

Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983-1985 Drought

Author(s): Sally E. Findley

Source: *The International Migration Review*, Vol. 28, No. 3 (Autumn, 1994), pp. 539-553

Published by: Center for Migration Studies of New York, Inc.

Stable URL: <http://www.jstor.org/stable/2546820>

Accessed: 17-03-2017 02:52 UTC

---

JSTOR is a not-for-profit service that helps scholars, researchers, and students discover, use, and build upon a wide range of content in a trusted digital archive. We use information technology and tools to increase productivity and facilitate new forms of scholarship. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

Your use of the JSTOR archive indicates your acceptance of the Terms & Conditions of Use, available at <http://about.jstor.org/terms>



*Center for Migration Studies of New York, Inc.* is collaborating with JSTOR to digitize, preserve and extend access to *The International Migration Review*

# *Does Drought Increase Migration? A Study of Migration from Rural Mali during the 1983–1985 Drought<sup>1</sup>*

Sally E. Findley

*Columbia University*

Using data from a longitudinal panel study conducted in 1982 and 1989 in the first region of Mali, this article demonstrates that the level of migration did not rise during the drought of 1983–1985. However, there was a dramatic increase in the migration of women and children during the severe 1983–1985 drought. Along with this increase in migration by women and children, there was a shift to short-cycle circulation, with 64 percent of the migrants adopting circular patterns. The study describes the characteristics of these migrants and recommends changes to development and migration policies that will facilitate such migrations in subsequent droughts.

While there is no consensus regarding the fertility and mortality consequences of drought (Caldwell and Caldwell, 1989), it is generally agreed that migration rises both immediately and as a long-term response to the threat of recurrent droughts. During the great drought of 1969–1974, there were marked population shifts from the more arid zones bordering the Sahara toward the cities of the Sahel, which grew by 6–10 percent during this period (Gervais, 1987; Ouedraogo, 1988).

Until recently, it had been assumed that most of the drought-related migrants permanently leave their home villages. Now, studies cause us to question these assumptions. A 1981 survey conducted in France showed that most of the Sahelian migrants return home definitively after an average stay of 7.7 years, broken by only one or two home visits (Conde and Diagne, 1986:89–90). A 1975 survey conducted in the Senegal River Valley showed that over half the male Peul, Wolof and Toucouleurs migrants aged 10–65 return seasonally to assist with farm work. Only the Soninke stay away for two to three year periods before returning for a visit (Minvielle, 1985:188).

Further, the drought migrants are not comprised solely of males. Surveys conducted in Bamako show that women migrants are almost as numerous as male migrants. Among the 30–34 year olds surveyed in Bamako, female migrants were a larger share of the female population than male migrants were of the male population (PUM, 1984:22–23). Like the male migrants, many of the women are circular migrants. Recent surveys of domestics and other women in

<sup>1</sup>This research was supported by The Rockefeller Foundation, by CERPOD, and the Canadian International Development Agency. The author wishes to thank Cheikh Mbacke, Dieudonne Ouedraogo, Salif Sow, Michel Diawara, and Babaly Thiam for their contributions to the research and thinking on the current topic. Earlier versions of this research were presented at the Population Association of America and in CERPOD's PopSahel series.

low income neighborhoods showed that at least some of the women plan to return to their home villages with their earnings (ISH, 1984; Vaa, *et al.*, 1989).

This article presents data describing the migration patterns of families living in Mali during the drought of 1983–1985. The first part discusses the reasons why we should expect more circulation during a drought, especially by women and children. Using data from a longitudinal household survey conducted in 1982 and 1989 in Mali's Senegal River Valley, the second part outlines the differences between the pre-drought and drought migration, and between the circular and permanent drought migrants. The article concludes with some observations about how this circular migration could be better integrated into planning aimed at helping families cope with drought.

### *CIRCULATION AS A MECHANISM FOR COPING WITH DROUGHT*

Migration is usually distinguished by the duration the migrant stays away from his home. Although exact durations distinguishing forms of migration vary, a common threshold for defining permanent migration is six months. A circular migrant stays away between one and six months and upon return participates in the economic and social life of the household. He or she retains an economic and social role within the original household unit. In contrast, permanent migrants stay away more than six months, do not return to participate as regular members in the life of the household, and do not plan to return. The migrant has shifted his or her work and residence completely to the new location. (For a more extended discussion of circulation, *see* Hugo, 1980; Standing, 1985; and Prothero and Chapman, 1985).

In the Sahel, there are two forms of labor circulation, distinguished by their durations and their distances. In the short-cycle pattern, adolescents and younger married men, especially those from poorer families, go to nearby cities where they work as petty traders, helpers or at other low status, low paid jobs. As shown by studies from Niger, Burkina Faso, Togo and Senegal, they almost always stay for durations of less than a year and return to help with the farm work (Barou, 1976; Remy, 1977; Finnegan, 1980; Amselle, 1978; Minvielle, 1985). Women who migrate to work as domestics also adopt this circulatory pattern (Hamer, 1981). Given the poorly developed road and transportation network, these migrants generally stay away for months, returning only once a year for cultivation or harvest.

In contrast, the long-cycle pattern involves long duration, long distance circulation, usually to a foreign destination and often to France. Many permanent migrants from this region are actually long-cycle circulators, with the migrant absent two to three years time. Between visits, the migrant sends remittances home and, upon home visits, generally brings fairly large sums of money (Adams, 1977; Barou, 1976; Conde and Diagne, 1986; Finnegan, 1980; Coulibaly *et al.*, 1980).

What factors condition the choice among the two patterns? Clearly, if the agricultural situation is such that men do not have to return every year to help with farming, it is easier for them to be absent over extended periods. This is not the case in the Senegal River Valley where soil preparation and tilling is a task reserved for men; therefore, men normally return at the beginning of the rainy season (Minvielle, 1985). However, if the household is large and contains other economically active men, these other men may perform the heavy cultivation tasks for the migrant, leaving him free for the long-cycle circulations. As a result, both single and married men may adopt the long-cycle circulation pattern.

To be successful, long-cycle migration usually requires fairly sizeable expenditures for airfare and support while the migrant looks for work. Those who adopt this pattern must have a larger resource base upon which to draw: more money with which to finance the journey, more education and job experience to improve their chances in foreign labor markets, more contacts at the destination who can help them get jobs or who can support them until they can support themselves. These migrations, especially the migrations to France, may take months, if not years, to carry out.

Because of their long planning horizon, the long-cycle migrations are impractical as spontaneous responses to a drought-induced crop failure. Those who are already working overseas will be expected to intensify their remittances, but families may lack the resources, contacts, or even available labor force to suddenly ship one of their members to France. In fact, new migrations to France may decline during a drought period, as funds that would have gone to finance migration are diverted to more urgent food needs.

Therefore, short-cycle labor circulation should rise during a drought. At the same time, permanent migrations to destinations that do not require significant advance planning or investments also should go up during a drought. In the case of Mali, this should lead to more migrations to major African cities and to other parts of the region less affected by the drought (*e.g.*, Gabon, Zaire, Ivory Coast).

Migration also can be seen as a strategy to reduce household size, hence food consumption, and some migrations may be planned with that specific goal in mind. Women may be permitted or encouraged to marry earlier than they might otherwise. Given that residence patterns are virilocal (the bride lives with her husband's family), marriage reduces the family's food demands. To make marriage feasible under cash-short conditions, the head of household might waive the bride price and/or other gifts normally offered on the occasion of marriage.

Alternatively, women or children might be sent on fairly extended visits, namely as circular migrants. In order for the family to avoid paying the costs of food for the "visiting" members, the migration must correspond to one of the socially acceptable patterns. For children, the options are sending children for Koranic studies with a master in another village or fostering the child out to

distant kin, even in the same village (for a discussion of Malian fostering customs, *see* Findley and Diallo, 1988). These migrations or temporary transfers of children normally involve young children of between 5 and 7 years, and they may be absent a couple of years or for longer periods, staying with their foster parents throughout childhood.

Even if they are desperate to find some kind of work, few women will attribute their migration to economic need. That would be considered dishonorable for her male kin, since the husband is expected to support his wife. Therefore, both she and they will describe her migration as visiting family or for other noneconomic reasons, like seeking health care.

For all these reasons, circular migration will rise more than permanent migration during a drought. With the shift towards short duration migration will be a diversification of the gender and age composition of the migrants. Circulators will include young men with few connections or resources with which to launch a migration to France, as well as older married men with no extended kin to help with their farm responsibilities. Women and children also will circulate as part of the family's strategy to reduce its consumption. Whether male or female, most circulations during a drought will involve nearby destinations.

### *THE STUDY AREA*

The Upper Senegal River Valley, stretching from Matam, Senegal to Diamou, Mali, is only partially served by the Dakar-Niger rail line. The region has no strong export base, and it remains a subsistence, agropastoral economy (Ministère du Plan; 1985; OMVS, 1980). Kayes, the regional capital, serves as the local administrative and trade center.

The dominant cereal crop is millet. Due to average rainfall levels of around 600 millimeters per year, yields are low. In 1982, they were only 245 to 600 kilograms per hectare (Ministère du Plan, 1985). In 1982, families on average purchased 40 percent of their cereal requirements.

Cereal cultivation generally is complemented by livestock raising. In 1982, 75 percent of all households kept some form of livestock. Most households raised cows, with an average of 23.7 heads per family. This livestock serves as the family's savings account. During the dry years, animals are sold so that the family can buy grain.

During the 1983–1985 period, the average amount of rainfall was 30 percent below the fifty year average (Sow, 1987), resulting in a production decline to one-third of pre-drought levels (Ministère du Plan, 1985). For the families in this survey, the average 1983–1985 millet production was 415 kilograms per hectare, 55 percent below the level observed in 1989.

The prolonged drought also reduced the forage levels to one-fourth their pre-drought levels (Sow, 1987). The 1989 survey showed that local herds were cut in half. Each family lost an average of 4.5 cattle and another 5.4 were sold

to allow the family to buy food. By 1989, average herd size was reduced to 11.5 cows and 7.1 goats.

Most families experienced severe declines in food and livestock production levels during the drought. How did families cope with these shortfalls? The remainder of the article presents the results of a survey that was conducted before and after a drought to assess the families' responses to the drought.

### *THE DATA SOURCES*

Observations of migration and related family and community characteristics before and after the drought, are drawn from two surveys conducted in 1982 and 1989 after the 1983–1985 drought. The surveys were conducted by CER-POD, the Centre d'Etudes et de Recherche sur la Population pour le Developpement, of the Sahel Institute, Bamako, Mali.

The original survey was undertaken jointly with the OECD Development Center and involved surveys in France and in the Valley. The 1982 Senegal River Valley sample covered 99 villages, two-thirds of which were identified previously as villages with high levels of emigration (for additional details on the sample design and the survey instruments, *see* Conde and Diagne, 1986:17–23 and Annex). The baseline data for the characteristics of individuals and households are drawn from the Malian subsample of the 1982 survey, which included 39 villages and 327 households.

The migration data come from the just completed 1989 Follow-up Migration Survey of the Senegal River. The 1989 survey encompassed 7,263 individuals in 327 households. All of the original households were reinterviewed, even if the household head or individual membership had changed. Interviews were conducted with each household head, who supplied the information on all members, including the migrants.

The data from 1982 and 1989 were linked together by means of unique individual identifiers. After cleaning and elimination of cases where household level information was missing, the number of individuals and households remaining was 7,079 individuals and 309 households.

For this research, circulators or short-cycle migrants are defined as persons who did not stay in the village during the drought, who left for one to six months prior to returning, or who left for one to six months before migrating again after 1985. Permanent migrants are defined as persons who left between 1983 and 1985 and had not returned by 1989. Since the average duration of absence between return visits was found to be about three years in 1982, it is likely that many of the permanent migrants are actually long-cycle circulators. The pre-drought permanent migrants are all those who were gone more than six months or reported as emigrant in 1982. Pre-drought circulators are all persons absent less than six months in 1982 at the time of the survey.

## RESULTS

During the drought, 63 percent of the families said that they depended on remittances from family members who had already migrated. Most (47% of the families) received money from migrants already in France, but some (16%) only received money from migrants scattered around parts of sub-Saharan Africa.

In addition to remittance income from long absent migrants, about one half the families (48%) said that members had worked as casual laborers elsewhere during the drought. Two-thirds of these persons worked in other rural areas of Mali, some in nearby locations where migration was not required. One third departed for Dakar, Abidjan, or another Sahelian cities.

Even though families were heavily dependent on migrant remittances during the drought, the aggregate level of migration did not rise. During the 1982–1989 period, 1,907 individuals, or 30 percent of the total population sample, reported at least one migration. If these migrations had been equally distributed throughout the seven-year period, we would expect 14 percent of the migrations to occur in each year, or 43 percent during the three drought years. In fact, 44 percent of the 1982–1989 migrations fell in the drought period of 1983–1985, almost exactly the expected level of migration.

Although the level of migration continued unaltered, the pattern of migration changed. The marked increase in short-cycle circulation is documented in Table 1. In 1982, the survey showed that 25 percent of the migrants had circulated, either absent for less than six months or returning home to visit at the time of the survey. In 1989, some of these temporary migrants were still away or had died, and some of the emigrants had returned. Correcting for these subsequent changes, 29 percent of the 1982 migrants actually were circulators. In contrast, over two times that level, or 63 percent of the 1983–1985 migrants, circulated at least once during the drought years.

Migrant destinations also shifted during the drought. As shown in Table 2, before the drought about half of all migrants went to France and the remainder were split between Mali and other African destinations. During the drought, the preferred destination shifted to Mali, which accounted for 42 percent of all drought period destinations. Migration to France was cut almost in half, to 27 percent of all migrations.

The short-cycle circular migrants were two times more likely to go to nearby destinations in Mali. Most circulators (51%) stayed in Mali, and another 24 percent went to other African destinations, chiefly Senegal and Ivory Coast. About one-fourth (23%) traveled to France. For many of the permanent migrants, the destinations are unknown. Among the 214 for whom the destinations were known, the dominant destination remained France, which accounted for 98, or 46 percent, of the long-cycle migrations. Just over one-third (38%) of the long-cycle migrants were known to have stayed within Mali, and only 16 percent went to other African countries.

More women and children migrated during the drought. As seen in Table 3, the proportion of children who migrated rose from 17 percent in 1982 to 24

**TABLE 1**  
**DISTRIBUTION OF PRE-DROUGHT AND DROUGHT MIGRATION BY TYPE**

Type of Migration	1982		1983–1985	
	Number	Percent	Number	Percent
Circulated at least once	222	25	584	63
Outmigrant (away more than 6 months with no circulation)	560	75	343	36
Total	782	100	927	100

Source: Enquête Renouvelée de Migration dans la Vallée du Fleuve Sénégal, CERPOD, 1989

**TABLE 2**  
**COMPARISON OF 1982 AND 1983–1985 MIGRATION DESTINATIONS**

Destination	Pre-drought		Drought 1983–1985					
	1982 (N)	(%)	Total (N)	(%)	Permanent (N)	(%)	Circular (N)	(%)
Inside Mali	121	22	376	42	81	24	295	51
Other Africa	161	29	177	20	35	10	142	24
France	265	47	234	27	98	28	136	23
Other	14	2	140	11	129	38	12	2
Total	561	100	927	100	343	100	584	100

**TABLE 3**  
**AGE-SEX COMPOSITION OF 1982 AND 1983–1985 MIGRANT POPULATION**

Age-Sex Group	Pre-drought		Drought 1983–1985					
	1982 (N)	(%)	Total (N)	(%)	Permanent (N)	(%)	Circular (N)	(%)
Chile < 15 years	135	17	222	24	84	24	138	24
Female > 14 years	131	17	318	34	122	36	196	34
Male > 14 years	502	65	367	40	125	36	242	41
Age unknown	20	2	20	2	12	4	8	1
Total	782	100	927	100	343	100	587	100

Source: Enquête Renouvelée de Migration dans la Vallée du Fleuve Sénégal, CERPOD, 1989



percent in 1983–1985. Among adult migrants, the proportion female doubled from 17 percent to 34 percent during the drought.

The majority (62%) of the women and children migrating during the drought period were circular migrants. The mean age at migration was 22.2 for the permanent migrants, while it was 19.6 for the circular migrants. Among adult migrants, women accounted for 44 percent of all circulator or short-cycle migrants.

What motives were attributed to these drought migrations? As shown in Table 4, very few of the household heads explicitly reported drought or famine as the reason for migration. However, it is important to recall that migrant reasons were reported retrospectively by the head of household, and they are subject to both reporting and reinterpretation biases. This would tend to bring the reported motives into congruence with the actual economic contributions from the migrant.

Comparison of the motives for the pre-1982 and 1983–1985 period shows the expected increase in migrations attributed to family and marriage. Almost one-half (48%) of all drought migrations were attributed to family or marriage, compared to only 21 percent among the 1982 migrants. During the drought, the proportion of all migrants moving for marriage rose from 2 percent to 17 percent. This is consistent with the hypothesis that women would be encouraged to marry in order to reduce consumption.

**TABLE 4**  
**DISTRIBUTION OF REASONS FOR MIGRATION IN 1982 AND 1983–1985,**  
**BY GENDER AND TYPE OF MIGRATION**

Stated Reason	Total (%)		Drought 1983–1985 (%)					
			Permanent			Circulator		
	Pre-1982	1983–1985	Total	Male	Female	Total	Male	Female
Drought	0	0	0	0	0	1	1	0
Marriage	2	17	25	0	52	12	1	27
Other family	19	31	27	16	38	34	20	50
Studies	3	5	7	13	0	5	9	1
Economic	47	25	31	60	0	21	39	1
Other noneconomic	4	4	1	1	1	5	5	4
Return migrant	2	3	1	1	0	4	6	1
Unknown	23	15	9	9	9	18	19	16
Total Cases (N)	782	927	343	176	167	584	315	269

Source: Enquête Renouvelée de Migration dans la Vallée du Fleuve Sénégal, CERPOD, 1989.

Note: Columns may not add up to 100% due to rounding.

The proportion of moves attributed to economic motives declined, falling from 47 percent to 25 percent of all reported moves. Even if the 15 percent for whom the motive was not specified were actually economically motivated, there would still be a drop in the proportion of economically motivated migrations.

The other columns in Table 4 show that the decline in economic motives was concentrated among the female migrants, who were practically never described as economically motivated. Male migrants, whether long- or short-cycle migrants, accounted for virtually all economically motivated migrations. As in the period before the drought, during the drought males were largely motivated by the search for work and money.

After controlling for gender, there still were differences in motivation between the long- and short-cycle migrants. Over half (60%) of the male long-cycle permanent migrants were said to migrate for economic reasons, compared to only 39 percent of the male short-cycle or circular migrants. Even among males, many more of their short-duration moves were attributed to family and other noneconomic reasons. The proportion with motives unknown was also twice as high among the circular male migrants.

The long- and short-cycle female migrants were distinguished by the proportions moving for marriage. Half (52%) of the women who permanently left their families were said to have left for marriage, compared to only one-fourth (27%) of those who came back. Among the short-cycle migrant women, other family reasons, such as visiting family, dominated, accounting for 50 percent of the moves. This was a larger than expected number of circular migrants giving marriage as a reason. Customarily, marriage leads to a woman's permanent departure from her natal family, so we should not see much marriage-induced female circulation. Why did it rise so much? First, the circulation may have occurred prior to the wedding, perhaps as a move to earn extra money. Second, some women may have gone to live with the husband's kin at the time of the wedding, but when he subsequently migrated or returned to France, she returned to live with her own kin. Third, the woman may have been asked to help her natal family for a short period of time. By 1989, most of these women had returned to their husbands' families and were considered permanent emigrants from their natal families.

As shown in Table 5, social and demographic differences between the long-cycle and short-cycle migrants were relatively small. The exceptions were gender, ethnicity and migration experience. Over half (55%) of all short-cycle migrants were female, well above the 41 percent among the long-cycle migrants. Fewer of the short-cycle migrants were members of the Soninke ethnic group, and their families had less migration experience. While most (85%) of the long-cycle or permanent migrants had family members who had migrated at least once before 1982, only 69 percent of the short-cycle migrants had family members who had done so.

As expected, the short-cycle migrants were poorer than the long-cycle or permanent migrants' families. Almost half (44%) of the short-cycle migrant

**TABLE 5**  
**CHARACTERISTICS OF PERMANENT AND CIRCULAR MIGRANTS, 1983–1985**

Characteristic	Permanent or Long-cycle	Circulator or Short-cycle
Proportion female (all ages)	41%	55%
Average age at migration	22.2 years	19.6 years
Proportion with no modern schooling	90%	88%
Proportion with prior migrations	51%	56%
Proportion Soninke	72%	64%
Proportion with migrant kin 1982	85%	69%
Proportion not working 1982	71%	77%
Proportion poor	38%	44%
Family per capita income 1982–1989	32,470 F CFA	22,418 F CFA
Family remittance income 1982–1989	214,627 F CFA	143,800 F CFA
Family millet deficit 1982 (p.c.)	64 kg	54 kg
Average drop in millet output 1983–1985	703 kg	554 kg
Total cases	343	584

Source: Enquête Renouvelée de Migration dans la Vallée du Fleuve Sénégal, CERPOD, 1989

families were the poorest in the village, owning no consumer durables or only a kerosene lamp. In contrast, only 38 percent of the long-cycle permanent migrant families were this poor. The permanent migrant families had 1982–1989 per capita income 45 percent higher than that for the circular migrants (32,470 F CFA versus 22,418 F CFA). Consistent with their greater number of migrant kin, the permanent migrants had a much greater access to migrant remittances, averaging a 1982–1989 remittance income of 214,627 F CFA, 42.3 percent higher than the level reported among circular migrants' families.

Though the families of the circular migrants were poorer than the families of the permanent migrants, they were more food self-sufficient. In 1982 they averaged a 54 kilograms per capita millet deficit, 16 percent less than the deficit in the families of long-cycle or permanent migrants. In addition during the drought they experienced a smaller drop in millet production. They had less food deficit to make up by migrating than did the other families. It was feasible for them to adopt patterns of migration which brought in less income or which made marginal changes in consumption, such as with circulation of women and children.

## CONCLUSIONS

Although the 1983–1985 drought was not so serious as those experienced in recent years in Ethiopia and Zimbabwe, cereal and livestock production dropped to one-half the normal level. Instead of needing to purchase only 40 percent of their food, families had to purchase 60 percent of their food. The majority of families depended on migration to get them through the drought. Some families depended on remittances from prior migrants, those already in France, Senegal, Ivory Coast, Gabon or elsewhere in Africa. Others sent new migrants out to look for work and food.

During the drought, the average rate of migration for this region did not rise. This lack of an increase in migration could be due to the fact that there already were many outmigrants from this region, and through their remittances the families were able to avoid having to send additional migrants. The food relief efforts mounted during the drought may have offset the food production shortfalls so that the immediate pressures to migrate in search of food were reduced. Alternatively, the pre-drought migration level may have already been near some maximum level, which could not be significantly changed even with the drought.

The types of migrations shifted towards more short-cycle migrations, namely more circulations to nearby Malian destinations. Only 36 percent of the drought migrants followed the classic long-cycle or permanent migration pattern. As expected, the long-cycle migrants were very similar to the pre-drought migrants: mostly male, Soninke ethnicity, with previous employment and migration experience, and coming from the better-off families. One-third of the long-cycle migrants migrated in search of work.

The most striking changes in migration during the drought involved short-cycle or circular migrations, which more than doubled during the drought. Unlike the permanent, long-cycle migrations, the short-cycle migrations are associated with a higher level of movement, involving two moves per migration. This doubling of circular migration contributed to the impression that migration had risen dramatically during the drought.

The short-cycle migrants were similar to the long-cycle migrants in many respects, except in gender, ethnicity, migration experience, and economic status. The short-cycle migrations were not primarily described as economically motivated. However, the short-cycle migrants did come from poorer families, with lower average incomes and lower remittance levels. Poverty played a role, though not openly, in prompting the short-cycle migrations.

Because the families with circular migrants also had smaller average food deficits, the departure of one or two members could have played a role in balancing food consumption and demand during the drought. In addition, these families experienced smaller declines in food production during the drought, leaving them more potential to meet food demand with relatively minor production adjustments.

With the completion of the Manantali dam on the Senegal River, the Malian government and international aid organizations have the opportunity to create more options for these families. Given the long history of migration from this region, it is unlikely that probable development activities would curtail these migrations. But development programs could be designed to reinforce and mold the region's migrations so that they serve a more positive role in preparing the families to cope with future droughts.

For the families and villages where long-cycle migrations dominate, it would be better to work with their system than against it. Their dominant Soninke ethnicity stresses migration, trade, and family; these dimensions should be incorporated into village development projects.

This means finding ways to make migration less onerous for the families and generally facilitating, rather than discouraging, these migrations. The most important change in policy would be to recognize these migrations for what they are, namely circular migrations with no intention of permanent settlement. France and the European Community could start by reversing the 1980–1990 trend of tightening immigration restrictions. Given the Malian migrants' intentions to return, the governments could explore ways to facilitate both entry and return. For example, the Malian and French governments and prospective French employers could streamline the migration process so less time is spent unemployed and waiting in Dakar. Dakar and Bamako firms might actively encourage migrations of their employees as a part of an apprenticeship or training program. Entry and exit visa formalities could be revised to permit the migrant to return home at least every three years without fear of losing the re-entry visa, even if they stay home for more than six months. Currently, the fear of losing their visas prolongs stays, preventing men from returning home either to visit or to stay while younger siblings take their turns migrating. More could be done to make the migrants economically competitive, namely improved education and technical training.

In Mali, the government and local nongovernmental organizations could work with the migrants' families to co-fund emergency food banks, building in the current system whereby the migrants send money to a middleman who in turn supplies the migrants' families with grain in time of need. With the greater investment potential made possible by remittances, villages with high levels of long-cycle migration would be good sites to establish cooperative savings and investment groups. Given the tight ethnic bonds of the Soninke and their already demonstrated willingness to pool funds for village developments, this is a zone where the Bangladesh Grameen Bank type of credit arrangements might work well. Through careful planning and use of pooled funds, the migrants could provide the catalyst for a more diversified economy where they can find an economic niche upon their return.

Among the families and villages where short-cycle migration was dominant during the drought, different strategies are needed. As much of the migration appears to have the goal of balancing food consumption against supply, strate-

gies should focus on stabilizing food supply. These are the villages where efforts to make agriculture more drought-resistant might pay off since they already are closer to stable production. Existing irrigation projects could be made functional, with a view to creating a system to maintain grain production during dry years and to build reserves in the normal years.

As much of the short-cycle migration functioned to reduce consumption and to move family members from food-short to food-surplus zones, relief organizations could explore ways of working with these migrants, rather than attempting to stop them or, worse yet, ignoring their occurrence. For example, it might be possible to distribute vouchers that women and children could use to purchase food in urban areas.

At the same time, because these families are the ones who were forced to split up during the drought, they might be the most interested in family planning, clearly the strongest long-term strategy to reduce consumption during a drought. In addition, family planning would allow women to increase spacing between births, thereby allowing them the freedom to circulate during the drought.

Through the diversification of migration patterns during the drought, the families demonstrated their ability to bend fairly rigid social structures to the needs of the situation. They can be counted on to do this again in future droughts. The question remains whether the government and relief organizations will match this flexibility by exploring alternative ways of connecting people with food.

## REFERENCES

- Adams, A.  
1977 *Le Long Voyage des Gens du Fleuve*. Paris: Francois Maspero.
- Amselle, J.  
1978 "Migration et Société Néotraditionnelle: Le Cas des Bambara du Jitumu (Mali)," *Cahiers d'Etudes Africaines*, 18(72):487-502.
- Barou, J.  
1976 "L'emigration dans un Village du Niger," *Cahiers d'Etudes Africaines*, 16(3):627-632.
- Caldwell, J. C. and P. Caldwell  
1989 "Famine and Mortality in Africa." In *Mortalite et Societe en Afrique*. Eds. G. Pison, E. van de Walle, and M. Sala-Diakonda. Travaux et Documents, Cahier no. 124, Institut National d'Etudes Démographiques. Paris: Presses Universitaires de France.
- Caldwell, J. C., P. H. Reddy, and P. Caldwell  
1986 "Periodic High Risk as a Cause of Fertility Decline in a Changing Rural Environment: Survival Strategies in the 1980-1983 South Indian Drought," *Economic Development and Cultural Change*, 34(4):675-701. July.
- Colvin, L. G. et al.  
1981 *The Uprooted of the Western Sahel*. New York: Praeger.
- Conde, J. and P. S. Diagne  
1986 *South-North International Migrations: A Case Study of Malian, Mauritanian and Senegalese Migrants from Senegal River Valley to France*. Development Centre Papers. Paris: OECD.

Coulibaly, S., J. Gregory, and V. Piche

1980 *Les Migrations Voltaïques: Importance et Ambivalence de la Migration Voltaïque*. Centre Voltaïque de la Recherche Scientifique and Institut National de la Démographie. Ottawa: IDRC.

Diallo, Y. M.

1981 "Les Conséquences de la Sécheresse sur les Migrations dans les Pays du Sahel: L'Exemple du Mali," *Proceedings of International Union for Scientific Study of Population*, Manila. Vol. 3. Liege: Ordina Editions.

Findley, S. and A. Diallo

1988 "Foster Children: Links between Urban and Rural Families," *Proceedings of African Population Conference*, Liege: International Union for Scientific Study of Population.

Finnegan, G. A.

1980 "Employment Opportunity and Migration among the Mossi of Upper Volta," *Research in Economic Anthropology*. Vol. 3. Greenwich, CT: JAI Press.

Gervais, R.

1987 "Pour une Problématique Démographique des Catastrophes Dites Naturelles: L'exemple du Niger 1969-1974." In *Demographie et Sous-Developpement dans le Tiers-monde*. Eds. D.Gauvreau, J. Gregory, M. Kempeneers, and V. Piche. Montreal: McGill University.

Hamer, A.

1981 "Diola Women and Migration: A Case Study." In *The Uprooted of the Western Sahel*. Ed. L.G. Colvin, *et al.*, New York: Praeger.

Hugo, G.

1980 "New Conceptual Approaches to Migration in the Context of Urbanization: A Discussion Based on Indonesian Experience." In *Population Movements: Their Forms and Functions in Urbanization and Development*. Ed. P.A. Morrison. IUSSP Seminar on Territorial Mobility. Liege: Ordina Editions.

ISH (Institut des Sciences Humaines)

1984 "Exode des Femmes du Mali: Main-d'oeuvre Domestique Féminine à Bamako et Segou." Bamako.

Ministere du Plan

1985 *Diagnostic de la Region de Kayes*. Comité Régional de Developpement. Kayes: République du Mali, Min. du Plan.

Minvielle, J. P.

1985 *Paysans Migrants du Fouta Toro: La Vallée du Senegal. Travaux et Documents No. 191*, Editions de l'ORSTOM, Paris: ORSTOM.

OMVS (Organisation pour la Mise en Valeur du Fleuve Sénégal)

1980 *Etude Socio-Economique du Bassin du Fleuve Sénégal*. Dakar/Saint Louis:OMVS.

Ouedraogo, D.

1988 "Sécheresse et Population." Presented at Conférence des Planificateurs et des Demographes CEA, Addis-Ababa, March.

PUM (Projet Urbain du Mali)

1984 *Etude de Developpement Urbain de Bamako: Programmation Decennale des Investissements*. Bamako. Rapport Phase 1. Ministère de l'Interieur, Republique du Mali.

Prothero, R. and M. Chapman, eds.

1985 *Circulation in Third World Countries*. London: Routledge and Kegan Paul.

Remy, G.

- 1977 "Mobilité Géographique et Immobilisme Sociale: Un Exemple Voltaïque," *Revue Tiers-Monde*, 18(71):617–653.

Sow, S.

- 1987 *Les Conséquences Économiques et Humaines de la Sécheresse (1983–1985) dans la Zone Kayes Nord*. Unpublished Masters Thesis. Ecole Normale Supérieure, Bamako, Mali.

Standing, G., ed.

- 1985 *Labour Circulation and the Labour Process*. London: Croom Helm.

Vaa, M., S. E. Findley, and A. Diallo

- 1989 "The Gift Economy: A Study of Women Migrants' Survival Strategies in a Low-Income Bamako Neighborhood," *Labour, Capital and Society*, 22(2):234–260. Nov.

Weigel, J.-Y

- 1982 *Migration et Production Domestique des Soninke du Sénégal*. Travaux et Documents de l'ORSTOM No. 146. Paris: ORSTOM.