

Impoverishment Risks and Reconstruction of Kali Gandaki Dam, Nepal

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Abstract:

Displacement of local people by large infrastructure projects often results in the people's impoverishment. This paper extracts the characteristics of involuntary resettlement in Kali Gandaki (KG) Dam which is the biggest infrastructure project of Nepal (the Project), financed by the Asian Development Bank. The author focuses on the principal impoverishment risks typical in dam construction. He explores the extent to which these risks became reality in Kali Gandaki and conversely the extent to which measures implemented by the project were successful in counteracting the risks.

The intensity of various impoverishment risks in the Kali Gandaki Dam was not equal: it varied among different sub-groups of a total 1,000 affected families (population 6,000). The main impoverishment risk is loss of land and other income generating assets (e.g., fruit trees). Different sub-groups of affected families now have 25-50 percent less land and assets than before appropriation. Decreased lands and trees have resulted in less volume of agricultural production and number of livestock. The risks of joblessness had low intensity because few affectees held jobs before the Project. Homelessness and house reconstruction problems were serious at the beginning but after a couple of years all affected families have succeeded in rebuilding their houses. The risk of marginalization manifested very severely among Botes (fishermen), indigenous people, and the other very poor groups. The Botes lost their customary land without compensation. Similarly, the risk of food insecurity has also become a reality. Affected families are facing food deficits ranging from 4 to 9 months per annum, mainly due to loss of productive land. The risk of increased morbidity manifested in several ways. Outbreak of cholera claimed several local lives. Among Botes, 70 percent of the children (under five) are malnourished. The risk of loss of access to common property assets took several forms viz. grazing land, community forest, drinking water sources, cremation sites, fishing in the river, and so on. Because of the favorable topographical site of the Project the risk of social disarticulation through dispersion was limited. Most of the affected families have adjusted near or within the old settlement, after expropriation.

The paper also brings evidence about the effectiveness of the risk-limiting measures implemented by the Project. These included: a) heightened rates of compensation for land; b) targeted employment rates of affected people for securing them with paid jobs; c) training in non-agricultural professional skills; d) micro-credit facilities; and e) other forms of agricultural and community development assistance provided by the Project. Particularly, providing project jobs has proven a robust approach and has resulted in unusually significant successes. The paper concludes by proposing pragmatic measures and policy recommendations.

Introduction

Larger infrastructure development projects are criticized for several reasons. One reason is the displacement of local people that these development projects entail. Displacement of local people by larger projects often result in the people's impoverishment. Projects that require displacement and relocation of people include dams for hydro power and irrigation, roads, airports, and so on. This paper extracts the characteristics of involuntary resettlement at Kali Gandaki (KG) Dam, which is the biggest infrastructure project of Nepal, financed by the Asian Development Bank. The paper focuses on the principal

impoverishment risks typical in dam construction. It explores the extent to which these risks became reality in Kali Gandaki and conversely the extent to which measures implemented by the Project were successful in counteracting the risks.

This paper is a synthesis of sociological studies carried out by the author among three distinct groups of affectees at KG Dam: a) Bote indigenous groups¹; b) 123 Seriously Project Affected Families (SPAFs)² from the access road, Dam, and reservoir; and c) 266 Project Affected Families (PAFs)³ from the main facilities. All these three studies employed the "risk and reconstruction" model developed by Michael Cernea

(1997) as a conceptual framework. The model includes the contents of both displacement and a reconstruction process, i.e., universal impoverishment risk-patterns and a set of counter strategies to prevent these risks. Such key impoverishment risks and parallel counteractive strategies are:

- Landlessness vs. Land-based Reestablishment,
- Joblessness vs. Re-employment,
- Homelessness vs. House Reconstruction,
- Marginalization vs. Social Inclusion,
- Food Insecurity vs. Adequate Nutrition,
- Increased Morbidity vs. Better Healthcare,
- Loss of Access to Common Property vs. Restoration of Common Assets,
- Social Disarticulation vs. Community Reconstruction.

This paper analyzes the Kali Gandaki “A” Project's resettlement impacts along these eight risk variables based on the existing database and direct interviews with the affected families. Apart from these risk analyses the paper follows discussions on other relevant issues as well.

Project Component and Associated Impacts

In general, among different components of hydro power generation projects, the KG Dam is likely to entail more resettlement impacts than other components. But the Kali Gandaki Project seems quite different in this respect. Few houses have been expropriated for dam construction. Most of the riverbank that was submerged is government land; required land for the Desander is grassland. Among other components Powerhouse required expropriation of some half dozen houses and some hectares of Khet land. Construction of Project facilities, i.e., employer and contractors offices and residences, required expropriation of about two dozen houses and similar hectares of Khet and Bari land. The civil contractors' workshop also required displacement of 8 Bote fishermen in Andhimuhana. The access road displaced about 60 houses and affected lands along its right of way (RoW). Thus, it is seen that almost all SPAFs and PAFs are affected due to access road and other project facilities. Only some of them were affected by the Powerhouse. In this way the KG Dam component seems to have generated very few SPAFs.

Strategy and Objective

The review of the Project planning revealed that

KGA thought very wisely in minimizing involuntary resettlement impacts by reducing the height of its dam. Previously, the dam's height was considered to be around 50 meters but later was changed to only 44 meters. If the first option was chosen it was likely to submerge Setibeni Bazaar and the Holy stone (Saligram). This later strategy served, on the one hand, to prevent displacement of some hundred families and, on the other hand, did conserve the local cultural property.

In spite of design changes, some resettlement impacts were unavoidable due to construction of several Project components as described above. The Project, therefore, has set its resettlement objective as “*all adversely affected families improve or regain their prior standard of living.*”

Definition of Affected People

The Project has defined those people as affected families who have lost their houses and/or land. Other indirectly affected people (e.g. fishermen and rafters in Kali Gandaki river) are not defined as affected families. Further, there are two categories of affected families. Those who lost their house and/or more than 50 percent of their land have been categorized as seriously project affected families (SPAFs); those who did not lose their house and lost less than 50 percent of their lands are called project affected families (PAFs). It is quite obvious that these concepts were borrowed from the aborted Arun-III project.

Some inconsistencies, however, were observed during the study in respect to categorization of SPAFs. That any person(s) (not family) owning a separate land certificate and losing a house along with more than 50 percent land, have also been categorized as separate SPAF/PAF. In this way two or more names from a single household were found in the official list of SPAF/PAFs. Secondly, those who lost more than 50 percent land from a single land certificate have become SPAFs. Thirdly, names of SPAF/PAF have been determined based on the names of persons in the land certificates. In many cases land possessors do not necessarily have his/her name on the certificate due to errors in the cadastral survey.

Evaluation of Risk and Counter Strategies

The study revealed that the intensity of various impoverishment risks at the Kali Gandaki Dam were not equal: it varied among different sub-groups of affected families and among different risks. The

following sub-sections examine the extent to which these risks have become reality in Kali Gandaki and conversely the extent to which measures implemented by the Project were successful in counteracting the risks.

Landlessness vs. Land-based Reestablishment

The IR&R Model's Hypothesis

Landlessness is a major impoverishment risk associated with involuntary resettlement. The expropriation of land removes the main foundation upon which people's productive systems, commercial activities, and livelihoods are constructed. This is the principle form of decapitalization and pauperization of displaced people as they lose both natural and man-made capital. The strategy to counter this risk from becoming a reality requires the land-based reestablishment. Settling displaced people back on cultivatable land is the heart of the matter in reconstructing livelihoods. Successful approaches often involve identifying equivalent lands, or bringing new lands into production through land recovery and crop intensification (Cernea 1997).

KG Empirical Data

The risk of landlessness in Kali Gandaki was found to be loss of land (irrigated, rain fed, and grassland), and other land-based assets like trees. As Table 1 shows, altogether the different groups of KG's affectees now have 25-50 percent less land, have 25-60 percent fewer fruit trees, and have 33-60 percent fewer fodder trees than before expropriation. Furthermore, the reduced land and trees have resulted in less volume of agriculture production and reduced number of livestock. Livestock are important sources of food as well as income in the rural economy. The same table shows that these groups of affected families have less agricultural production by 27 percent among PAFs and 60 percent among SPAFs. Likewise, they have 50-60 percent less livestock after expropriation.

Table 1

Impact on Land and Other Assets			
	16 Botes	123 SPAFs	266 PAFs
Land loss (<i>ropani</i>)	42 (50%)	989 (50%)	1314 (25%)
Fruit tree loss	28 (40%)	1046 (60%)	300 (25%)
Fodder-tree loss	89 (33%)	2768 (60%)	3615 (49%)

Agri. Prod. Loss (<i>muri</i>)	51 (60%)	1322 (45%)	1852 (27%)
Livestock loss	40 (51%)	591 (60%)	1158 (55%)

Furthermore, even after 4-5 years of expropriation, the majority of families have not been able to recuperate their loss of these assets. For example, more than 80 percent of families still have less land than before expropriation. About half of the families have less fruit trees and more than two thirds also have less number of fodder trees. The studies also reveal that Botes indigenous group seems to have the most serious impacts compared to other groups. The PAFs are less seriously affected than the other two groups. The reasons behind this inability of recuperation of land loss are several. First, the majority of compensation money went to other purposes like house reconstruction, payment of old loans, purchase of new commodity goods, etc. Second, they did not find suitable land in the village and did not want to go to Terai. Third, due to lack of prior monetary experience in handling cash, they could not afford risk by buying land in a new place. Finally, some people converted their economy from agro-based to market-based and did not want to repurchase land.

In respect to counteracting strategies, projects that provide land in lieu of expropriated land have found it successful to restore land more effectively than projects which hand out compensation only (Cernea 1993). However, in some cases it might not be feasible because either the replacement with new land is not readily available, and in few cases land owners themselves prefer cash compensation. Both cases happened in Kali Gandaki as two-thirds of families preferred cash when they were asked about their choices on mode of compensation. In such a way several modes of cash compensation strategies were adopted in KG to counteract the risk of landlessness. First, all kinds of land were compensated in cash to the official owner of the land certificate. The Project followed cash compensation instead of land for land. Secondly, public consultations were sought for land compensation processes. A Village Advisory Committee was formed comprising local community leaders as well as representatives of affected families. Third, the Project heightened the rates of land compensation for powerhouse/headwork's land compared to pre-project compensation levels. It was an effective decision to adjust the compensation rate nearer to market price as the government rate of land was lower than local market price. Fourth, the Project

also provided additional grants to some groups of affectees. Tenants of trust (*Guthi*) land, who had legal certificates, were provided with an additional 42 percent compensation, totaling 75 percent vis-à-vis legal provision of providing only 33 percent compensation for such kinds of land. A small grant was also provided as an incentive to those people who purchased replacement land. Finally, compensation was provided for standing agriculture crops damaged during project construction.

Some policy deficiencies as well as practical failures, however, have also been observed during the grievance process. First, the most severe failure manifested in non-compensation for customary land without formal legal land title, i.e., communal trust (*Guthi*) land possessed by Bote indigenous people and other land parcels without legal title. Though they were residing there and possessed this land since long ago, they were denied compensation on the ground that they lacked legal land certificates (*lalpurja*). This practice, however, is not consistent with the donor policy. The ADB resettlement policy of 1995 envisaged that absence of legal title should not be a bar from receiving compensation. Second, another such failure was the Project's inability to cover all kinds of losses for compensation. Expropriated fruit and fodder trees were not compensated. Likewise, downstream effects by construction of roads, soil erosion, and damage of land etc., were not taken into account for compensation. Furthermore, the Project's requirements for legal document and non-recognition of *de facto* status regarding size and type of land also proved to be counterproductive on fair valuation of expropriated property. For example, most of the affectees have had land registered at low grades and smaller sizes and therefore the compensation amount were reduced because valuations of expropriated property were done according to the legal documents. In such a way farmers were underpaid vis-à-vis actual losses of their properties. Finally, the Project did not carry out parcel level land mapping.

Joblessness vs. Re-employment

The IR&R Model's Hypothesis

Joblessness is another fundamental risk. Involuntary resettlement is likely to result in loss of employment and wages by affectees more in urban areas, but also in rural areas, depriving landless laborers, service workers, artisans, and small business owners of sources of income. Unemployment or underemployment resulting from resettlement tends to linger long after

physical relocation of affectees. The counter strategy of countering this risk is creating re-employment opportunities. This includes employing the jobless in project and project-related jobs. A shift to more valuable crops, diversification of on-farm/off-farm activities, use of project-created resources such as reservoir irrigated areas downstream, etc., are also viable strategies for employment restoration of those affectees who previously were employed in agriculture and similar activities (Cernea 1997).

KG Empirical Data

The impoverishment risk of joblessness did not prove to be a reality in KG for various reasons. First, most of the working age population was in agriculture in the pre-Project period. The Project area included mostly peasant communities where little of the population had paying jobs. It did not include town and urban areas where the majority of populations have such jobs. Most of those who had pre-Project jobs were in India. Secondly, the Project adopted a firm strategy of securing paid project jobs to affectees. Its contractual documents made construction contractors obligatory of providing skill training as well as employment of at least one member from Seriously Project Affected Families (SPAFs). The employment records reveal that more than two-thirds SPAFs had some family members employed in Project jobs. This risk limiting strategy was promoted with sufficient vigor and has proven robust in achieving unusual success. Furthermore, apart from direct Project jobs, enormous self-employment opportunities were also created due to the boom effect in the local economy, which also helped prevent this risk.

Despite general success in creating new jobs, however, some weaker sections of affected populations did not reap these Project-generated benefits. Such destitute groups included Botes, women, the elderly population, and low castes. Only 10 percent of Bote families have Project jobs, whereas the figures reach above 65 percent for other high caste groups. Likewise, out of total employees, women share less than five percent.

Homelessness vs. House Reconstruction

The IR&R Model's Hypothesis

Homelessness is not only an economic impoverishment risk, but also a cultural impoverishment risk. Loss of housing and shelter is temporary for the majority of displaced persons, but

threatens to become chronic for the most vulnerable. Considered in a broader cultural sense, homelessness is also placelessness, loss of a group's cultural space and identity. House reconstruction is regarded as one of the relatively easier achievable strategies. The improvements take one or more of the following forms: more square footage per capita, better quality housing materials, connection to services (electricity, water), safer sanitation facilities, space for house gardens, and other forms (Cernea 1997).

KG Empirical Data

The risk of homelessness and house reconstruction problems appeared at the beginning of the KG Project when about 90 families lost their houses. But after four or five years of expropriation, except Botes, almost all affectees in KG have succeeded in rebuilding their houses, however, at the cost of other resources. Quality of reconstructed houses appears better than old houses. Some of the new houses are roofed with iron-sheet metal and are cemented whence these were previously thatched. Two-thirds of houses have electricity, while there was no electricity at all at pre-Project houses. This was all possible because most of the Project compensation as well as earnings from Project paid jobs have been used in house reconstruction. The studies show that half of the total compensation money received from the Project went to this purpose. Not only those who lost houses, but also others, have used a substantial portion of income in the same activity. The reasons of which are two: cultural and economic. From a cultural point of view houses are regarded as symbols of social status, and being homeless is something like social death. Similarly, some people have found houses also as important income-generating assets. Due to pressure of temporary immigrants in the Project area houses can be rented out with a handsome return of rent. About 10 percent of affectees have their house rented out to others and these houses earn more than 1 million rupees annually in the form of house rent.

Botes, however, have a different experience. Some of their houses have been displaced twice. After the displacement they are now residing in very unsafe and improper places. In fact, some settlements could not be accepted as living places. Houses are located along a trail which passes through a very steep area, part of which will be inundated by reservoir water once the dam construction completes. Houses have no courtyards. They can not even find a place to keep a piglet and some chickens distributed by the Project.

Marginalization vs. Social Inclusion

The IR&R Model's Hypothesis

Marginalization occurs when families lose economic power. Middle-income farm households become small landholders, and so on. Economic marginalization is often accompanied by social and psychological marginalization, expressed in a drop in social status while feelings of injustice and vulnerability increase. Planners tend to overlook these socio-cultural dimensions, but they should focus on them to facilitate reconstruction of social institutions as well as income generating measures. It also includes integration within host populations and compensation for community owned assets (Cernea 1997).

KG Empirical Data

Some affectees, who got better cash compensation as well as Project jobs and were capable of managing cash money, have moved socially and economically upward. Botes and other weaker sections of affectees were disadvantaged in terms of compensation and Project paid jobs. They were not familiar with the skill of handling cash property, and have experienced marginalization with reduced income and increased social vulnerability. The survey data show that these underprivileged people, i.e. mostly Botes, women-headed households, and unemployed families, have around 50 percent less agricultural income than before expropriation. Botes' income from fishing has almost vanished with two-thirds curtail. Furthermore, not only economic but also several socio-cultural dimensions of marginalization have been observed among these disadvantaged and vulnerable groups. Such vulnerabilities include downward social status, psychological stress, anxieties regarding future living, food, clothing, medical treatment, education, and marriage of children, etc. Similarly, common vulnerability included increased alcoholism, abuse of women, violence, decays of social values, etc. Young generations particularly have become victims of alcoholic addiction. Also prostitution and AIDS, as well as elopement and the disappearance of women and girls appear to become a great threat toward gender impoverishment. Such things are further intensified due to decays in some good social values like respect to women, elders, and poor people.

Despite the above-mentioned dark aspects, however, the same studies also provide evidence as well in this respect of successes of counter risk strategies implemented in the KG Project. Particularly,

Project employment, as mentioned in the preceding section, has proven to be an unusual success in increasing very substantial cash infusions in the economy as well as overall livelihood of beneficiary groups among affectees. The studies have found that the income accrued by 214 families from Project employment exceeds 50 million Nepali rupees per annum. The newly generated income from Project employment is roughly 5-6 times higher than that of the agricultural production value that they lost. Further, the Project has set up a \$50,000 micro-credit revolving fund to provide assistance to its affectees to start new income-generating enterprises.

In conclusion, it is seen that about two-thirds of the affected families have fully been successful while others have failed to limit risk in terms of the lost income and socio-cultural status. These groups include Botes, women-headed households, low caste people, and families only having elderly people.

Food Insecurity vs. Adequate Nutrition

The IR&R Model's Hypothesis

Forced displacement increases the risk that people will fall into chronic food insecurity. Sudden drops in food crop availability and income are endemic to physical relocation and hunger, and undernourishment lingers as a long-term effect. Counter strategy could benefit much from refugee programs' techniques in the same matter. It may include providing food on a temporary basis as well as long-term measures for adequate nutrition (Cernea 1997).

KG Empirical Data

Even though the area was marked as a food-deficient area before the Project construction started, the expropriation of productive land and other assets by the Project has further worsened the situation toward the danger of chronic and severe food deficit among affectees.

Table 2

Families and Number of Food Deficit Months			
	Botes	SPAFs	PAFs
% family with food-deficit	100	90	80
# months with food-deficit	9	6	5

As mentioned earlier, agricultural production among affectees has been reduced by 45 percent and 27 percent among SPAFs and PAFs, respectively. This has also resulted in a more severe food deficit among these affectees. The table shows that more than four-fifths of affected families have a food deficit. The average number of food deficit months differs from 5 for PAFs to 9 for Botes.

Although an agriculture intensification program was conceived during the planning stage to prevent this risk, and given a \$10,000 annual budget for its implementation, this was never implemented in Kali Gandaki. The Project jobs and subsequent increase in cash income have been successful so far in preventing hunger as they have money to buy food from the markets. But the situation is likely to worsen once these affectees lose their Project jobs with completion of dam construction.

Increased Morbidity vs. Better Healthcare

The IR&R Model's Hypothesis

The health of displacees tends to deteriorate rapidly from the outbreak of relocation – related parasitic and vector borne diseases (malaria, schistosomiasis, etc.), malnutrition, and increased stress and psychological traumas. Strategies are needed for better health care, lower morbidity, and measures to prevent increases in mortality rates (Cernea 1997).

KG Empirical Data

The evidence shows that this risk manifested itself to be a reality to some extent in Kali Gandaki. After the Project inception, cholera broke out, which was uncommon before, and spread in the Project area claiming several lives. Likewise, during the interviewing most of the affectees responded that they experienced psychological stress. Furthermore, one of the recent health surveys revealed that among Botes indigenous people 70 percent of children under five are malnourished. Along with environmental pollution, incidences of water-borne and respiratory diseases have also increased among the affected population.

The counter strategies by the KG Project to prevent this risk included distribution of water to some of the local communities and treatment of water sources within the project area. This also included provision of labor housing and running two health centers in Mirmi and Beltari.

Loss of Access to Common Property vs. Restoration of Common Assets

The IR&R Model's Hypothesis

Loss of access to commonly owned assets (i.e., forested lands, bodies of water grazing lands, and so on), typically overlooked and uncompensated for in government schemes, is another major cause of income deterioration for affectees, particularly for the assetless. Restoration of community assets needs to compensate those properties expropriated by development programs (Cernea 1997).

KG Empirical Data

The studies revealed that the risk of loss of access to common property assets has become apparent in some respects. Such negative impacts on community assets include grazing land, community forests, drinking water sources, cremation sites, fishing in the KG River, and so on. The majority of civil works and muck disposal area ended up occupying much of the common grassland and a long segment of the riverbanks where peoples' cattle used to graze. This is also a major reason that there was a significant drop in livestock owned by KG affectees. Similarly, forest depletion is also common. The risk of deforestation may further increase once the 106-KM transmission line is likely to cut down trees along its right of way. Furthermore, several cremation sites are prone to inundation after construction of the Dam; and some drinking water sources have already been badly effected. Fishing in the KG River has also been impossible due to the Dam barrier as well as illegal poaching by Project's workers. About 200 Botes and other fishermen are likely to lose their average 100 KG fish harvest per family per annum, i.e. equivalent to 10,000 rupees.

In this respect, risk-limiting strategies by the Project included planting of saplings in community barren land, renovation of two cremation sheds, and cage culture training for fishermen. Furthermore, a fish trapping/hauling program and fish hatchery are also crucial in terms of their objectives of fish population mitigation as well as Bote employment.

Social Disarticulation vs. Community Reconstruction

The IR&R Model's Hypothesis

Community dispersal means dismantling structures

of social organization and loss of mutual help networks. Community reconstruction needed a strategy to rebuild living social bonds and networks, e.g. kinship, social organization, leadership, etc. (Cernea 1997).

KG Empirical Data

Because of the favorable topographical site of the Project, the social disarticulation did not take place at KG Dam. Most of the affected families have adjusted nearer or within the old settlement after expropriation.

Some Other Issues

Besides the analysis of impoverishment risks and reconstruction strategies, this section also examines some other issues as well. Such issues include the national resettlement policy, application of donor policy, planning instruments, compensation of land, indigenous people, awareness of stake holders, budget and timing, maintaining overall responsibility, coordination and monitoring, and participation of affectees and NGOs.

Absence of National Involuntary Resettlement Policy

Nepal's legal and regulatory framework for the resettlement of the Projects' affectees is not comprehensive. Its 1990 constitution, particularly article 17(2), guarantees the property rights for its citizen as a fundamental human right. But the same constitution also provisions that its citizens' property may be acquired by the state for public interest providing compensation. Similarly, there are several acts which specify the basis and procedure for such compensation. Among such acts, the Land Acquisition Act of 1977 is the most commonly used. However, despite the existence of these acts, there is a lack of policy and framework specifically to deal with families affected by development for public interest.

This lack of specific policy regarding project-related involuntary resettlement has proven to be dysfunctional in the case of the KG Dam, too. Implications of the policy vacuums are several. The first kind of such dysfunction is manifested in the inability of the Project to compensate Botes' land under customary and common ownership without formal legal title. Secondly, emphasis given by the Land Acquisition Act for cash compensation prevented the KG Project from adopting land-for-land compensation policy, at least to those Botes who preferred this option. Finally, the lack of policy also gave space for differential treatment of affectees in the same project. The elite groups of

affectees, therefore, got beneficial treatment while weaker sections like Botes were disadvantaged.

Application of Donor Policy

Since Nepal lacks a comprehensive national policy on involuntary resettlement compliance, a donor's policy of resettlement is a common requirement because most development projects in the country are supported by external assistance. The KG Dam, as an ADB supported project, is supposed to comply with ADB's involuntary resettlement policy of 1995. The notable features of ADB resettlement policy include: a) avoidance of involuntary resettlement; b) compensation and assistance to unavoidably displaced people; c) information to and consultation with affected families on compensation and resettlement; d) support to existing social and cultural institutions; e) compensation for land under customary rights and/or without formal legal title; and f) formulation and implementation of a full Resettlement Action Plan (RAP) as part of the project.

These policies, however, manifested themselves in the KG project with varying degrees of applicability. Some policies have been applied to a satisfactory level, while some others are ignored. The KG project neither compensated for Botes' Guthi land without legal certificates nor did it develop a comprehensive resettlement/rehabilitation action plan for them.

Planning Instruments

Successful involuntary resettlement requires advanced and good planning. This includes research on potential socio-economic impacts, and developing a comprehensive Resettlement Action Plan (RAP). Though the Kali Gandaki Project has a Mitigation Management Plan (MMP) and an Acquisition, Compensation and Rehabilitation Program (ACRP), it could not properly address all requirements of RAP.

First, these instruments did not include riverbank Botes who will lose their income from fishing the Kali Gandaki river. Secondly, they neither addressed the issue of Botes customary land and other lands possessed without land title for their compensation. Third, issues of indigenous people was also not addressed in these instruments. Fourth, relocation of Botes is scheduled for operation phase while they have been already displaced at the outset of the Project and are seriously impacted. Fifth, a separate budget and time schedule has not been clearly marked for SPAFs' skill training so that the civil contractor IGL has not

implemented it so far. Finally, the ACRP has shown the attitude that it has no responsibility beyond cash compensation. Rehabilitation aspects have been given less priority. From the above discussion it is seen that absence of Resettlement and Rehabilitation Plan (RAP) has contributed to aggravate the SPAFs degrading situation.

Land Related Issues

There are three major issues related with land: eligibility, valuation, and agency for compensation. The first issue has been discussed in the previous section that the Project did not take into account compensation of customary rights and land possession without legal land certificates during land compensation. Similarly, fruit trees and fodder trees were not considered for compensation. In the second issue, the rates for land compensation were nearer to replacement cost. But inconsistencies between the government's cadastral map/record and de facto ownership of land created several problems in proper compensations of these lands. For example, the map did not truly represent owner's parcels expropriated by the Project, and therefore, the owner could not get compensation. In some cases, areas of land registered were found to be less than the actual area. Third, agencies and responsibilities that were involved in land valuation and compensation were found to be less integrated with the Environment Unit. Whatever lessons learned by KGEMU have not been properly used for further improvements. Proper databases are not available for expropriation and compensation of SPAF/PAFs' assets by the Project from its outset.

Coordination with/by Government

It is expected that during the life span of the Project it will bring a significant "boom" effect in the local economy. Its sustainability depends on regional and local development planning by central as well as local governments. If line agencies of the central government and local Village Development Committees (VDCs) and District Development Committees (DDCs) appropriately harness the Project's benefit through sectoral and regional development programs there is a greater likelihood that such benefits can be sustained for a longer time, even after completion of the Project. However, it appears that this is not happening here. On the one hand, locals have an expectation of the Project that it should do everything that may not be possible to the Project. On the other hand, government line agencies and local governments are not properly coordinated and mobilized in the area.

This shows the dire need for the leadership role of a central government and coordination among all stakeholders of development.

Overall Responsibility and Awareness of Stake Holders

One of the important points is maintaining overall responsibility and awareness of stakeholders on the principle issues of involuntary resettlement. The Project should maintain overall responsibility for the involuntary resettlement outcomes of all activities performed by contractors, consultants, or sub-contractors. Similarly, social awareness of all these agencies and personnel is essential. But it appears that the Project is lacking these things. Contractors are expropriating locals' property themselves when they are not authorized to do so. For example, IGL displaced 8 Botes from its workshop area without approval of its employer – NEA. Likewise, not all personnel are aware of the social and environmental issues. Engineers are biased to proceed with the construction work and give less importance to social matters. Some of the personnel assigned for social responsibilities are also engineers and, hence, know very little about social issues. Most of the contractors' personnel were also found to be unaware of involuntary resettlement issues.

The weaknesses of the employer to maintain overall responsibility for its contractors have resulted in many failures. The main civil contractor (IGL) was supposed to conduct skill training to all SPAFs before starting construction works, but he has not yet done so. Neither has the Project been successful to get things done by the contractor. Likewise, very poor environmental and safety compliance performances have been recorded, i.e., not more than 50 percent. Weaker safety measures have also given rise to several casualties and conflicts with local communities. However, the Project seems unable to maintain this overall responsibility for contractors. Rather, it has tended to heavily rely upon police forces to resolve conflicts that may be counterproductive in the long run.

Budget and Timing

The two variables, i.e., budget and timing, also seem very important in determining the success or failure of involuntary resettlement programs. The budget allocated for rehabilitation activities seems very low. Only \$50,000 in micro-credit funds have been initiated until now. The agricultural intensification fund of \$10,000 per annum has not been initiated for the last 3 years. This clearly shows time lagging. Similarly, Botes' employment in the fish hatchery was

conceived for the construction phase but which will be built only during the operation phase, leaving them unemployed during this phase.

Affected People and NGO Pressure Groups

One of the important variables associated with the success or failure of involuntary resettlement is the awareness and activeness of affected people and NGOs. If these groups are aware of the issues and are proactive in articulating their interests, there is a greater likelihood that they may get better treatment from project developers. Otherwise the situation may be reversed. The KG case appears to have both stories. On the one hand, some elite groups like higher castes, people who have urban exposure, have been successful in this regard. These people seem aware and are very pro-active in articulating their own needs as well as having been successful in having their demands fulfilled by the Project. The evidence of high employment and compensation rates among these groups, in comparison to other projects of the same magnitude, is an example. However, in the same respect Botes have a different experience. It is mostly because these Botes are unaware, unorganized, and powerless that they do not articulate their needs in front of the Project.

Conclusions

In conclusion, it appears that the impoverishment risks and risk limiting measures manifested at differential degrees, i.e., among themselves as well as among affectees. Risks of landlessness, marginalization, food insecurity, and loss of community assets have become a reality with different intensities. However, the counteracting measures proved to be robust, with unusual successes in preventing other risks of social disarticulation, joblessness, and homelessness. Similarly, adoption of good policies, people awareness, and NGO pressure groups have been found as positive factors in limiting the impoverishment risks and in reconstructing the livelihood of affected families. Absence of policies of providing compensation to landowners without legal title and formulation and implementation of resettlement and rehabilitation plans as well as other similar factors were found to have negative impacts. This study, therefore, shows that better policies and good practices can prevent impoverishment risks from becoming a reality, and on the other hand, lack of better policies and practices exacerbate the risks among the KG Dam Projects' affectees.

Notes

1. There is a general consensus that Bote is an indigenous group (Dahal 1999).
2. The KG Project has classified affected families into two groups: SPAFs and PAFs. SPAFs include those families who have lost their house and/or 50 percent or more of their land.
3. PAFs include families who have lost less than 50 percent of their land.
4. "Ropani" is a land measurement system. Approximately 20 ropani equals 1 hectare.

References Cited

Cernea, M.M.

1991 *Putting People First: Sociological Variables in Rural Development*. The World Bank, New York: Oxford University Press.

1997 The Risks and Reconstruction Model for Resettling Displaced Populations. *World Development*, 25(10).

Dahal, D.R., editor

1999 *Socio-economic Study of Some Backward Ethnic Groups of Nepal*. Kathmandu: CNAS.