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Social Soundness Analysis of the West Benoue
Integrated Rural Development Proposal, and
Suggestions for Alternative Interventions in
Margui-Wandala

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I. Introduction

This report has been prepared at the request of the USAID mission in Yaounde, Cameroon. Its purpose is to provide a social soundness analysis as a part of the prefeasibility study of the West Benoue Integrated Rural Development project identified in the Annual Budget Submission FY 1977 Yaounde (based largely on the IBRD's concept paper of 1974 entitled West Benoue Agricultural Development project). The overall purpose of the project is to develop and implement an integrated development scheme in a heretofore undeveloped, sparsely inhabited region (West Benoue) that will encourage the resettlement of 20,000 farm families from adjacent heavily populated Mandara mountains to the north (Margui Wandala). The expected result of the project will be to improve the livelihood of the rural poor, and to assist with the protection of fragile northern soils by 1) bringing into cultivation the fertile alluvial soils of the West Benoue region while 2) permitting some of the poor soils of Margui Wandala to remain out of cultivation thereby regaining fertility through the growth of natural vegetation (Annual Budget Submission FY 1977 pp 165, 66, 71, 72, 73).

Summary of Findings

The results of this prefeasibility study indicate that from the point of view of social and ecological soundness the proposed project faces serious problems, that it is based on incorrect assumptions, and that it will not achieve its goals of resettlement and will not raise the real income of the vast majority of the rural poor in Margui Wandala.

The most important findings are summarized below.

1. The high population densities (in excess of 300/km²) encountered in the northern region of the Mandara mountains are based on a labor intensive, integrated and ecologically sound agricultural system.
2. The practice of terracing, manuring, crop rotation and the maintenance of selected shade trees increases rather than decreases the agricultural potential of the densely settled regions.
3. Taking terraced land out of cultivation leads rapidly to erosion depletion of organic content of the soil and hence to a degradation and loss of agricultural potential.
4. The reduction of population densities below a minimum threshold makes it impossible for the remaining population to maintain the intensive terraced farming complex and leads to the collapse and abandonment of entire mountainsides.
5. Past experience indicates that farmers from the most intensively farmed and densely settled mountain groups are least likely to voluntarily settle on the plains except in the piedmont adjacent to their natal villages.
6. Evidence from previous projects to settle farmers from the Mandara mountains in the plains reveals political, administrative, economic and ecological difficulties that have not yet been successfully overcome:
 - a. resettlement projects have been viewed by some Cameroonian

administrators as a solution to the "Kirdi problem", that is, as a way of moving unruly, pagan mountain people with few cash crops and reluctance to pay taxes down to the plains where they can be more easily administered, encouraged to raise cash crops and brought into contact with the unifying influence of Islamic civilization.

b. because of this desire to resolve the "Kirdi problem" and because of pressures created by heavy expenditures on project infrastructure overzealous administrators have pressured and, in some instances coerced, farmers to leave their mountain homes.

c. projects have been designed and implemented in an authoritarian manner with little regard for micro-variations in soil conditions or the social organization and risk aversion strategies of settler households.

d. patterns and methods of clearing land directed by project authorities have led to severe erosion problems in some instances.

e. emphasis on cash crops, including the required production of cotton, has reportedly led to the degradation of soils in some areas.

f. projects that have displaced a large proportion of a local mountain population have resulted in the degradation and abandonment of the terraced farming eco-system thus reducing the total carrying capacity of north Cameroon agriculture.

g. with the exception of the FED North East Benoue Project which is new, development services have broken down in all previous settlement

schemes including those cited as successful in the original IERU concept paper on the West Benoue Agricultural Development Project.

h. despite high per capita investments in infrastructure there is little evidence that farmers in settlement areas have higher real incomes than other traditional farmers.

i. experience with previous settlement projects has made mountain farmers more skeptical of new schemes.

7. Taxes vary but characteristically range from 1,500 to 3,000 or between 10% and 20% of total income estimated in cash.

8. In spite of an official change in the official policy of SOLECOTON many farmers in the piedmont and on the plains are still being forced to plant one-half hectare of cotton by local administrative pressures including the sanction of imprisonment.

9. In spite of the fact that average returns per man-day to cotton production are less than one-third of those in cocoa or coffee* the lint equivalent producer price of cotton has averaged 57% ^{of the FOB Douala p.} over the past 12 years.**

10. The forced production of cotton and low price policies result in a substantial income transfer from the rural poor to the modern sector of the Cameroon economy and foreign investors.

11. Present production and price policies are justified by two high level northern officials on the grounds that an increase in producer price

*IERU: United Republic of Cameroon Agricultural Sector survey 1973 statistical appendix tables 6 and 7.

**IBID table 8 ---

would lead to a drop in production.

12. Detailed soil analysis by Gavaud of ORSTOM indicates that:

a. a major cause for the depopulation of the west Benoue region is soil depletion.

b. to a large extent zones of higher soil potential correspond to areas claimed and utilized by the 70,000 people already in the project area.

13. The North Cameroon government's heavy reliance on traditional officials in local administration presents difficulties with regard to land tenure and equitable taxation.

14. In light of these difficulties the FY 77 PID goal of resettling 20,000 farm families over a five-year period appears to be unrealistic, particularly when it is born in mind that the FAD North East Benoue project which faces similar problems in a similar environment has as its goal the relocation of only 5,000 families. (In the original IBRD concept paper on which the AID PID is largely based the 20,000 farm families in question represent the IBRD's estimate of the number of families (holdings) already in the project area and not new settlers.)

Recommendations

In view of these problems and of USAID policy objectives the following recommendations are made to the USAID Cameroon mission.

1. USAID should not undertake a feasibility study of the West Benoue Integrated Rural Development project at this time.

2. The possibility of conducting a feasibility study should be reconsidered in 1979 or 80 by which time the results of the FED North East Benoue project can be observed.

3. In order to raise levels of income, health and nutrition; generate local employment during the dry season; reduce food crisis in dry years; increase production and hence government revenues; and contribute to national ethnic integration by enabling the Mandara mountain peoples to participate in the benefits of development USAID should explore the possibility of the following interventions in the densely settled northern mountains of Margui Wandala:

a. the development of cisterns or dams which would improve household water supply and make possible the labor-intensive small-scale production of irrigated crops during the dry season.

b. the cleaning and selection of seeds for the varieties of millet and sorghum presently grown in terraced farming.

c. the chemical protection of stored food against insect damage.

d. the improvement of health care delivery and family planning services.

4. USAID should have a French-speaking development economist with extensive experience in agricultural price policy analyze the price structure of cotton and peanuts and, if warranted, should discuss the results of this analysis frankly on an informal basis with high level Cameroon officials in the ministries of plan and agriculture. The object of such discussions should be to persuade Cameroon officials

that comparative evidence indicates it would be in the interests of the government as well as the producer to raise producer prices. It is essential that these discussions be seen as an exchange of views and not as an attempt by the American government to dictate Cameroon policy.

5. USAID should provide the necessary fiscal and human resources to undertake a systematic study of changes currently taking place in patterns of land use, land tenure, migrant labor and population distribution in the more densely settled plains of the northern province, and opportunities for employment generation in the region's towns.

Objectives of the Analysis and Conceptual Framework

The objective of this analysis is to identify the individuals and groups that will be affected by proposed West Benoue Integrated Rural Development project; to assess the ways in which these individuals and groups are likely to perceive the effects of the project on their interests and to assess the ways in which their interests are, in fact, likely to be affected. The underlying assumption of the analysis is that the project, or alternative projects, will not succeed unless it engages the interests and energies of both the target groups of low-income farmers, those who exercise political influence and the authorities who will be responsible for implementation.

While any development project is a strategic resource the uses of which may affect the interests of many groups a resettlement scheme such as the one proposed in the West Benoue Project has an unusually

great impact because of the radical changes it introduces in the lives of the settlers, and to a lesser extent in the lives of those they leave behind and those already in the area of new settlement.

As proposed in the FY 77 PID the West Benoue project would affect the interests of:

1. The families that actually are resettled at a great distance from the kinsmen on whom they presently depend for sociability, mutual aid and risk aversion.
2. The aging parents of young migrants who depend on their offspring for labor, honor and support in their declining years.
3. Village headmen and chef de canton (local district officials) whose prestige and, more importantly, revenues are proportional to the number of tax-paying households under their authority.
4. The traditional local authorities who stand to gain tax-paying subjects but who in the past have tended to view the mountain peoples as culturally inferior serfs.
5. The pastoralists and farming peoples already using, if only on a seasonal basis some of the resources to be put at the disposal of the settlers.
6. Cameroon and expatriate personnel who may be employed in the project.
7. Regional administrative officials who are interested in currying favor with their superiors but who, under present conditions are not very responsive to the needs or demands of those they administer.

8. Farastatals and their constituents with a vested interest maximizing the production of particular cash crops without regard to its effects on food production or the environment.

The central concern with interests and decision-making processes in this analysis has led to a focus on micro-studies that reveal the institutional context, the actual situations, in which decisions are made rather than on aggregate statistics. The ultimate goal of the analysis, of course, is to clarify the relationship between individual farmer decisions and their consequences for long-term ecological, economic and demographic trends.

The objectives of this analysis have also determined the selective use that has been made of historical and ethnographic data. Historical data has been included to the extent that it reveals the dynamics of ecological, economic and demographic change or deep-seated beliefs held by ethnic or political groups that still influence their actions towards one another. Ethnographic data have been included only to the extent that they are directly relevant to the exploitation of the environment; the social organization of production, consumption and risk aversion; and to marriage and migration patterns. In so far as has been possible ethnographic detail and minor variations between different ethnic groups have been omitted in the interest of clarity of exposition and analysis.

Sources

The information in this analysis is based in large part on the published works of researchers associated with ORSTOM. Data on the

social and economic organization of the people in the northern Mandara mountains have been drawn from the works of Jean-Yves Martin and Jean Boulet. Demographic data on the mountain region is largely based on the written work of A. M. Fodlewski. Material concerning the descent of the mountain groups into the piedmont and plain and on officially-sponsored resettlement schemes is based in large part on the work of Jean Boutrais. Ethnographic and historical background material on the West Benoue region has been taken largely from the written work of Jean Boulet and has been supplemented with material obtained from Eldridge Mohamadou.

Settlement and land use patterns in the proposed West Benoue project area were viewed from a small aircraft. Brief interviews were conducted at Poli (where the airplane was able to land) and the northeastern section of the area as far as Tcheboa was visited by car. The Mandara mountain area and the adjacent plains were visited by car on a trip that included the towns of Guider, Marcua, Mora, Meri, Mokolo, Raumsiki, Guili and Bourrah. Interviews were held with Mr. Leman, Ministry of Plan; Mr. Dore, Project Manager; Mr. Appelbaum, FED; a number of local government officials, dignitaries and farmers. It was not possible in the time available to conduct any systematic research directly with a representative group of farmers.

Without exception scholars associated with ONAREST and ORSTOM were helpful and generous with their time. I am particularly grateful,

however, to Jacques Weber, Patrick Gubry, Jane Guyer and Eldridge Moharmad for their assistance and stimulating discussion of the issues.

It should be emphasized, however, that except where specific references are made to the conclusions of other researchers the analysis, judgments and conclusions in this report are my own and do not necessarily reflect those of those who have assisted me.

Organization of the report

The remainder of the report is organized in three parts. The next, part II, is concerned with the peoples of the Mandara mountains. With what are thought to be their problems by administrators and by what appear to be their problems from the studies done by social scientists associated with ORSTOM. Part III is concerned with the experience of the mountain peoples who have spontaneously settled in the plains, been forced to settle in the plains or who have chosen to move to areas served by rural development and resettlement projects. The final part, IV, attempts to assess the feasibility of implementing the West Benoue Integrated Rural Development Proposal in relation to the experience of other settlement projects and the socio-political conditions currently prevalent in the West Benoue region.

II. The Peoples and Problems of the Mandara Mountains

Since the major justification for the proposed West Benoue project is to facilitate the movement of poor farm families from the overpopulated and "deteriorating" Mandara mountains to the underpopulated and more fertile West Benoue region it is a necessary first step in this analysis to identify the peoples and the problems of the Mandara mountains. Following a brief introduction to the region and its people their problems will be examined from two perspectives. First from that of the Cameroon northern administration, second from that of the mountain farmer.

Land and People

The Mandara mountains extend along the Nigerian border of Northern Province some 150 km from the Benoue basin in the south to the Mandara plains in the north. For the most part they fall within Margui Wandala department, one of five departments that together make up Northern Province (see Map I)

The mountains consist of a central plateau averaging approximately 800 meters in altitude bordered by an eroded mountain zone that drops away to the piedmont and the plains beyond. Average annual rainfall in the mountains is about 900 millimeters* concentrated in the rainy season between May and September. There are however sub-regional variations, variations from year to year and variations in the duration and distribution of rainfall which are critical for agriculture and population

*Atlas du Cameroun.

movements and which are discussed below.

The total population of Margui Wandala department is estimated to be 446,234 with an average density of 63 (see Table 1). The population is not, however, distributed evenly but is concentrated on the northern and northeastern mountain slopes where densities exceed 300 inhabitants per km² (see Map 2).

Ethnographers distinguish as many as 27 ethnic groups in the Mandara mountain area, but for purposes of this report it is adequate, following Boulet, to group them into two clusters.* One group is made up of the peoples who inhabit the high plateau to the south of Mokolo. It includes the Kola, Hina, Daba, Guider, Falai Kangou, Kapsiki, Bana, Djimi, Goude and Njegn. The other cluster is made up of the peoples who dwell in the rugged mountains and detached massifs to the north and east of Mokolo. These include the Mafa, Hide, Mineo, Mabass, Mouktele, Poacko, Mora, Vame-Mbrema Mada Culdeme, Zoulgo-Guenejek Curza Mouyengue, Mokyo-Kolkoa, Mbokou, Guelebda and Moïou. Population estimates for these groups are given in Table 2.

Historically, most of the southern cluster is thought to have taken refuge on the Mandara mountain plateau during the past two centuries by warlike and more politically centralized groups who invaded their former lowland territory. Since the cessation of inter-group warfare most of them have, to a greater or lesser extent begun to move back onto the plains. Agricultural techniques are not as intensive in the

*Boulet 1975a

southern cluster as among the northerners and population densities range from only 10 to 40 inhabitants/km².

It is not clear to what extent and at what dates peoples of the northern cluster occupied the mountains to escape enemies on the plains, but it is certain that some of them have been in their present location for at least four centuries. It is likely that the mountains have been inhabited much longer. Their agricultural techniques are intensive, well adapted to mountain conditions and support the high population densities previously mentioned. While population pressure and administrative pressure have forced many of the northern farmers to move into the piedmont in the past few decades, in contrast to what has happened in the south there has been no massive voluntary exodus to the plains.

Because of their greater numbers, their higher densities, high fertility and rapid rate of population increase (see *Maps 2 and 4*) it is the northern peoples who are considered to present the greatest problems, and who have been subject to the greatest pressures to dislodge them from their mountain homes. For this reason they will be given greater consideration in this section than the peoples of the southern cluster.

While there are many variations in dialect, custom and outward symbols of ethnic distinctiveness such as house types, the basic forms of settlement, social and political organization are essentially similar throughout the northern mountain peoples. Everywhere the

basic social unit of production, consumption and resource control is the household centered on a man, his wives and their unmarried children.

In geographical terms individual households are scattered over the cultivated, terraced lands. There are, with the exception of modern administrative and market centers, virtually no nucleated villages.

In terms of social ties and patterns of interaction, however, the scattered households are grouped into sprawling traditional hamlets, averaging from 15 to 50 households,* and the hamlets, in turn, are grouped into named political communities of from a hundred to over 1,000 households often referred to for lack of another term as villages. Political communities are normally separated from one another by natural features such as ravines, and in the past, stretches of uncleared bush.

In sociological and conceptual terms the framework of hamlet and village is a system of patrilineal descent groupings so arranged that each "village" community is made up of several discreet but intermarrying clans each with a membership of 40 to 1,000 households. Membership in clans crosscuts membership in hamlets.

Each clan is thought by its members to be made up of the descendants in the male line only of a named common ancestor who according to local legend first cleared a portion of the village lands by virtue of first occupancy or with the permission of the older inhabitants in

*Modern administrative units usually group several hamlets together.

in the village. In virtue of their common descent members of each clan have a sense of political solidarity against all others, are united by a complex set of ancestral beliefs and practices, and share reversionary rights in the share of the village lands belonging to their clan.* They are, however, forbidden to intermarry. Each clan has a senior elder or head and one of the clan leaders in each village is considered to be the village leader though he exercises little direct authority in most groups and should be viewed as merely primus inter pares.

Political relations between the clans that make up a village and between clans in different villages are structured in large part by marriage alliances through which one clan takes its wives from specific other groups thus, over time, creating close knit kinship ties between clans through the female members (every man's mother must have come from another clan and every man's sister and daughter must eventually marry out into another clan).

Detailed case studies by Jean-Yves Martin** indicate that far from being a static system in which clan size and location were determined by chance of birth alone demographic pressures, political motives and above all the desire for land led to manipulations of the kinship and descent ideology by politically powerful factions.

*The nature of these reversionary rights are explained below in relation to land tenure.

**Jean Yves Martin, 1970

For purposes of day-to-day sociability and cooperative work it is geographical proximity and friendship that determines interhousehold relations. In a ritual context and on less frequent but critical occasions when disputes arise over rights to land and office it is the system of clans and their constituent lineages that is most important to the mountain farmer in defending his security and interests.

It is essential, when interpreting patterns of migration to bear in mind that a mountain farmer's reluctance to sever his ties with his natal community and kinsmen is not based on sentiment, or religious belief alone, though both are certainly factors, but also on the underlying fact that in normal times (when there is no general famine) it is his ties with his kinsmen and clansmen that provides him with his social, economic and political security.

Between villages, and even more so between ethnic groups, there was little or no sense of common identity or common interest. There was little trade and in most instances virtually no supra-village political authority. The various ethnic groups of the northern cluster do not, even today, appear to conceive of themselves as having common goals or sharing a common predicament.

The Kirai Problem in Administrative Perspective

If the peoples of the Mandara mountains lack a sense of common identity in their own eyes they have nevertheless been placed in a single conceptual category, "the Kirai", by the Islamic and more

centralized peoples of the plains below.* Inherent in the concept of Kirdi is a stereotype of what the mountaineers are like and how they should be treated. The stereotype of what they are like has changed very little during the past century. Approaches to how they should be treated -- to solving the "Kirdi problem" -- have changed with the evolution of colonial and post independence administrative policy.

The central features of the concept of Kirdi are that they are pagan, naked, lack government, and are poor and backward. While there are also racial overtones to the concept -- the Kirdi are considered to be black, to have kinky hair and wide noses -- it would be incorrect to equate these overtones with American type racism. For a Kirdi who moves to a Muslim town on the plains, converts to Islam and adopts Fulani clothes and life style is no longer a Kirdi. Indeed it is this continual process of conversion and assimilation that has drawn off able and ambitious mountaineers and has prevented the Kirdi (in the broader sense of the term), who outnumber Muslims 2 to 1, from developing any unified political consciousness.

During the centuries that preceded the colonial period the Mandara mountains were on the marchlands of a series of Sudanic kingdoms and empires. Directly or indirectly the ebb and flow of populations of north Cameroon and the Mandara mountains was affected successively by the power of the Sao Empire of Kanem, the kingdoms of Bornou and

*The term Kirdi derives from Choa Arabic and signifies infidel i.e. non-Islamic pagan. The term is also applied to the other non-Islamic groups of North Cameroon who live in the plains including most importantly the Moundang, Toupouri, Massa, Mousey and Mousgoum.

Mandara, and finally, in the beginning of the 19th century by the formation of the religiously revitalized Fulani emirate of Adamaoua.

For the most part contacts between the inhabitants of the Mandara mountains and their neighbors were limited to sporadic fighting and a limited trade in ironwork in which certain mountain groups excelled, and, in times of famine, slaves were exchanged for salt and narrow bands of cloth.

It was only after the rise of the Adamaoua emirate that attempts were made to reduce the northern mountaineers to tributary status and these were met with little success. This was partly because groups like the Mara with their stone-walled fortified homesteads and poisoned arrows were not easy to subdue,* administer or tax; and partly because the Fulani herdsmen and their urbane elites could discern little agricultural potential in terraced agriculture.

German colonial administration did little to change the relationship between the Islamic plains powers and the pagan mountaineers, or to change the stereotype of the Kirdi. In 1902 when the Germans had established their rule after ten years of warfare against the Fulani leaders, a German Lieutenant Dominik noted that the Fulani were a "noble tribe" but that this was not true of the Kirdi. Of them he wrote "their emotional life is scarcely above that of animals."**

*J-Y Martin 1970 p 28.

**J-Y Martin 1970 pp 40-41

It was thus for reasons of ideology as well as convenience that the German colonial administration adopted a policy of indirect rule under which the Muslim leaders were given the military backing to establish control over the Mandara mountain peoples.

The replacement of German by French administration at first did little to change the relationship between the Fulani (and in the north Mandara) chiefs and their mountain vassals. The primary objective of the French administration, which in Mokolo was a military administration until 1940, was to pacify the unruly mountaineers. Having little direct contact with the Kirdi they at first gave a free hand to the Muslim chiefs who exacted what tribute they could and from time to time raided mountain villages for booty and slaves.*

The mountain peoples fought back, stealing cattle in the plains, attacking and occasionally killing merchants returning from markets and greeting Fulani and Mandara tax collectors with fusillades of poisoned arrows.

By 1931 after a decade of resistance the northern Mandara mountain peoples had been pacified and placed more firmly under the control of government appointed Muslim Mandara and Fulani chiefs. In the same year a plague of locusts brought famine to the Mandara hills and forced many of its inhabitants to take temporary refuge as unpaid laborer-dependents with the Muslim groups in the adjacent lowlands.

*J-Y Martin 1970 p 42

The following year most of the mountaineers reoccupied their former lands but the idea that the solution to the "Kirdi problem" would be their resettlement in the plains had been planted in the minds of French administrators. The emergent French view of the Kirai and the solution to their problems has been summarized succinctly by Lembezat, himself an administrator.

"This phase of taming (the one that followed military pacification) was marked by a clearly benevolent concern and a comprehension that the peoples who were now better known (the Kirdi) were extremely primitive and coarse but full of courage, industrious, interesting and in the grip of very difficult living conditions. A cruel famine occurred in 1931 when an invasion of locusts destroyed the millet before the harvest. The unhappy Kirai dying of famine left their mountains, searching for any kind of work, for a little millet. It seemed then that the solution to all the problems lay in the descent into the plain of the Kirdi. Once in the plains the pagans would be rich and well fed, peaceful and easy to rule."*

Another manifestation of the greater French concern with the Kirdi was the increasing conviction that the Kirai should not be ruled indirectly through representatives of their traditional Muslim foes but should instead be placed under the direct control of chiefs drawn from their own ethnic groups. With the termination of military rule in the northern mountain region in 1940 the new policy of direct rule was put into effect, but not without difficulty, for in most groups there were no traditional leaders with authority over more than the local community.

The compromise solution was to create "ethnic chiefships" and to appoint to them members of the local ethnic group who were already most

*Lembezat cited in J-Y Martin p 42.

exposed to outside influences and hence who, in most cases, were Muslims with no claim to legitimate authority within their own group. Under these conditions there was a tendency for a dual system of authority to develop; one, used for purposes of dealing with the administration and headed by the government appointed "ethnic chief", and the other used to settle local disputes headed by the traditional leader of the local community.

During the final two decades of colonial rule the French administration continued its policy of direct rule in the mountains and tried to stimulate the use of money by requiring each farming household to plant peanuts purchased at a fixed price by a government-controlled monopoly, and by requiring that taxes be payed in cash instead of kind as they had been prior to 1939.* The resettlement of the Kirdi in the plains was considered a desirable goal but except for a few small scale settlement schemes (see below) little direct administrative action was taken to encourage the descent of the Kirdi.

After Cameroon attained independence in 1960 a number of factors worked together to bring about changes in the northern Cameroon administrative policy towards the "Kirdi problem". To the old stereotype that the Kirdi were naked, backward, unruly pagans was added the desire to civilize them in order to build an ethnically more unified nation. It was believed that this goal could best be achieved by bringing the Kirdi down onto the piedmont and plain where they could engage in the production of cash crops, particularly cotton, thus bettering their own

*Boutrais 1973 p 122-123

standard of living and contributing to the growth of the national economy. Finally, it was recognized that only by moving the Kirdi out of the mountains could they be brought under more direct administrative control.

One of the first acts of the new administration was to force the Kirdi to clothe themselves with whatever cloth they could afford to buy. At the same time increasing pressures were brought to bear on the mountain peoples to abandon the homes and terraced fields they and their ancestors had toiled to build.

In 1963 these pressures reached a climax when more than 39,000 mountain people were forced to descend to the lowlands.* Continuing, if less dramatic, attempts were made to resettle the Kirdi in the plains during the years that followed. The human, economic and environmental effects of this massive displacement of people from one ecological zone to another are described in Section III'. If they are to be understood, however, it is necessary to stop at this point and to review the Kirdi problem once again, this time from the perspective of the mountain peoples themselves and in light of what is known of their agricultural system, their economy and their demography.

Ecology, Economy and Demography of the Northern Mountain Peoples**

"The age-old cultural practice of cultivating the shallow, stony soils of steep mountainous slopes by displacement

*Boutrais 1973 p 59.

**The material in this section is based in large part on studies of the Mafa, the largest and most dynamic ethnic group in the northern cluster of "true mountain farmers" distinguished above. As has been noted, however, the other ethnic groups in this cluster are essentially similar to the Mafa.

of rocks and boulders to create a hand-formed terrace bench involves social factors in addition to physical land factors. The practice yields, after equilibrium is reached between soil development and soil loss, at best a marginal return dependent upon the availability of hand labor. It is probable that under this system, the soils resource is never stabilized and productive potential gradually decreases (my italics, ah). Original soil surfaces are covered by rocks and boulders to about 15 to 50 percent. The average content of coarse fragments in a soil mantle that averages in depth 25 to 100 centimeters in pockets is 20 to 40 percent. The most common crop is wet-season sorghum, but peanuts and vegetables are also produced. Optimum use of these sites from the standpoint of ordinary agricultural economics is in grazing management, from which low production could be expected."*

It is puzzling, in light of this negative assessment of the agricultural potential of terraced mountain farming in the northern Manuara mountains that the area has the highest population densities found in north Cameroon,** among the highest per hectare wet-season crop yields in north Cameroon (1,000 kg/h), adequate nutrition (in regional comparative terms),*** and as high a rate of population increase as any group in north Cameroon.****

A closer examination of the data from the standpoint of cultural geography, anthropology and land economics serves to resolve this apparent paradox; and indicates that though population pressure creates problems for individual mountain farmers there is no evidence that it is leading to a deterioration of the environment or a decreasing standard of living.

*North Cameroon Resource Inventory, February 1976 pp 105-106.

**Atlas of Cameroun.

***Eoulet 1970 p 210.

****A. M. Podlewski 1966 p 181.

Detailed research on Mafa agriculture by Jean Boulet reveals a labor-intensive, land-efficient, and environmentally-conservationist integrated farming system.* The major features of this system are:

1. Anti-erosion techniques including the construction of stone-walled terraces that follow the contours of the mountains and vary in width with the slope; the banking of earth and grass to form a network of miniature dykes around each stalk of millet or sorghum thus preventing run-off and forming moisture retentive compost; and drainage control.

2. The maintenance of fertility in a system of continual land use. This is accomplished by several complimentary techniques. A first is crop rotation. A second consists of collecting weeds, leaves of trees, and old millet and sorghum stalks that have been left in the fields from the previous season, meticulously heaping them up in little piles and burning them. A third is the application of the manure produced by sheep, goats, chickens and stall-fed cattle. A fourth is the selection and maintenance of an arboreal cover of *Acacia albida* and jujubier.

With regard to the effects of agriculture on the soil Boulet concludes:

"Finally, it should be added that according to soil experts, the mountain soils seem to restore themselves more quickly and better than those of the valley. This poorly understood phenomenon is, we think, the result of the intensity and age of cultivation. It appears, in fact, from continual observation that the parts of the land

✓ *Jean Boulet 1970 and 1975b .

which have been longest and most intensively cultivated by these true peasants do not show signs of exhaustion and have more than acceptable yields, while land which has been brought into cultivation more recently shows signs of exhaustion and has mediocre yields. It is probable that continuous cultivation far from exhausting the soil, maintains it in a (good) state, provided that the cultivation is done properly."*

The basic social unit of production, consumption and land ownership among the Mafa is the household. While the household is always important from the perspective of development studies since it is a unit in which important economic and demographic decisions and processes take place, the Mafa (and related groups) household is of unusual interest because of its remarkable (by traditional African standards) degree of autonomy as a management unit from larger units of organization based on kinship, vicinage or chiefship.

The Mafa household is composed of a man, his wife or wives and his unmarried children, only the youngest son may remain in the household after he marries. In contrast to most other traditional African societies there are no extended families in a physical or jural sense married sons (except for the youngest) are no longer under the authority of their fathers in regard to the control of land resources or the organization of work. The average number of members per household is six.

Within the household some tasks are assigned on the basis of age and sex but everyone who is able works on the all-important millet

and sorghum crops at times when a maximum effort is required. Inter-household cooperation on the basis of kinship and vicinage occurs but is not crucial from an economic point of view.

Labor requirements in mountain agriculture are closely related to the seasons. In March and April the pace of agricultural work picks up as the ground is prepared for cultivation in a relatively leisurely fashion. Planting in late May or early June depending on patterns of rainfall requires a more intensive effort, but the highest labor inputs are required during the growing season from late June to early September when there is much weeding and dyking to be done and when the house cow and goats who may no longer go out to forage must be taken fodder. After a break in the work at the end of the rains in mid-September the heavy work of the harvest occupies the second half of October and much of November.

During the dry season labor requirements are considerably lower and there is under-employment in the mountains. Increasingly, however, young men have begun to engage in seasonal labor migration to the plains where they work as wage laborers for Fulani and Mandara landlords in the production of transplanted, dry-season sorghum grown in the moisture-retentive clay soils along the receding river beds.

To some extent this increasing seasonal labor migration may be related to increasing population pressure and the need to obtain cash for the payment of taxes, but from the young man's point of view his primary goal is to earn money that will help pay the bride price for a

wife and thus enable him to marry and establish a household independently of his father.

There is also increasing labor migration by the young to work on as wage laborers in cotton and peanut production (rainy-season crops) and to the towns and cities where they seek employment as laborers.* Those who stay away more than a few years are considered unlikely to return by their kin.

Despite this increasing labor migration, the required production of peanuts and tax collection in cash, the average Mafa household's economy is still predominantly a subsistence economy. In an in-depth survey carried out in 1967 by the anthropologist J-Y Martin in the same region where Boulet carried out his intensive ecological inquiries the average annual income estimated in cash of 13 households was found to be 16,000 francs CFA. Of this 5,615 francs was in cash, the major source of which was peanuts (59.3%) followed by millet beer (14.3%) and chickens (9.1%). Income from wage labor was reportedly only 3.7% of cash income and sales of millet, the staple crop, accounted for only .6% of cash receipts. Major cash expenses were clothes (24%), cattle (16.4%), taxes (14.4%) and millet (14.0%).**

Household budgets from 52 more prosperous Mafa households voluntarily settled in the plain near Mora revealed an average annual income estimated in cash of 20,121 francs CFA; while surveys of 16

*Data on rural urban labor migration are given in Boutrais 1973 pp 91-2.
**J-Y Martin 1970 pp 139-40.

(non-Mafa) households carried out by Boutrais at about the same period in Wolorde in the resettlement scheme of Mokyo-Molkoa and in the nearby mountains found household incomes of 18,380 and 16,300 respectively.*

Mafa households put their savings into goats and a cow. The cow is stall-fed for several years producing valuable manure and then is killed and eaten at a major ritual held every three years. When a household head has saved enough (10 to 12) goats he invests them in another wife, the favored form of investment because it procures the additional labor of the wife and eventually of her children as well.

From a Mafa point of view to be wealthy is to have many wives to help with the farming and many children to take care of the goats. A wealthy man, a man of prestige, does not have prestige goods but has a large household, several wives, cattle, goats and an ample supply of millet to carry him through a bad year.

The land tenure system of the system of the Mafa, the largest and most dynamic mountain group, contrasts markedly with most traditional African land tenure systems in the degree to which it recognizes individual rights in land. It is likely that this distinctive pattern of land tenure is related to the Mafa's equally distinctive intensive form of agriculture and that it has important demographic consequences.**

*Boutrais 1973 p 241.

**A useful summary of North Cameroon's many land tenure systems is to be found in Jean Boulet's Sociology report prepared in connection with (but not included in) the USAID/FAC North Cameroon Resource Inventory. The paper is an untitled typescript prepared for the USAID mission Yaounde and dated October 1975.

Land is considered to be the corporate property of the clan only in the political sense that it cannot be owned (as opposed to used) by non-clansmen. In other respects rights are individualized to remarkable degree. The household head can use his fields as he wishes, leave them unused, rent or loan them to whom he pleases, give them to his sons (see below) and even sell them with the limitation that the purchaser must be from the same clan. In practice loans seem to still be more common than rent, and land sale, though it occurs, is not frequent.

It is striking that in contrast to most African land tenure systems, that of the Mafa does not require that a father or his "successor" provide land for all his sons. Instead the head of a household gives land to his eldest son at the time he marries, if and only if he is able to do so without jeopardizing the parental household's land needs which are calculated by Boulet to be a minimum of 2 hectares.

If there is enough land available at the time the second son marries he may also be given land by his father. The same is true of subsequent sons. Daughters do not receive land by gift inter vivos or through inheritance.

It is only the youngest son who is assured of obtaining land for he remains in his father's household even after he marries and eventually succeeds not only to the household and its lands but also the largest share of moveable property and responsibility.

Sons who are unable to obtain land from their fathers try to borrow it from their clansmen or others in their natal community. If

land is available it is usually lent free the only payment being an offering of millet beer after the harvest. True rentals also occur, however, with rents being payed formerly in goats, now in cash.

If no land is to be had in their natal community young men may settle in another community where land is available, but in this case they are at a social and political disadvantage; for unless they are resident in a community where their clan owns land they have no rights of citizenship; they cannot take part in clan councils and rituals or expect the natural and supernatural protection accorded to clan members. Most importantly, unless they are able to obtain land rights through outright gift or purchase they are subject to eventual eviction.

J-Y Martin asserts that a disproportionate number of those who leave the Mafa region permanently are from this partially dispossessed class of non-inheriting sons a class referred to as keda or literally dogs. He also claims that this class has been increasing in recent decades due to increasing population pressure, and, one suspects, to the incipient commercialization of agriculture and rising land values.*

It seems likely that this tendency towards individual ownership and impartible inheritance of land, so unusual in traditional sub-Saharan Africa, is related to the equally unusual ecological pattern of intensive land use and the accretional capital formation represented by the improvement from generation to generation of the productive capacity of the land in terraced agriculture.

*J-Y Martin 1970 p 77-78.

Regardless of its origins, however, this land tenure system has important consequences for the dynamic interrelation of population and ecology in the Kafa area:

1. It helps prevent the sub-division of holdings below the minimum requisite size of 2 hectares and thus prevents the increasing impoverishment of farm families.
2. It gives security of ownership to the cultivator giving him the incentive to invest his labor in long-term improvements.
3. In times of food deficit due to deficiencies in rainfall or the depredations of locusts, it provided for the orderly and systematic "shedding" of some children, i.e. those least likely to receive family land. In the past these unfortunate individuals were forced to leave their natal communities or, in some instances, were sold as slaves to Muslim plainsmen in return for food. However great the inequity of this process it contributed to the stability of the Kafa social and economic organization in times of crises. Today the same processes seem to be exerting a selective pressure on middle sons who are the most likely to migrate to the plains or towns on permanent basis.

The tendency towards the individualization of land rights is also reported among a number of other mountain groups including the Mide, Mineo, Mabass and Ouldeme. It is less developed among the Mofou groups where the chief has a redistributive function. Among the plateau people individual tenure systems are reported among the Bana and Kapsiki.

The best summary of available information of north Cameroon land tenure systems and their genesis under changing economic and demographic conditions is to be found in Boulet 1975 cited above.

Demographic dynamics in the Mandara mountains

It is interesting, and significant from the point of view of the proposed West Benoue project that the highest population densities, the highest fertility and the highest rate of population growth are all found among the northern mountain peoples who are farthest from the West Benoue area and who have shown the least proclivity to re-settle in the plains far from their mountain homes.*

These high rates of natality and population growth are probably related to the labor-intensive mode of agriculture, patterns of household organization and health factors including adequate nutrition and low rates of venereal disease and debilitating diseases like schistosomiasis associated with life on the plains.

Whatever the causes of this growth rate it is useful to consider their effects on population dynamics in the past and at present. On the basis of available materials** it appears that during the pre-colonial period:

*A. M. Podlewski 1966 found that with the exception of the Daba all of the plateau groups for which he obtained data (the southern cluster of Mandara peoples) have stationary or decreasing populations while the Mafa have a crude natality rate of 284, a fertility rate of over 8 live births per woman and a population growth of 2.5%/year. The Mofou groups are also increasing. Unfortunately I have not been able to find data on the Mora mountain groups. Data on fertility and population growth are summarized in map form on pp 175 and 181.

**Boutrais 1973, J-Y Martin 1970 and A. Hallaire 1971 are useful sources on this issue.

1. High population densities were necessary for the labor-intensive agricultural system of the northern Mandara peoples to flourish thus establishing a lower threshold of population density below which it was difficult to maintain effective terraced agriculture and restore or improve the quality of soils.

2. The upper threshold of population densities was probably not set by the absolute carrying capacity of the agricultural system in normal times but by its carrying capacity during a series of lean years when rainfall was inadequate or inadequately spaced. At these times there was famine, emigration and the sale of some individuals into slavery.

3. It appears that intercommunity warfare also served to limit population to some extent and led to the displacement of one clan by another with regard to the occupation of farm land.

Today the same factors as in the past encourage high growth rates but under new conditions they seem to have different consequences.

1. The cessation of warfare with the people of the plains has enabled large numbers of mountaineers to seek temporary refuge with the latter during times of famine such as 1931 and 1966.

2. Increasing opportunities for seasonal and long-term labor migration may be resulting in the importation of millet into the mountains as is indicated by the data on family budgets cited above.

3. There has been increasing population movement into formerly forested and unoccupied piedmont zones immediately adjacent to the mountains.

The causes and consequences of this movement and their implications for planned resettlement schemes are the topic of the following section.

III The Resettlement of Mountain Peoples in the Plain

For the French colonial administration the resettlement of the mountain tribes in the plain was a long-term goal to be accomplished after they had been taken out from under the control of the Muslim plainsmen. For the northern Cameroon administration after independence the immediate resettlement of the Kirdi seemed to offer the best way to help them lose their diverse ethnic identities and to assimilate them into the more ecumenical Islamic society of the plains. At the same time it was thought that once in the plains the mountain peoples would be able to cultivate cotton and other cash crops raising their standard of living and contributing to the growth of the modern economy.

The rigor and methods with which the policy of resettlement was followed varied with time and place and depended to a great extent on the personal decisions of the sous-prefet or local administrator. In some instances, as with Mafa moving to the plain of Koza, the movement was largely spontaneous. In some instances, as in the plain of Mora, it was the result of direct, authoritarian police action. In still other cases it was related to the creation of an expensive and "attractive" infrastructure in settlement project areas.

The purpose of reviewing this process of resettlement here is not to pass judgment on the wisdom of Cameroon policy, but to assess its effects on the people moved to the plains and those remaining in the mountains; and its effects on the environment in mountain and plain; and the effectiveness of resettlement schemes as a means of furthering rural development in the present north Cameroonian context.

Much of the material summarized here is based on an excellent study conducted by Jean Eutrais and published in his La Colonisation des Plaines Par Les Montagnards au Nord du Cameroun (Monts Mandara) published in 1973. Wherever possible it has been updated with material gathered in interviews.

Until three decades ago the northern Mandara mountains and the plains to the north and east of them were separated by an uninhabited, often forested no man's land in the piedmont. Today the forests are largely gone, and the piedmont and adjacent plains are inhabited by people from the mountain groups. Of the 149,550 members of northern mountain groups living along the border of the plain 82,000 or 55% are no longer living in the mountains. 56,000 are in the piedmont and 26,000 in the plains.*

Table 3 shows the number of people who left the mountains in each of four areas (see Map 5) and whether they did so before, during or after 1963, the year when administrative pressure to resolve the Kirdi problem was at its height. The figures themselves reveal some

*Eutrais conducted his fieldwork in 1968 and 1969 but incorporated data available from other sources as late as 1973. It is not clear exactly what year the figures cited above represent.

interesting regional differences. The formerly forested and comparatively rich alluvial plain of Koza has been occupied by only (compared with 74% in Mora or 85% in Mofou) 21% of the farmers living on the adjacent slopes most of whom are from the Mafa group and hence are subject to high population pressures. Even more significantly only 2% (compared with 65% in Mora and 40% in Mofou) of the resettlement on the plain of koza occurred during 1963. Further investigation reveals that this area is in Bokolo arrondissement where forced resettlement was not pushed with vigor. What is most interesting for this report, then, is that the plain of koza represents an area of spontaneous resettlement of mountain people in the piedmont and plain.

With regard to this spontaneous resettlement Boutrais reaches a number of conclusions which are consistent with the observations of Boulet and J-Y Martin.

1. Most settlers have moved into the plains immediately adjacent to their homeland seldom more than ten kilometers which enables them to maintain social and ritual relations with their mountain kin.
2. Settlers do not go out as lone pioneers but form clusters with fairly high population densities where soils permit.
3. Settlers choose the best soils available in the area where they settle. To the northeast of Mozogo, however the better soils are already claimed by Mandara landlords who charge substantial rents on their lands.

4. Some settlers (including some of those studied by J-Y Martin near Glapar) have adopted the ox-drawn plow. They find it a labor-saving convenience but that it does not enable them to increase the land they put into production since weeding and harvesting (?) are the real labor bottlenecks in their agricultural system.

5. Mafa settlers in the plain of Koza were found to have real incomes approximately 25% higher than those of their mountain-dwelling relatives, though more recent settlers seem to be faring less well than early settlers as they are unable to find as attractive land.

6. In contrast to what has been found in some other parts of West Africa Mafa farmers do not abandon their intensive system of permanent agriculture in favor of more extensive slash and burn cultivation to a marked degree.*

7. In the more densely settled southern part of the Koza plain farmers have begun to conserve their land resources through anti-erosion measures, fertilization and the selective encouragement of an appropriate arboreal cover.

The plain of Mora provides a good example of coerced resettlement. There 74% of the inhabitants of the massif bordering the plain have been induced to resettle; and 65% of these resettled in 1963 alone. Furthermore nearly 10,000 people have moved back up into the mountains in spite of administrative pressure to discourage them from doing so.

*I received conflicting opinions on whether there has been an increasing trend towards extensive techniques. There may be regional variations depending on population densities.

The forced descent was set in motion by a decree issued by the sous-prefet of the arrondissement of Mora and sent to all chef de canton (the canton is the subdivision of the arrondissement). Those who refused to comply with the order were imprisoned.

All along the border of the massif in Mora mountain farmers, 29,000 in all, were forced to abandon their homesteads and relocate in the plains immediately below where they could be more easily reached by the administration. Only one canton was excepted from the decree, that of south Podokwo which was set aside as a "touristic reserve".* Significantly, this canton, though the most densely populated in the region has experienced virtually no population movement to the plains!**

To a large extent the forced relocation in the Mora mountain area had little effect on the agricultural patterns of its farmers, except to increase the time and effort involved in reaching their fields, for they continued to cultivate their valuable terraced fields in the mountains.

Evidence from Moskota (west of Mozogo) and evidence cited in the previous section indicates that without sufficient labor inputs terraced agriculture cannot be maintained. Higher and outlying terraces are abandoned creating greater problems of run-off on the fields below and, in turn, reducing their return. Weeding and guarding the crops at

*Boutrais 1973 p 59.

**Boutrais 1973 p 59 and Map No. 3.

harvest also require intensive care and are difficult to accomplish if the fields are too far from the homestead.

This difficulty of maintaining terraced agriculture as well as low yield sandy soils, termite problems, higher taxes, the depredations of plainsmen's herds and a slightly shorter rainy season in the plains discouraged many Mora area farmers sufficiently so that they have begun to go back to their former homes. In Boutrais' opinion, should fear of the administration cease altogether, virtually all the mountain peoples in this region would follow suit.*

For the purposes of this report the most interesting and instructive type of settlement in the plains is that which has been associated with rural development projects. It is useful to review briefly the experience of these projects and to evaluate their relative success in terms of the number of families resettled, "spread effect", the costs, the benefits, administrative and technological problems and effects on the environment. Four completed projects are discussed here. The newest, and most directly relevant project, the RED/FAC northeast Boucou project is discussed in the next section.

Prior to independence the French administration had taken the first small steps towards implementing its long-range policy of re-settlement and had created zones of colonization in the plains. The

*Boutrais 1973 p 219.

first settlement zone was created at Koza on the plain by the same name in 1954-5 and was intended to attract settlers from the nearby "overpopulated" Mafa. Bulldozers were used to clear about 200 hectares of forest. The land was then staked out and assigned to a few dozen "colonists". The cost of the project was estimated in 1955 to be 32,000 francs per settler. No services or management were provided and no evidence of the project remains today.

A second settlement project was created by an agricultural service of the administration, SEM Nord* around Mokyo some 20 km north of Maroua on the northern boundary of the Diamare plain. The project area covers 2,200 hectares and eventually resettled some 2,200 people most of whom came from the mountain massif of Mokyo-Molkoa which abuts the project area to the west.

The idea of establishing a project in the area south of the Mangafe riverbed originated in 1953. The purpose of the original project was to raise cotton. Subsequently a study by the soil scientists of ORSTOM reported that while the soils north of the riverbed had a good potential for cotton they were already occupied to the point of saturation. The soils to the south of the riverbed in the proposed project area were, according to the report, sandy soils of low fertility totally unsuited to cotton. The report also warned that many of the soils in the area were likely to become hard and be

*Secteur Experimental de Modernisation rurale du Nord. The history of the settlement project at Mokyo is described in Boutrais 1973 pp 167-184.

abandoned after a few years of cultivation, a prophecy which was to prove only too accurate.

The project was abandoned for the time being; a few years later, however, it was taken up again by SEM Nord on a more modest scale.

From the outset it was assumed that the project would succeed if it were organized on a rational basis and if modern methods of agriculture were enforced. The land was divided into rectangular plots of exactly four hectares each. The plots were duly marked, numbered, registered and assigned by an agricultural extension agent to a farmer.

Each four-hectare farm was divided into two equal sections and the new farmers were required to fallow one half each year and to plant the other half to a prescribed rotation of crops which varied with the soil type. No concessions were made to variations in individual farmer's needs or to the peculiar make-up of his four-hectare farm. One wonders what the careful mountain farmer, newly transplanted from his complex terraced agricultural system thought of "modernization".

Initially the project, like all projects, made progress in meeting its own goals. Roads were bulldozed, a project manager was hired, monitors appointed, seeds dispensed, etc. By 1959 the population was increasing and the project was under way.

The number of households within the project by year from 1959 to 1967 were:

1959.....	34
1960.....	80
1961.....	136
1962.....	160
1963.....	626
1964.....	626
1965.....	563
1966.....	504
1967.....	594

The great increase in population in 1963, of course, was due to the forced descent of the mountain farmers from the nearby massif of Mokyc-Molka. The essential stagnation of population after 1963 reflects a number of difficulties.

From an economic point of view the project had been doomed from the outset since 90% of its soil was, as had been known in advance, unfit for the production of the only important cash crop in the north at the time, cotton.

Still more serious from the farmers' point of view most types of soil in the project area were rapidly exhausted. Per hectare yields dropped as much as 50% between 1961 and 1967 and most farmers were forced to cultivate increasing amounts of their land in violation of the original project rules.

Today SEM Nord is gone, there are no effective extension services in Mokyc. The roads are impassable, machinery is in disrepair and an increasing number of settlers are moving back into the mountains. The cost during the lifespan of the project is estimated by Boutrais to be between 50,000 and 80,000 ^{francs C.F.A.} per person resettled.

A third project to resettle northern mountain peoples in the plain was established at Loulo-Ganay northeast of Kora. It is of particular interest because: 1) it includes within its perimeter substantial amounts of alluvial soil with adequate agricultural potential; 2) it was designed specifically to avoid the mistakes that had been made at Mokyö; 3) it is cited as a successful resettlement scheme on the ICRD's 1974 concept paper on the West Banoue Agricultural Development Project (page 3); 4) it was intended to substantially improve the agricultural techniques of the settlers not merely to transplant them.

The project began under the partially coordinated direction of two agencies; SEM Nord and a private agency, CIDER.* As at Mokyö a geometric matrix of projected roads was laid out, but the Mokyö concept of isolated family farm was abandoned in favor of a new system in which households were clustered into nucleated settlements. Several large sections of land were cleared with heavy equipment and assigned to each village. Each of these sections was put into a single crop each year and a predetermined pattern of rotation was followed. The individual farmer, on the other hand, was allowed to cultivate fields in several of the sections and, if he wished, to clear other lands on his own as well.

The advantage of this system, it was thought, is that it allowed the farmer to have a wider mix of crops in each year and somewhat more initiative. At the same time it enabled the project staff to maintain

*Centre International pour le Développement Rural.

closer surveillance over both the villagers "so that they couldn't hide things" and over their larger mono-cropped fields.

In 1961 twenty households were settled. By 1965 the population had grown to 1,200. The private development agency CIDR ceased its operation and the entire project passed under the direction of SEM Nord. More roads were built, more wells drilled (each settlement had a well) and new strips of forest were cleared with heavy equipment. By 1968 the settlement had attracted a total of 1,800 inhabitants. Almost half of the settlers were Mada, a group massively displaced from the Mora mountains some 20 km away. The other settlers were also largely from the Mora massif or nearby isolated mountains.

In 1968 the perimeter of SEM Nord was replaced by the perimeter of FED* and the actual management of the project passed under the jurisdiction of CFDT**, a well-organized, expatriate-managed parastatal organization responsible through its effective organization and authoritarian methods for the rapid increase in cotton production in north Cameroon in the early 1960's. SEM Nord remained responsible for recruitment alone and virtually all of its extension workers were replaced by the cotton-minded employees of CFDT.

With the change in management the area of settlement was expanded to include an ambitious 400 km² area and a vast new dimension to re-settlement envisaged, but not attained. The expansion effort financed by FED for four years at a cost of 107 million francs CFA resulted in

*Fonds Europeen de Developpement.

**Compagnie Francaise pour le Developpement des Textiles which has more recently become SOLECOTON.

the construction of more wells and roads and an authoritarian re-measurement of land and reassignment of land titles. Settlers who had been led to believe that they would be allowed to control the land they personally brought into cultivation were suddenly deprived of the fruits of their labor and assigned land of differing quality elsewhere.

In 1972 the FED project ended. SOUSCOFON maintains its interest in required cotton production, but in all other respects development services have ceased to exist. The 2,500 inhabitants of the (original) plantation are probably a little better off than they had been in the mountains or at least since they were forced out of the mountains. Millet and sorghum yields are reportedly between 900 and 1400 kg/hectare.

Yet the mode of agriculture, the quality of life, the level of expectation has not appreciably been altered. There are chronic problems of procuring meat in some of the villages. During the dry season many of the settlers throng to Noto to look for work as migrant laborers.

The total cost of the project during its lifetime between 1961 and 1968, 140 million francs CFA (a little under US \$600,000), had been spent on investment and operation to resettle 2,500 people at an average cost of 68,000 francs (a little under US \$300) per capita.* The average mountain family's income is not more than 18,000 francs CFA per year. Inevitably it must be asked whether the money might not have

*Ecoutrais 1973 p 189.

been spent in ways that would have benefited more farmers more significantly in their home region.

A fourth resettlement project, and one also cited by the IERD paper as successful, is Operation Guider financed by FAC.* This three-year integrated rural development project, now completed, was intended to resettle 9,000 farm families from the mountains to the nearby piedmont in Guider Arrondissement. Interviews with social scientists and administrators associated with this project indicate that with the formal termination of the project development services ceased to be provided. More disturbing are reports, which I have not yet been able to verify, that the exodus to the plain which was strongly "encouraged" by the local administration is contributing to the degradation of mountain terraces and at the same time to severe erosion in the newly occupied but not yet terraced piedmont below. It is hoped that further information on these issues will be incorporated into the final version of this report.

General Observations on North Cameroon Settlement Projects

In closing this section it is useful to summarize the major policy-relevant conclusions that can be drawn from the experience of the resettlement projects reviewed.

1. From the north Cameroon administrative point of view the most important reasons to resettle the Mandara mountains peoples in the

*Fonds d'Aide et de Cooperation.

plains are:

- a. to establish more direct administrative control over the mountain peoples.
 - b. to promote cultural unification through the assimilation of the diverse mountain ethnic groups to Islamic civilization.
 - c. to bring more of the plains soils into the production of cash crops.
2. In order to achieve these goals the administration or its zealous agents have frequently pressured mountain people to resettle.
3. Resettlement projects have suffered from:
- a. an almost total disregard of existing peasant farmer knowledge of soil conservation and crop management.
 - b. incorrect and over-optimistic assumptions about the ability of existing technology to lift the constraints faced by the small farmer.
 - c. an emphasis on cash crops at the expense of food crops and soil conservation.
 - d. authoritarian attitudes towards farmers and their almost complete exclusion from participation in decisions that affect their lives and livelihood.
 - e. interagency conflict, poor planning and, above all, the tendency to invest too heavily in project infrastructure for too short a period.

4. A major limitation on the success of resettlement projects has been the fact that high-quality soils are already controlled by dominant groups who are expanding their production of cash crops and dry-season food grains through the use of migrant labor and tenants.

The question that must be asked, then is to what extent these difficulties can be overcome in the proposed West Benoue project.

IV. Problems and Prospects for the West Benoue Integrated Rural Development Project

The proposed project area would cover 13,000 km² and would include the Arrondissement of Foli and most of the Arrondissement of Garoua in the Benoue Department. It would extend from Densa, north of the Benoue river, to the Foli mountains in the south, and from the national highway Ngaoundere-Garoua in the east to the Atlantica mountains — the border with Nigeria — in the west, (see Map 6).

The region includes some excellent alluvial soils in its river and diverted valleys and considerable areas of other soils with significant agricultural potential. Its rainfall is adequate varying from 1,000 to 1,400 mm but evaporation is also high as the Benoue plains are low and hot. Population is sparse, averaging under five people per km² but is not distributed evenly. Thus from an agricultural and demographic perspective the project area seems to have considerable potential for resettlement.

Since a number of reports on the project area and the project are available the material they contain will not be repeated here.* Instead I will raise a number of issues pertaining to the social and institutional soundness of undertaking a resettlement scheme at the present time.

The problems of the Mandara Mountain people and attempts to resettle them in the northern plains have already been discussed. Here I am primarily concerned with social and political environment of the West Bououe region, and with whether the problems that have plagued resettlement in the north can more easily be overcome in this environment.

By raising these issues as problems I do not mean to imply that resettlement in the West Bououe region is impossible or undesirable. Rather I am trying to identify difficulties that would have to be overcome and challenges that would have to be met before it could occur on a significant scale.

*The area and its people are described in J. Boulet 1972 and 1975. Its resources are described briefly in the USAID North Cameroon Resource Inventory. Detailed studies of its soils are to be found in P. Brabant 1976, P. Brabant & F. X. Humbel 1974 and F. X. Humbel & J. Barbery 1974. Agriculture in the area is described in H. Marticot & B. Audebert ND. The proposed project is described in USAID Annual Budget Submission FY 1977 and at greater length and somewhat more accurately in the IERD's 1974 paper on the West Bououe Agricultural Development Project. Prospects for the project are discussed in Morris 1976, prepared as a part of the present pre-feasibility study.

Who Lives in the Proposed Project Area Now?

While it is true that many parts of the West Bououe region are sparsely populated it is estimated that it is inhabited by approximately 70,000 people belonging to at least ten ethnic groups. The largest single group is the Fulani or Fulbe (in the French literature) who make up just over fifty percent of the population. The Fulani are located in the northern part of the region and in the west along the Faro river. Descendants of cattle nomads they still place high value on cattle and maintain substantial herds but they are dependent for subsistence on agriculture. While most Fulani are neither wealthy nor powerful theirs is the dominant ethnic group in West Bououe as in the entire north.* Their leaders still enjoy great authority and autonomy in much of the project area (see below) and the rights of Fulani herdsmen cannot be disregarded in the present political context.

The next largest ethnic group is the less unified Doayo (also referred to as Mouchi, a pejorative term applied to them by their neighbors) who make up about 20% of the population. The Doayo farm and keep small trypano-tolerant cattle on the lower slopes of the Foli mountains in the southern part of the proposed project area.

Less numerous groups include the Koma and Tchamba, together making up 16% of the population, who live on the piedmont between the Faro river and the Atlantica mountains that rise dramatically to the west. Other groups include the Doupa (4%) the Fali (4%) and a few other minor

*For an analysis of the Fulani position in north Cameroon society see de Martin 1976.

groups together making up less than 3% of the West Banoue population.

Why are there not more people in the West Banoue region?

In light of the apparently high agricultural potential it is appropriate to ask whether there were formerly more people in the West Banoue region and, if so, why densities are lower today.

The evidence on the first point is not entirely conclusive as to degree, but oral tradition, travel reports and surface site archeological evidence all suggest that indeed the area or at least parts of it was formerly more densely settled. Three causes of depopulation have been hypothesized: historical events, disease and soil depletion. It is not possible, with available evidence to evaluate the relative significance of each.

Historically the Banoue region has been a corridor of invasion and a site of battles for hundreds of years. The Fulani invaders, who swept into the region during the first decades of the 19th century, fought and dislodged the Nyan Nyan who fled towards Ngabardane, were preceded by other conquerors including the Sata. Fulani conquest and tax collection and their concern with grazing cattle may all have contributed to the retreat of groups such as the Fali and Doayo into the uplands to the north and south.

The bloody suppression by the Germans of a mahdist rebellion by lamidos southeast of Garoua in 1907 caused many inhabitants to flee eastward into the lamidat of Rey Bouba which had remained loyal to the Germans. In later years the impressment of porters and then workers on

the Garoua-Ngaoundere road further contributed to the emptying of the region.

Disease is often cited as another cause of depopulation but the evidence is not entirely convincing. To be sure Oncho, Filaria loa loa, malaria and schistosomiasis are all present in the human population but the redistribution tends to correspond with and not contrast with human centers of population. Trypanosomiasis is a seasonal problem in much of the region but it does not affect human populations, only cattle.

Archaeological and soil analysis research by P. Brabant indicates that in some areas soil depletion has been the major cause of depopulation.*

Are there substantial amounts of high quality but unused land?

A distinction must be made here between unoccupied, underutilized and unused. The rich alluvial soils of the Benoue and Faro river valleys and delta are not densely settled but what population there is in the area is clustered along the river. Some of the soils are used for mesquari or transplanted dry-season crops and virtually all of the remainder is used for dry-season grazing by Fulani herdsmen.

There appear to be some moderately good unused soils in the region east of Tchiboa but they are inundated during the rainy season and heavily infested with tsetse during the dry season. The issue is by no means clear at present, but Gavaud of ORSTOM Yaounde has conducted research in the area and believes that the present distribution of population and land utilization corresponds fairly closely

*P. Brabant 1976, pp 31, 37, 73-77.

with the distribution of better soils.*

Are there high quality, unused lands which are also unclaimed?

The answer to this question is again equivocal. From the perspective of the traditional Fulani rulers, the lamida, all land within their lamidat belongs to them and can be used only with their permission. While the modern administration does not formally accept this traditional claim neither has there been any legal or administrative challenge to it.

Will administrative elites perceive the resettlement project to be in their interests?

Before analyzing this issue it is necessary to disaggregate the administrative structure of the project area. The entire project falls within Benoue Department and hence is under the jurisdiction of the prefect of that department. Since it crosscuts two arrondissements (all of Poli and part of Garoua), however, it is under the jurisdiction of the two sous-prefets of these arrondissements. At the next lower administrative level things become more complex and less uniform.

The portion of the project area that falls within Garoua Arrondissement is subdivided into five lamidat, traditional units that might very loosely be translated as sultanates. These units are by no means equal to one another in size, population or administrative significance. Teheba, the largest, covers more than 3,390 km² while Dumbo is only 750 km².

*Personal communication.

Foli Arrondissement, by contrast is made up of one lamidat, Daka, and 12 canton, administrative units, usually smaller than lamidats, directly under the authority of the sous-prefet of the arrondissement. In theory the chef de canton, the heads of these units, are representatives of their respective local ethnic groups. In practice they tend to identify their interests with those of the elites that appoint them.

Within the project area as a whole 9,527 km² is under the jurisdiction of lamido and 4,530^{km²} is under chef de canton.

Formally the lamido and chef de canton are completely under the control of the sous-prefet and merely assist him in carrying out his duties of tax collection and the maintenance of law and order. In reality the relationship is more complex and variable. It is in the interest of the local officials (lamido or chef de canton) to maintain the favor of the sous-prefet for he can have them dismissed at will. On the other hand if they do not maintain at least the passive support of their constituents there may be unpleasant incidents that may also lead to the official's dismissal. The actual power of a local official thus depends in part on the size of his following, his traditional, legitimate claim to his position (in the case of the lamido of Ray Bouba to the east of the project area this is very great indeed), and the ease of communication by road between Cercara and the seat of the local administrator's government. For this last reason there is a

tendency for the sous-prefet to have more direct authority during the dry season and for the local official to have more autonomy during the rains when government by Land Rover becomes more difficult.

It is in this context that one must view the local official's attitude towards and expected cooperation with a settlement and development project. On the positive side of the ledger he welcomes the addition of new tax-paying subjects since a part of his revenue, legitimate and otherwise, is proportional to their numbers.* On the negative side, the newcomers may come into conflict with the local leader's supporters and encroach on their resources through cultivation, grazing or fishing.

At the higher level there can be little doubt that government officials are positive towards development projects in their areas of jurisdiction.

Are there likely to be problems between settlers and herders of ethnic groups already in the region?

The answer to this question must be in the affirmative. In addition to competition for resources between cultivators and more or less transhumant herdsman there is also little love lost between the mountain

* Opportunities for illegal enrichment do not arise during tax collection, which is carefully regulated, but during assessment when the sous-prefet must depend on the local official's help, and the latter, in turn, can under-assess his subjects in return for a gift. It is also common practice for local officials to expect gifts before issuing routine and required government documents.

peoples and the Muslim plainers who still tend to regard them as
serfs.

Which peoples would be most likely to resettle in the project area?

The evidence cited in section III and data on settlement in the
North East Banoue project cited below, indicates that should the
project prove successful it is most likely to attract settlers from
the non-Islamic peoples of the nearby plains such as the Ibibio and
the Tiv rather than people from the more distant and ethnologically
more different Mandara mountains. Indeed it is likely that a sub-
stantial number of settlers would come from Tchad and Nigeria rather
than Cameroon!

Would recruitment to the project be truly voluntary?

In light of all previous experience including that of the North
East Banoue project during the present year (1976) it is likely that
in at least some cases local administrators would respond to re-
cruitment campaigns by putting pressure on some of their subjects to
volunteer for resettlement.

What government agency would assume control of the project after
USAID assistance terminated?

Past and present experience with the Cameroon government indicates
that it would be difficult to achieve a cooperative relationship be-
tween the Ministries of Plan, Agriculture and Livestock. It is probable,
as Mr. Morris notes in his report that SODACOTON is the only agency

capable of taking over the management of the project. The past record of SOLECCION indicates that its methods and goals are not consistent with those of USAID.

What would be the effects of the project on the environment?

It is impossible to predict the effects without knowing exactly how the project is to be implemented. Past experience points to the following dangers.

1. The promotion of extensive farming and cash crops may lead to the exhaustion and/or erosion of the fragile soils.
2. Since the best soils are already under use it is likely that administrative decisions will lead to the cultivation of poor-quality soils in some instances. If this is done settlers are likely to cut the trees, kill the game and leave.
3. It is unlikely that "modernization"-oriented western-trained agricultural personnel will consider the use of the labor-intensive conservationist agricultural techniques presently used by the Moundang and Toupouri in Mayo Lanai and Diamare Departments.

What has been the experience of the FED FAC North East Benoue Project? *

The North East Benoue FED FAC project is of particular interest to us because it is located in the Benoue region (to the east of the Benoue), and is intended to improve agricultural techniques and production and to increase the population in the project perimeter from 22,700 in 1972 to 32,000 when it is completed in 1977. The cost of the project is 6.3 million US dollars or \$210 per capita. Settlers

*Information on North East Benoue Project is based on "Rapport Trimestriel (Octobre a Decembre 1975)", February, 1976, and personal interviews.

are accepted from anywhere but active recruitment has been aimed particularly at the northern Mandara mountain region in Margui Mandala Department.

It is much too soon to pass judgments on the project or to discuss details of problems that might make the task of those involved more difficult. The following observations are therefore presented in summary form.

1. The soil studies and maps prepared by ORSTOM (which was not officially consulted on the selection of the site) indicate that the northeast Benoue region has considerably less potential than west Benoue or the plains immediately adjacent to the Adamawa plateau. They also indicate that some of the new settlement villages are located on poor soils.*
2. During the first year of settlement settlers were not grouped into nucleated villages. Some of them had their crops taken by local residents who resented their presence. The role of the local landrö is unclear. There were also disputes concerning fishing rights and the use of grazing lands along the rainy-season riverbeds.
3. Because of these difficulties the project management has created nucleated villages and attempted to settle members of one ethnic group in each village.
4. During the year ending on December 31, 1975 the population of the perimeter increased by 1,202. The ethnic composition of these

*See P. Erabant 1976 and F. X. Harbel and J. Barbery 1974.

Immigrants is shown below:

<u>Ethnic Group</u>	<u>No. of Immigrants</u>	<u>Comments</u>
Iemo	438	A local group
Moundang	332	Homeland not distant, but many in area prior to project
Guider	175	From the nearest part of Kargui Mandala
Makaya	48	Live in vicinity
Fulani	69	Dominant group in area
Fulas	15	
Other	85	

In order to recruit settlers from the crowded Mandara mountains officials from the project, FED and the Ministry of Planning visited several administrative centers and asked local administrators to tell their farmers about the project. Those interested in resettling were to register with the local agricultural officer. Vehicles were sent to pick them up at a later date.

At Mokolo on the southern side of Mafa country 162 "volunteers" were registered, but when the trucks came only 40 actually departed. At Kozza 500 "volunteers" were registered but only 45 eventually departed; and only 11 of these were Mafa!

A number of reasons or interpretations were given for the discrepancy between the number of volunteers and the number of immigrants. Project officials suggested that local authorities did not

ment to loose tax-paying subjects and pressured them not to leave. A highly placed administrator in Marqui Mandala believes that the campaign was organized too hastily and that some of the volunteers had to leave hurriedly without paying taxes or settling debts and court cases. Still other reports, which I was not able to personally verify, claim that some of those registered were not volunteers, and other reports, which I was also not able to confirm directly, claim that volunteers who refused to leave after finding out that the project area were fined or imprisoned.

* * *

Since the conclusions and recommendations of this report were presented at the outset they will not be repeated at this point. It is hoped, however, that the presentation of the material in this report and the following list of references cited will be helpful to the reader who wishes to evaluate the conclusions and recommendations for himself.

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Table 1*

Department	Area	Population	Density
Logone and Chari	12,133 km ²	117,574	10
Margui-Wandala	7,129	446,234	63
Diamare	9,698	460,844	48
Mayo-Danai	5,303	219,542	41
Benoue	66,090	372,902	6

* the population totals shown in this table are based on preliminary estimates from the 1976 census; they are considerably higher than those used in Boulet, 1975a

Table 2

Population of Ethnic Groupings in North Cameroon*

Major groupings as percentage of total 1,617,096

Islamic	34.5%
Northern mountain**	19.6
Southern/Highland***	15.5
Plains (non-Islamic)	23.6
South Beoue	7.0

Ethnic groups within the northern mountain grouping

Mafa groups	46.1%
Mora groups	33.0
Mofou groups	20.9

* after Boulet 1975a

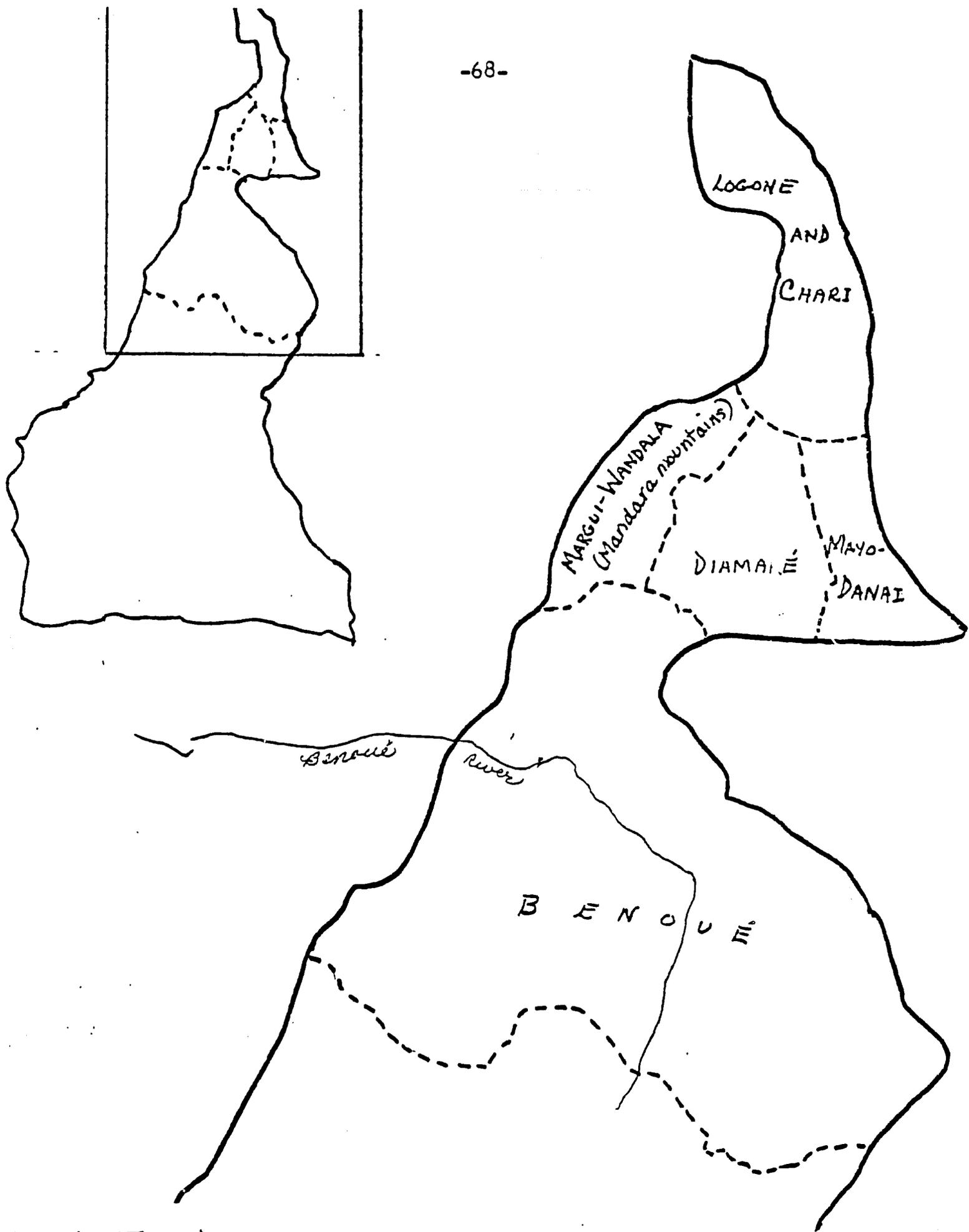
** this is the "northern ethnic cluster" of Map 3

*** this grouping includes the "southern ethnic cluster" of Map 3 and some highland peoples such as the Fali who now live outside Margui-Wandala Department; some of them have moved onto the plains in recent times

Table 3

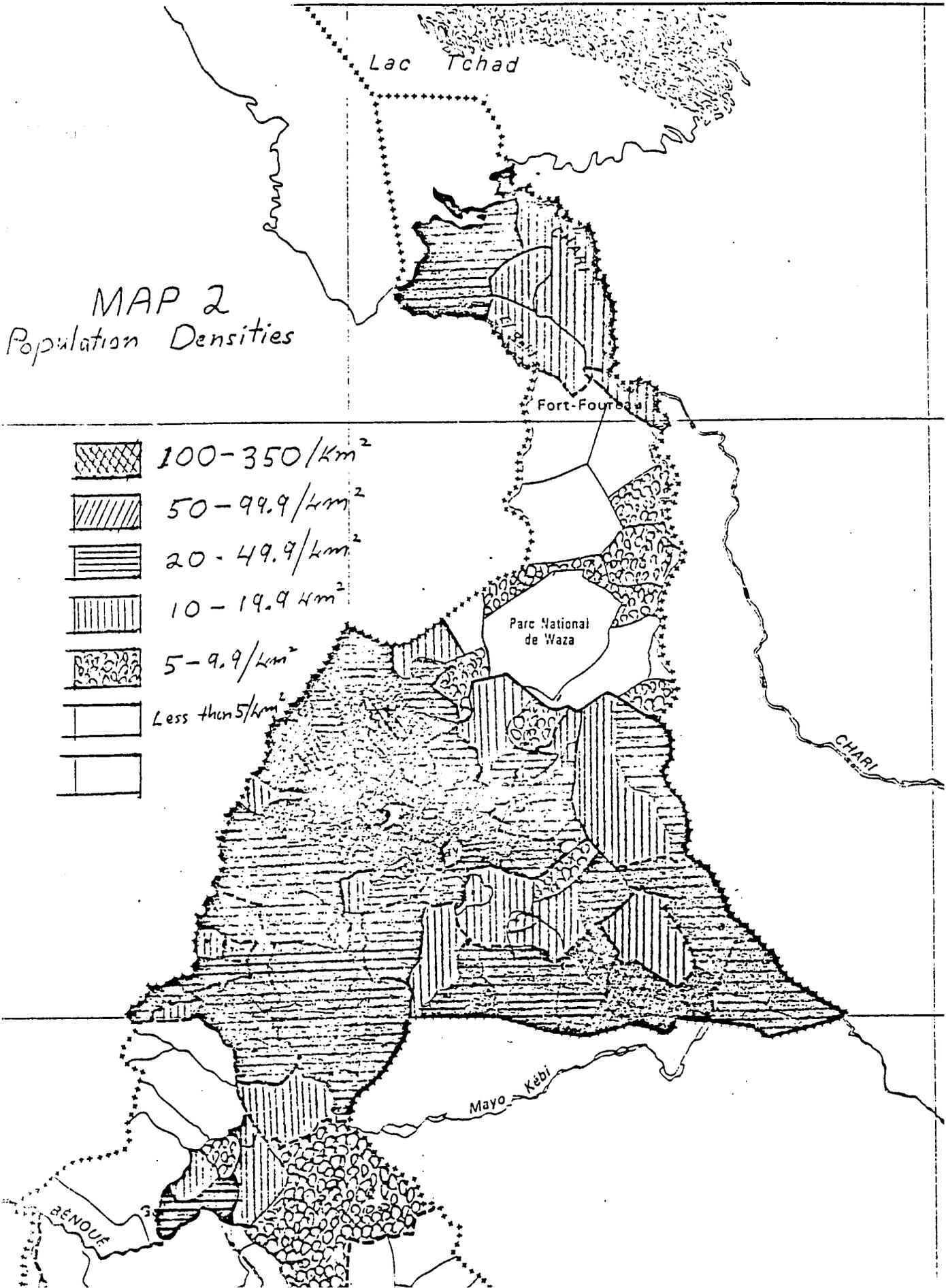
The Descent of Northern Mountain People into the Plains*

	Total population of "mountain" people	Descended in plain	Before 1963	In 1963	After 1963	Returned to mountains
n of 72	43,350	2,300	5,800	200	3,300	
n of 22	60,500	45,350	10,100	22,250	6,000	9,700
n of 21	24,800	9,450	6,000	2,700	750	
n of 10	20,900	17,900	9,500	7,300	1,100	
1	149,550	82,000	31,400	39,450	11,150	9,700

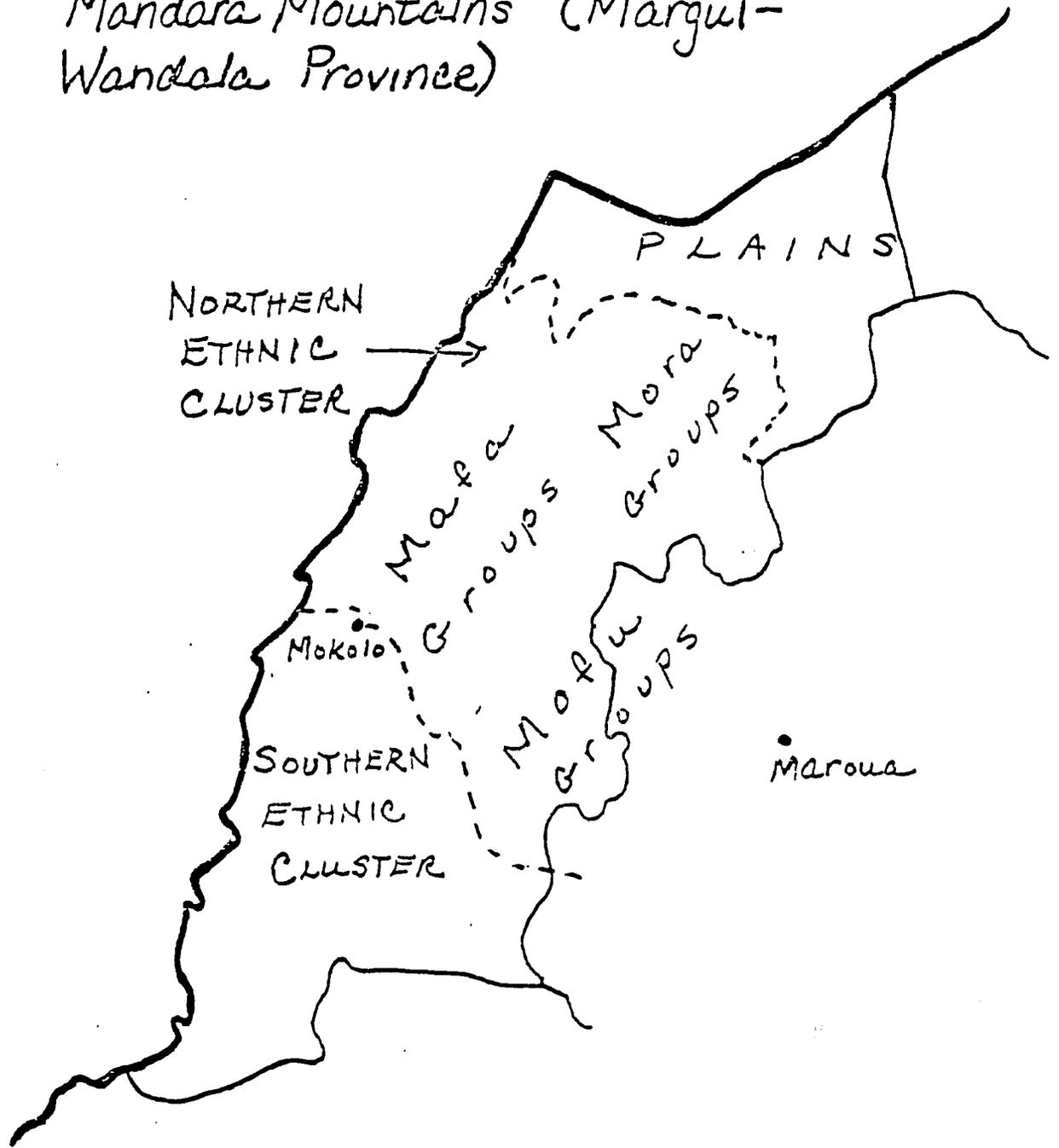


Map 1: The Departments of Northern Province.

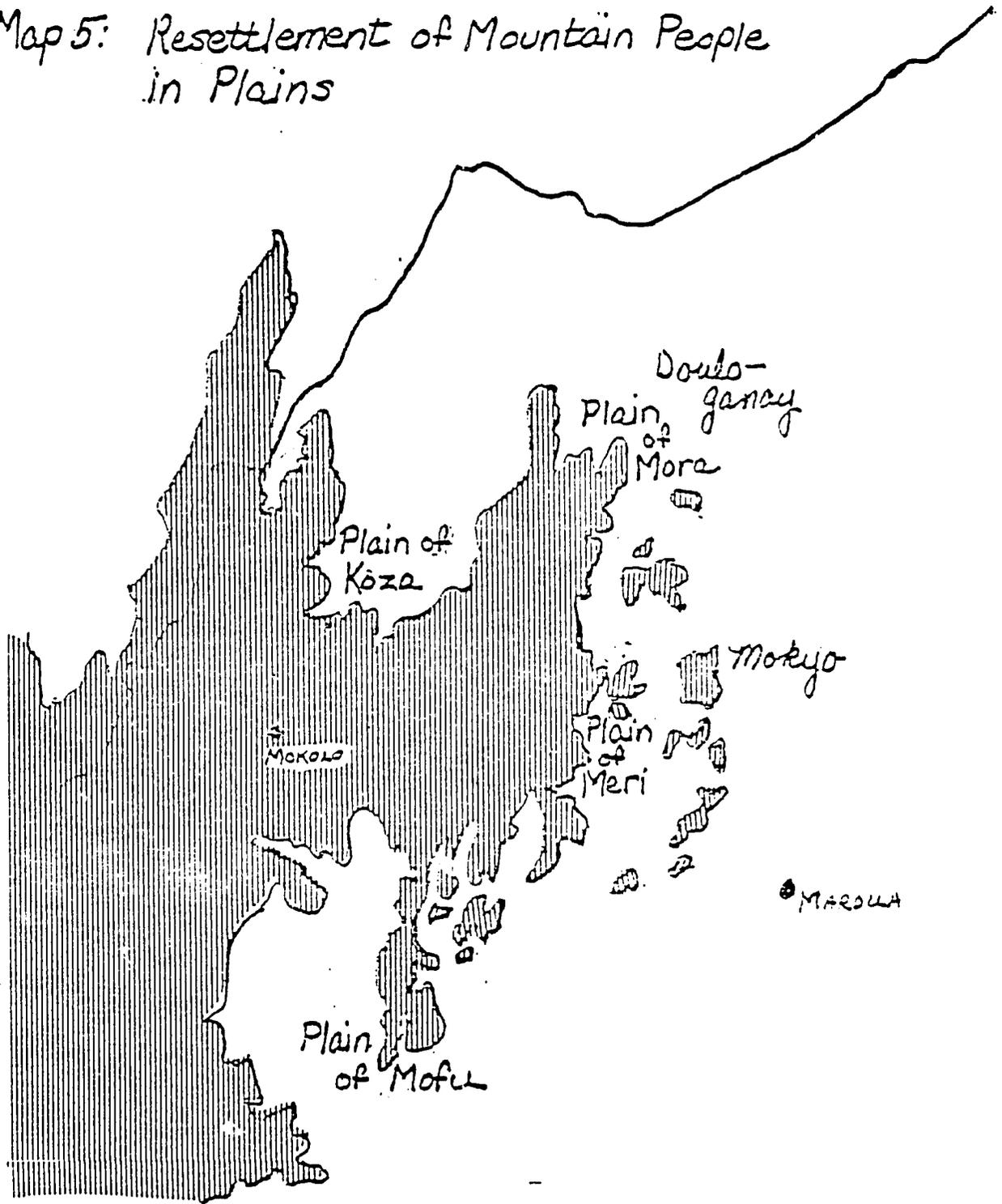
MAP 2
Population Densities

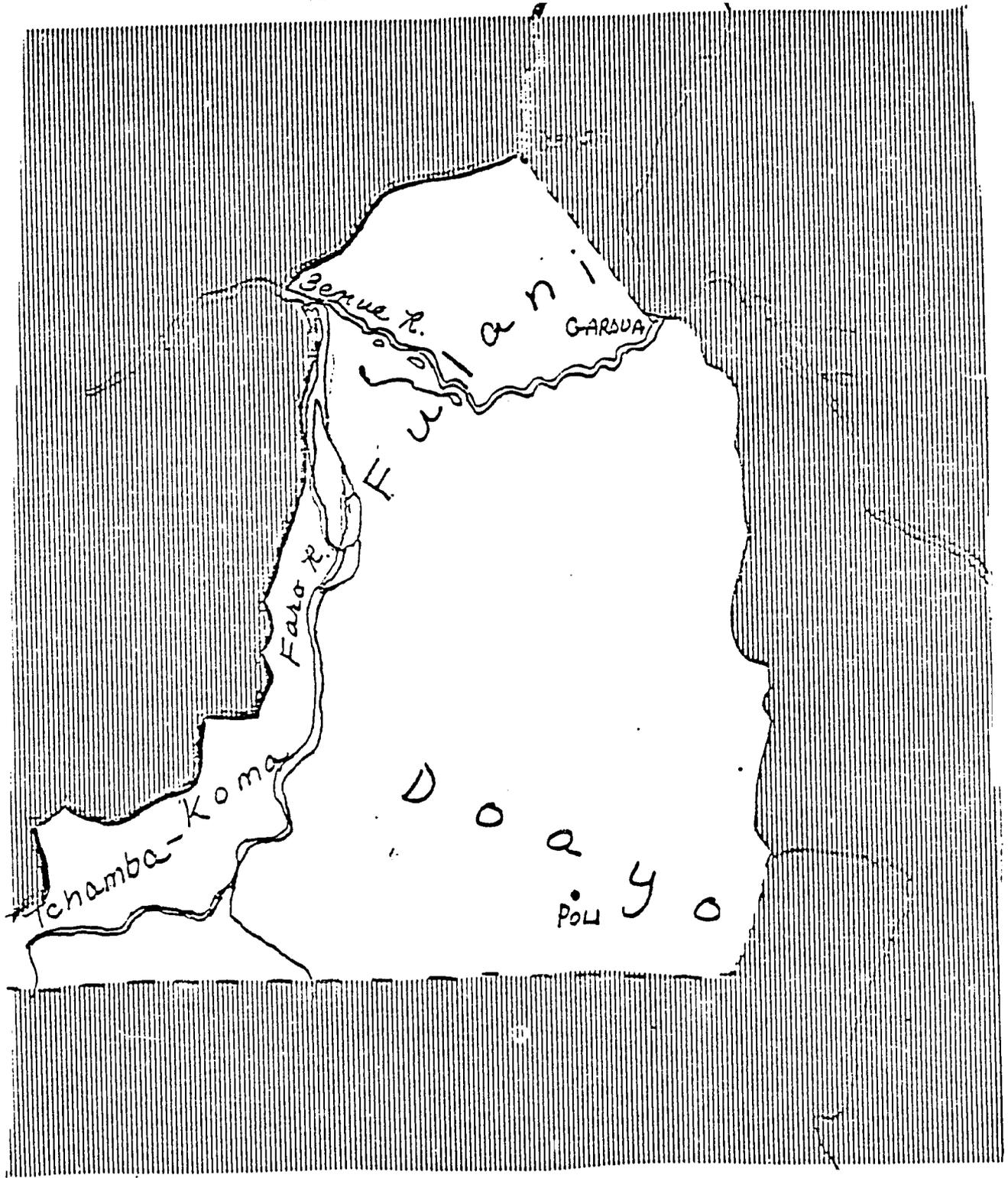


Map 3 : Major Ethnic Groups of the Mandara Mountains (Marqui-Wandala Province)



Map 5: Resettlement of Mountain People
in Plains





Map 6: West Benue Project Area