite the out-migration, the Kompienga CR continued to meet during 1990. Their activities included the regulation of disputes between the FulBe and local agriculturalists. The CR also continued to meet with the Prefet and other officials about such issues as proposals to zone the town, efforts to improve transportation linkages, and the need to improve crop and livestock extension services.

In 1991 and 1992, after the CR's were abolished, the group transformed itself into a committee that promotes small-scale, irrigated vegetable production. In contrast to farmer groups at the other sites, a high proportion of the leaders at Kompienga are literate. This strong tradition of village institutions at Kompienga represents a considerable development resource. At the present time, however, the *groupe-ment's* activities are hindered by the lack of effective linkages to the regional extension office in Fada, illustrating the critical importance of effective national institutions.

Policy Implications

Both national policies and local administrative practices influence the development of local administrative structures. Neither is sufficient in and of itself. Local projects that espouse a doctrine of high levels of settler participation may succeed in the short run but be unsuccessful when these institutions must answer to wider administrative and extension structures. Similarly, a national program (such as the early AVV or PNGT) may espouse high levels of local participation, but be unwilling to relinquish any real administrative responsibility or resources. Other national programs (like land tenure reform) may have many unintended consequences for creating settler-host conflict. These conflicts may, in turn, discourage the settlers' willingness to participate in jointly run local institutions.

Policies that do not build on and incorporate a strong base of settler and host initiative are bound to fail in the long run. Moreover, failure to build on the expressed wishes and capacity of local institutions can lead national institutions and donors to advocate inappropriate interventions that in worst case scenarios may actually endanger settlers' social, economic and physical welfare. In the final analysis, the impact of any sort of national policy to affect crop or input prices policy (Chapter 4), land tenure (Chapter

5), agriculture or off-farm employment (Chapters 6 and 7), pastoralists and indigenous host land rights (Chapter 9), or the development of markets and administrative centers (Chapter 8), sustainable land use practices (Chapter 10), national management structures (Chapter 11), or local institutions (Chapter 12) is ultimately determined by the decisions of millions of actors living in hundreds of thousands of household units in small communities

It is therefore important that planners understand the needs, concerns and aspirations of the farm families living in the OCP river basins. This understanding is the vital first step to the formu-

lation of sound development policies for the affected areas.

These areas represent one of West Africa's greatest natural resources. It is unlikely, however, that the full economic returns to river blindness control will be realized without sound management and parallel investment in development programs.

The Burkina case study shows ample evidence for success in areas where new lands settlement was assisted. The study also shows the high costs of doing nothing. This is a rich history that needs to be thoroughly analyzed before planners embark on a new generation of development planning in the valleys.

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