The Risks and Reconstruction Model for Resettling Displaced Populations

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https://link.springer.com/chapter/10.1007/978-3-030-57426-0_16

Introduction

Impoverishment of displaced people is the fundamental risk in development-caused involuntary population resettlement. To counter this central risk, protecting and reconstructing displaced peoples' livelihoods is the central requirement for equitable resettlement programs.

Empirical evidence shows that, more often than not, the risks of impoverishment and social disruption turn into a grim reality. In India, for instance, researchers found that the country's development programs have caused the displacement and involuntary resettlement of approximately 20 million people over roughly four decades, but that as many as 75% of these people have not been "rehabilitated" (Fernandes 1991; Fernandes et al. 1989). Their incomes and livelihoods have not been restored. In other words, the vast majority of development resettlers in India have been impoverished.

Similar findings about impoverishment and the *de facto* lack of equity in involuntary resettlement processes come from many other countries. The material loss in each case is vast. No less serious a consequence is the political tension that surrounds forced relocation. The cultural and psychological stress experienced by people who are forcibly uprooted lingers, affecting their subsequent individual and group behavior.

What is the appropriate response to this major pathology of development?

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M. Koch-Weser, S. Guggenheim (eds.), *Social Development in the World Bank*,
https://doi.org/10.1007/978-3-030-57426-0_16

Social Justice and Planning with an Equity Compass

Development programs that provide irrigation for thirsty lands, energy for growing industries, hospitals and schools within residential areas, and wider roads in clogged downtowns are indisputably necessary. They improve many people's lives and develop both the national and local economies. Nonetheless, these developments can also cause the forced displacement of segments of the local population. The forcibly displaced populations, often already poor, end up worse off, and poorer for a very long time, an impoverishment that sometimes even extends across generations. The overall result is that some people enjoy the gains, while others share only in the pains of development. Even though some degree of population relocation is at times unavoid-able, this inequitable distribution of gains and pains, benefits and losses, is neither inevitable nor justified. It is, in fact, profoundly contrary to the very goals of development. Spatial rearrangements and their pernicious consequences should not be accepted as a God-given tragedy, worthy of little more than a compassionate shrug of the shoulders.

The magnitude and frequency of development-related displacements makes involuntary resettlement a problem of worldwide relevance. Based on World Bank and other data, we have calculated the global magnitude of development caused forced displacements.[1] During the last decade of the 20th century, about 10,000,000 people each year were displaced worldwide by infrastructural development programs (dam construction, urban development, highways, roads). This amounts to some 90–100 million people displaced during the decade, which—surprisingly to many—is much greater than the total number of refugees from wars and natural disasters. The impoverishment of such large numbers of people constantly adds to the problem of worldwide poverty. Therefore, understanding the processes that cause impoverishment under development programs and ways to prevent them is crucial for mitigating the hazards intrinsic to displacement.

"Social justice" and "social injustice" are notions not frequently used in the development discourse, yet they are essential. Recently, these concepts have been brought to the public forum in authoritative statements. "We must act" stated the President of the World Bank "so that poverty will be alleviated, our environment protected, social justice extended, hu-man rights strengthened... Social injustice can destroy economic and political advances" (Wolfensohn 1995). Undoubtedly, involuntary resettlement is one domain in which the call for social justice and equitable distribution of development's benefits resounds loudly. This was also the reason for which the World Summit on Social Development (Copenhagen, March 1995) incorporated the call for reestablishing resettlers' livelihoods into its Program of Action (United Nations 1995).

[1] See World Bank (1994/96). This large-scale study, carried out by a World Bank Task Force, reviewed all 1986–93 World Bank-financed projects that involved involuntary population displacement. The study was written by M. Cernea and S. Guggenheim. The calculation of worldwide displacement magnitudes estimates was part of that study.

Studies that I have carried out over 40 years identified and reconfirmed the main "impoverishment risks" inherent in forced resettlements (Cernea 1986, 1990, 1995b; World Bank 1994/96). Based on the evidence, however, I argued that impoverishment is not inevitable. It is not an "unavoidable" cost of necessary development. For this reason, impoverishment caused by development should not be tolerated with passive resignation. It is the outcome of choices. Displacement is a socially caused disruption, not a natural disaster, and its perverse effects must and can be counterbalanced. Redressing the inequities caused by displacement and enabling affected people to share in the benefits of growth is not only possible but is also necessary, on both economic and moral grounds.

Although as a class of processes relocations are unavoidable, not every individual case of displacement proposed by planners is either inevitable or justified. There are pragmatic ways to avoid, or at least reduce, specific instances of forced displacement. There are ways to reduce their hazards and socioeconomic adverse impacts. Socially responsible resettlement—that is resettlement guided by an equity "compass"—can counteract lasting impoverishment and generate benefits for both the regional and for the local economy. Yet much too often, those who approve and design programs causing displacement are deprived of a compass that can guide them in how to allocate financial resources equitably and to prevent (or mitigate) the risks of impoverishment (Cernea 1986, 1988, 1996b; Mahapatra 1991). Indeed, the planning approach which causes many to be displaced but only a few to be "rehabilitated" has proven itself a big failure, unable to prevent impoverishment.[2] The repeated instances of resettlement without rehabilitation point to even deeper congenital defects in the current policies of many countries, not only in planning approaches. These policies, and the resulting planning methodologies, must be changed.

Functions of the Risks and Reconstruction Model

How does impoverishment through displacement occur? How can it be prevented and how can the livelihood of displaced people be reconstructed?

These are both theoretical and practical questions. For decades, these basic questions have confronted social researchers, policy makers, plan-ners, and—more than anyone—resettlers. A vast social science and policy literature exists on them (Guggenheim 1994), offering many answers, some more and others less convincing. We still have much that we need to learn.

[2]The Indian sociologist Victor D'Souza, in an insightful analysis of development planning in India, wrote: "Gigantic social problems... cast serious doubt on the suitability of the current mode of planning.... They call for a drastic change in the method of setting the goals of planning; it is not the rate of growth of the economy per se, but the degree of fulfillment of human needs and the elimination of glaring inequalities in society which should be the yardstick of success in planning" (D'Souza 1990).

Relying on much of the worldwide displacement research and on my field experiences in many countries with multiple national policies, planning practices and development projects, I'm proposing below a conceptual model for analyzing the socioeconomic content of displacement. The model anticipates displacement's major risks, explains the behavioral responses of displaced people, and can guide the reconstruction of resettlers' livelihoods. This conceptual framework could be named "the risks and reconstruction model" for resettling displaced populations.

Like any other conceptual template, this one is a tool—first a tool for generating and organizing knowledge, but also a tool for guiding action by generating proposals that are usable for policy and planning. This model can serve various social actors of resettlement processes—namely policy makers, project designers, social researchers and of course the resettlers. In addition it should be possible to extend this model, with appropriate adjustments, to the analysis of comparable processes affecting other displaced populations such as refugees (Kibreab 1996) deprived of their habitat and assets not by development but by civil war, ethnic persecution, or natural disasters (Hansen 1990; Cernea 1996a). Further explorations about the utility of the model could benefit its conceptual and operational applications.

The four distinct but interrelated functions which the risks and reconstruction model can perform are best described as:

- A diagnostic—explanatory and cognitive—function;
- A predictive—warning and planning—function;
- A problem-resolution function for guiding and measuring resettler's reestablishment; and
- A research function for forming hypotheses and conducting theory-led field investigations.

The ease of using this model results from its simplicity. It is built around a core concept: the multisided risk of impoverishment. Impoverishment risks are embedded in all displacements. In this context, the sociological concept of risk[3] is understood as the potential that a certain course of action will trigger future injurious effects—losses and destruction (Giddens 1990). It is widely held that the concept of risk is a counter-concept to security (Luhman 1993). The social actors of this course of action are involved in risk differentially—a few, as decision makers, many others as at-risk populations.

[3]The literature on the conceptual definition of "risk" is vast, and the modern society itself is more and more defined as the "risk society" (Beck 1990). Frequently the terms "risk" and "danger," or "hazard" and "danger", or "hazard" and "risk" are used as interchangeable and overlapping. Some sociologists (e.g., Giddens 1990) explicitly reject the distinction between risk and danger. Other researchers, however, argue that in some situations a difference exists, and define risk as the probability of an injurious effect resulting from a hazard (Kaplan and Garrick 1981). Consonant with most of the current risk literature, risk may be defined as the possibility embedded in a certain course of social action to trigger adverse effects (losses; destructions; functionally counterproductive impacts; deprivation of future generations, etc.)

There have been several other conceptual frame-works for resettlement, proposed in the past by various scholars, which circulate in the literature (e.g., Nelson 1973; Chambers 1969; Chambers and Morris 1973; Scutter and Colson 1982). Some of these frameworks have emphasized the institutional variables; others were centered around the concept of identifying sequentially the main stages of settlement processes; and others have highlighted "stress" or alternative variables. These valuable frameworks helped generate results in various research projects, but they also appeared unsatisfactory in others. Some proved more and others less effective as tools for action. Over the last 30 years, however. social research on development-caused resettlement, as well as on refugees displaced by other events. has increased exponentially (Guggenheim 1994; Cernea 1995b, 1996a). expanding our knowledge and changing the "state of the art." This surge in knowledge makes possible—in fact, demands—new theorizing.

Building upon lessons and awareness of the inadequacies from the use of previous frameworks, the risks and reconstruction model carries the modeling effort further in three essential ways: (a) it captures the core economic and social substance and consequences of displacement and relocation which is impoverishment and reconstruction, (b) it points to the imperative of preventing and overcoming the risks through the very policy decisions that create them; and (c) it informs about the kind of socioeconomic processes that must he initiated for problem-solving.

The risks and reconstruction model benefits from the new state of the art in resettlement research and responds to it by offering a more comprehensive theoretical framework for diagnosis and advance warnings, a framework that is usable operationally; it explains the response of displaced populations to economic and social deprivation; suggests novel areas for conducting field inquiry; and most crucially, it outlines the constitutive elements of a strategy for problem-solving and planning. It is also a conceptual template within which further knowledge will he built to improve the understanding and measurement of resettlement.

A brief characterization of each function of this model is in order, before proceeding to a more detailed discussion.

(a) *The diagnostic*—explanatory and cognitive—capacity of the model rests on a mountain of analytical evidence gathered through research and past resettlements. As a cognitive and explanatory tool, the model diagnoses the recurrent pathologies of forced displacement. These consist of eight major economic and social impoverishment hazards. The practical utility of this diagnostic function is that it reveals—to policy officials, who decide on triggering displacements, and to the affected populations who incur the consequences—the nature, the risks, and the possible outcomes of impending forced displacements.
(b) The model's *predictive* capacity rests on converting the diagnosis into a prognosis for better planning. It provides early warnings about adverse effects long before the decision to displace is made. It equips the planners with better understanding and anticipation power. The practical utility of this function is that it enables planners, as well as would-be displacees, to recognize the

impoverishment risks in advance, to search for alternatives to avoid displacement, and/or to respond with effective mitigatory and coping strategies.

(c) The *problem-resolution* capacity rests on the model's reach beyond just explanation to its orientation toward action. To achieve this, the part of the model that identifies pauperization risks is fully reversed, as will be shown below. As a result, the model points out ways to overcome the problems that displacement causes. Thus, the practical utility of the model increases greatly by moving from diagnosis and prediction to prescription for action. In the end, the model becomes a compass for strategies to reconstruct resettlers' livelihoods, going beyond mitigatory mechanisms and advancing a development orientation.

(d) The *research guiding* capacity rests on the conceptual scaffolding it provides to social researchers for formulating hypotheses on both displacement and relocation, and for conducting theory-led fieldwork. The practical utility of this function is that it guides the field collection and aggregation of empirical data in a coherent manner along content variables. It also simplifies the comparison of specific findings regarding the same variables across cultures, countries and time periods.

Diagnostic and Analysis: Ten Impoverishment Risks

The core content of unmitigated forced displacement is always economic and social uprooting. Capturing and conceptualizing this core content is the first call upon the conceptual framework. Therefore, to identify the basic socioeconomic mechanisms set in motion when people are involuntarily displaced by development-related programs, I examined an extensive body of empirical data and compared the field findings of numerous researchers.

Beyond the enormous diversity in individual country and project-specific situations, the comparison revealed a number of basic regularities. Thus, I found a pattern of ten subprocesses whose convergent and cumulative effect is the rapid onset of impoverishment (Cernea 1990; Cernea 1995b). Before the displacement operation actually begins, these processes are only imminent economic and social hazards. But if adequate counteraction is not initiated, these hazards become actual components of a multifaceted impoverishment disaster. Relying on the worldwide empirical evidence about such disasters, I constructed a general "risk-pattern" apt to inform decision makers and project designers long before the project starts. These risks threaten not only the people displaced: they are risks incurred by the local (regional) economy as well, to which they may inflict major losses and disruptions.

The following ten impoverishment hazards are not the only ones that result in processes of economic and social deprivation, but are the most important ones. Depending on local conditions, these risks have variable intensities. They are:

Landlessness

Expropriation of land removes the main foundation upon which people's productive systems, commercial activities, and livelihoods are built. The loss of land is the principal form of decapitalization and pauperization of displaced rural people, as they lose both natural and man-made capital.

Selected empirical evidence.[4] Unless the land basis of people's productive systems is reestablished elsewhere or replaced with steady income-generating employment, landlessness sets in and the affected families become impoverished. In the Kiambere Hydropower project in Kenya, a sociological study (Mburugu 1993) found that farmers' average land holdings after relocating dropped from 13 to 6 hectares; their livestock was reduced by more than a third; yields per hectare decreased by 68% for maize and 75% for beans. Family income dropped from Ksh. 10,968 to Ksh. 1976—a loss of 82%. In India's Rengali project, the percentage of landless families after relocation more than doubled—from 4.6 to 10.9% (Ota 1996), while in the coal mining displacements around Singrauli the proportion of landless people skyrocketed from 20% before displacement to 72% after (Reddy 1997). In Africa, Lassailly-Jacob's (1994, 1996) studies on the Kossou Dam and other major reservoirs have empirically quantified and documented resettlers' loss of land and the insufficiency of the land-replacement remedies adopted. In Indonesia, a survey by the Institute of Ecology of Padjadjaran University (1989) around the Saguling reservoir found that resettled families' land ownership decreased by 47% and their income was halved. Similar evidence is available from Brazil (Mougeot 1989). Findings from sociological and anthropological field studies show that for farm families, loss of land generally has far more severe consequences than the loss of a dwelling.

Joblessness

Loss of wage employment occurs both in urban and rural displacements. Those losing jobs include landless laborers, enterprise or service workers, artisans, or small businessmen. Yet creating new jobs is difficult and requires substantial investments. Unemployment or underemployment among resettlers often endures long after physical relocation has been completed.

Selected empirical evidence: For several categories of rural people whose livelihoods depend on jobs—including landless laborers; employees of local services, or other small enterprises; shopkeepers and small businessmen—job loss due to

[4]The empirical evidence for each of the model's variables is enormous, and is available in many of the studies listed in the references, and in other works. For each variable of the model, I will refer only to selected significant field findings.

displacement causes lasting painful economic and psychological effects. The previously employed may lose out in three ways: in urban areas, they lose jobs in industry and services, or other job opportunities; in rural areas, they lose access to work on land owned by others (leased or share-cropped); and they also lose the use of assets under common property regimes. In the Madagascar Tana Plain project, for example, private small enterprises displaced in 1993—workshops, food-stalls, artisan units—were not entitled to compensation, and lost their place of trade and their customers.[5] A survey carried out among tribal households in five villages at Talcher, Orissa found an increase in unemployment from 9 to 43.6%, accompanied by a large shift from primary to tertiary occupations (when available); reported reductions in levels of earnings were between 50 and 80% among tribes and scheduled castes. Vocational retraining, offered to some resettlers, can provide skills but not necessarily jobs. Similar findings come from developed countries: in the Churchill-Nelson Hydro project in Manitoba, Canada, the economic activities of resettled indigenous people—fisheries, waterfowl capture, fur processing—were curtailed; field studies found a significant increase in non-productive time in the community. Joblessness among resettlers often surfaces after a time delay, rather than immediately, because in the short run they may receive employment in project-related jobs. This employment, however, is not sustainable. Evidence compiled from several dam projects[6] shows that the "employment boom" created by new construction temporarily absorbs some resettlers, but severely drops toward the end of the project. This compounds the incidence of chronic or temporary joblessness among the displaced.

Homelessness

Loss of housing and shelter may be only temporary for many displacees, but for some homelessness remains a chronic condition. In a broader cultural sense, loss of a family's individual home is linked with the loss of a group's cultural space, resulting in alienation and deprivation, as argued by students of "place attachment" (Low and Altman 1992). Families subjected to compulsory villagization schemes, as argued by de Wet (1995), also experience a lasting sense of "placelessness."

Selected empirical data: If resettlement policies do not explicitly provide improvement in housing conditions, or if compensation for demolished shelters is paid at assessed value rather than replacement value, the risk of homelessness increases. A 1990 World Bank report on the Cameroon-Douala Urban resettlement (which was completed in 1989) found that over 2000 displaced families were hindered in their efforts to set up new permanent houses; less than 5% received loans to help

[5]Personal observation, Madagascar 1993.

[6]E.g., the China-Gezhouba dam, Brazil-Tucurui dam, Turkey-Ataturk dam, Togo-Benin Nangbeto Hydropower dam, and Korea-Chungju dam.

pay for assigned houseplots. From the Danjiangkou reservoir China has reported that about 20% of the relocatees became homeless and destitute.[7] To speed up evictions, violent destruction of houses belonging to people labeled squatters still occurs in some places (e.g., in Uganda in the Kibale park area). When resettlers cannot meet the time, labor and financial costs involved in rebuilding a house, they are compelled to move into "temporary" shelters. The "emergency housing centers" and temporary "relocation camps" used as fall-back solution in poorly planned resettlement tend to make homelessness chronic rather than temporary. At the Foum-Gleita irrigation project in Mauritania, only 200 out of the 881 displaced families successfully reconstructed their housing; the rest lived precariously for 2 years or longer in tents or under tarpaulins. In the Kukadi-Krishna irrigation subprojects in Maharashtra, India, 59% of the displaced families were found living in temporary/semi-permanent houses 10–15 years after their relocation (Joseph 1997). Yet the risks of homelessness—like joblessness, marginalization, morbidity—can definitely be avoided through timely pre-project preparation and adequate financing instead of the routinely undercalculated compensation.

Marginalization

Marginalization occurs when families lose economic power and slide on a "downward mobility" path: middle-income farm households do not become landless, they become small landholders; small shopkeepers and craftsmen downsize and slip below poverty thresholds. Many individuals cannot use their previously acquired skills at the new location and human capital is lost or rendered inactive, useless. The coerciveness of displacement also depreciates the image of self. Marginalization materializes also in a drop in social status and in a psychological downward slide of resettlers' confidence in society and self, a sense of injustice, a premise of anomic behavior. Moreover, we know that relative economic marginalization begins long before the actual displacement, because of disinvestments or no investment in infrastructure and services in condemned areas.

Selected empirical data: Resettled families seldom restore lost social status and economic capacity fully. For farm families, partial but significant loss of farming land to roads or canals may make their farm economically nonviable. High-productivity farmers on fertile valley-bottom land tend to become marginalized when moved uphill to inferior, infertile soils. In the Nepal Kulekhani Hydroelectric project, an independent study found that the majority of displaced people were worse off socially and economically, due to lower productivity of their new

[7]The sad experiences of Danjiangkou and Sanmenxia Dam displacements led to the adoption of new and better resettlement policies in China, policies that attempt to transform resettlement into an opportunity for development.

land, and less diversified production. Marginalization also occurs through the loss of off-farm income sources. In Sri Lanka's Kotmale project a field study reported that marginalization occurred because opportunities for non-farm income generation were lost or limited through displacement, increasing the economic differentiation between evacuees and hosts (Soeftestad 1990). Psychological marginalization and behavioral impairments, anxiety and decline in self-esteem, have been widely reported from many areas (Appell 1985; Appell 1986). For urban resettlers, marginalization is sometimes gradual and may occur after relocation, as when resettlers received jobs (instead of land) that are temporary, unsustainable income sources in the long run. Governments and project agencies also tacitly accept lasting marginalization of resettlers when they consider it "a matter of course" that the displaced cannot regain their prior social standard of living.

Increased Morbidity and Mortality

Serious declines in health result from displacement-caused social stress, insecurity, psychological trauma, and the outbreak of relocation-related illnesses, particularly parasitic and vector-borne diseases, such as malaria and schistosomiasis. Unsafe water supply and poor sewerage systems increase vulnerability to epidemics and chronic diarrhea, dysentery, etc. The weakest segments of the demographic spectrum—infants, children, and the elderly—are affected most strongly.

Selected empirical data: People forced to relocate increase their exposure and vulnerability to illness, and to comparatively more severe diseases, than those who are not. In Sri Lanka an outbreak of gastroenteritis occurred along the Victoria dam reservoir (Rew and Driver 1986) and in Mahaweli's System C resettlement site the incidence of malaria rose from 8.9 to 15.6% (Jayewardene 1995). At Akosombo in Ghana, the prevalence of schistosomiasis around the reservoir rose from 1.8% prior to resettlement to 75% among adult lake-side dwellers and close to 100% among their children, within a few years after the dam's impoundment in the 1960s. The Foum-Gleita irrigation project in Mauritania exceeded its anticipated increase of schistosomiasis, reaching 70% among school children; farmers' health also worsened from contaminated drinking water and agrochemical intoxication. At Nam Pong reservoir in Thailand, monitoring confirmed that local rates of morbidity—from liver fluke and hookworm infection—were higher among resettlers than the provincial levels, the result of deteriorated living conditions and poor waste- disposal practices. Exposure to "social stress" was highlighted as having differential consequences on mental health across age, gender, marital and occupational status (Scudder and Colson 1982; Scudder 1991; Turner et al. 1995), but empirical measurements related to displacement-induced social stress are not readily available (see Appell 1986 for an interesting discussion on measuring social stress). Overall, direct and

secondary effects of compulsory dislocation in the absence of preventive health measures include psychosomatic diseases, diseases of poor hygiene (such as diarrhea and dysentery), and outbreaks of parasitic and vector-borne diseases (such as malaria and schistosomiasis) caused by unsafe and insufficient water supplies and inadequate sanitary waste systems. Increased mortality rates are also reported as a result of either accidents associated with new reservoirs or epidemic malaria outbreaks around new bodies of water. Lack of proper information and precautionary measures resulted in 106 deaths by drowning at Saguling Lake (Indonesia) during the first 14 months of operation; at Cirata reservoir (Indonesia) 10 people drowned in the first 10 months after impounding (Padjadjaran University 1989).

Food Insecurity

Forced uprooting increases the risk that people will fall into chronic undernourishment, defined as calorie-protein intake levels below the minimum necessary for normal growth and work, and food insecurity.

Selected empirical data: Undernourishment is both a symptom and result of inadequate resettlement. Sudden drops in food crop availability and/or incomes are predictable during physical relocation, and hunger or undernourishment tend to become lingering long-term effects. Forced up- rooting increases the risk that people will fall into chronic food insecurity, as rebuilding regular food production capacity at the relocation site may take years. At the Foum-Gleita irrigation project, Mauritania, paddy-rice monocropping replaced multiple cropping and animal husbandry, and diets and cash-crop income deteriorated (Ngaide 1986). At Sri Lanka's Victoria dam project, some 55% of resettled families were receiving food stamps even after a long period (Rew and Driver 1986). Because the area of cultivated land per capita in the Bailiambe reservoir in China decreased from 1.3 mu to only 0.4 mu after relocation, local food production became insufficient and 75,000 tons of annual food relief had to be provided for several years.

Loss of Access to Common Property

For poor people, particularly for the landless, and assetless, loss of access to common (non-individual) property assets that belonged to relocated communities (forested lands, water bodies, grazing lands, burial grounds, etc.) results in significant deterioration in income and livelihood. Typically, loss of common property assets are not compensated by government relocation schemes. Losses of access to

various basic public services, as pointed out by an Indian anthropologist (Mathur 1997), also occur rather often and should be linked to this class of risks.

Selected empirical data: Empirical evidence shows that fruit and other forest products—firewood and deadwood, common grazing areas, and public quarries—account for a significant share of poor households' income. For example, in semi-arid regions of India, 91–100% of firewood, 66–89% of domestic fuel, and 69–80% of poor households' grazing needs are supplied by lands held under common property regime (Sequeira 1994; Gopal 1992). A study of seven projects causing displacements during 1950–94 in Orissa, India has found that no compensation has been paid for common properties by any of these projects (Pandey et al. 1997). In the Rengali dam area in India, while prior to displacement all families had access to common grazing lands and burial grounds, after relocation only 23.7% and 17.5% respectively had such access. After losing the use of natural resources under common property, displaced people tend either to encroach on reserved forests or to increase the pressure on common property resources of the host area population. This is a source of both social tension and increased environmental deterioration. Secondary adverse effects of resettlement on the environment also occur when oustees who do not receive cultivatable land move uphill into the reservoir watershed. This migration intensifies deforestation and cultivation of poor soils, accelerating erosion and reservoir siltation.

Social Disarticulation

Forced displacement tears apart the existing social fabric: it disperses and fragments communities, dismantles patterns of social organization and interpersonal ties; kinship groups become scattered as well. Life-sustaining informal networks of reciprocal help, local voluntary associations, and self-organized mutual service arrangements are dismantled. The destabilization of community life is apt to generate a typical state of anomie, crisis- laden insecurity, and loss of sense of cultural identity, tending to transform displacement zones into what has been termed as "anomic regions" or "anomie-ridden areas" (Atteslander 1995a, b). The unraveling of spatially-based patterns of self-organization, interaction and reciprocity is a net loss of valuable "social capital," that compounds the loss of natural and man-made capital (discussed previously). The social capital lost through social disarticulation remains unperceived and uncompensated by planners, and this real loss will reverberate long and detrimentally during subsequent periods. "The people may physically persist, but the community that was—is no more" (Downing 1996a), because its spatial, temporal, and cultural determinants are gone.

Selected empirical data: Dismantled social networks that once mobilized people to act around common interests and to meet their most pressing needs are difficult to rebuild. This losses are bigger in projects that relocate families in a dispersed manner, severing their prior ties with neighbors, rather than relocating them in

groups and social units. A detailed sociological study by Nayak (1986) on a dam project in India found various manifestations of social disarticulation within the kinship system, such as the loosening of intimate bonds, growing alienation and anomie, the weakening of control on interpersonal behavior, and lower cohesion in family structures. Marriages were deferred because dowry, feasts, and gifts became unaffordable. Resettlers' obligations towards and relationships with non-displaced kinsmen were eroded and interaction between individual families was reduced. As a result, participation in group activities decreased; leaders became conspicuously absent from settlements; post-harvest communal feasts and pilgrimages were discontinued; and common burial grounds became shapeless and disordered. A monograph on the Hirakud dam in India found that displaced households whose "economic status had been completely shattered as a result of displacement" did not become "properly integrated" in host villages for many years after relocation (Babboo 1992). On a larger social scale, studies by historians of migration have also concluded that the costs of population relocation go, in general, much beyond "simply the financial costs": among the "heaviest costs of all are the severing of personal ties in familiar surroundings, to face new economic and social uncertainties in a strange land" (Sowell 1996). Overall, if poverty is not only an absence of material means—such as land, shelter, work, food—but also powerlessness, dependency, and vulnerability, than the disarticulation of communities and the loss of reciprocity networks are significant factors in aggravating poverty.

Differential Impacts: Specific Risks to Women and Children

These eight basic impoverishment risks discussed above affect various categories of vulnerable people differentially. The evidence suggests that, depending on the sector in which displacement occurs, or on local circumstances, resettlers at different locations may experience some or all of the eight basic risks. Moreover, certain population groups are hurt more than others. For instance, recent research revealed that women suffer more severe impacts (Feeney 1995; Koenig 1995). Agnihotri (1996) signals clear- cut discrimination against women in compensation criteria—e.g., entitlement to land compensation for unmarried individuals is set in Orissa at age 18 for men, but only at age 30 for women! In turn, tribal groups are more vulnerable than the general population to the impoverishment hazards discussed above; in India, a vast research literature empirically documents this statement (Fernandes 1991; Mahapatra 1994).

Differential Impacts: Specific risks for Children, as an age category, are subjected to particularly perverse consequences. Elaborating on the risks and reconstruction model in light of evidence from India, Mahapatra (1996) suggests that "to the impoverishment risk model one may add the specific educational loss affecting children." Indeed, relocation often interrupts schooling and some children never return to school after displacement, as a result of drops in family income, many

children are drafted into the labor market earlier than what would have otherwise been the case. Often, the new relocation sites are not yet equipped with school buildings from the outset, causing children to miss critical years of education that have negative impacts on the rest of their lives. Differences between particularly vulnerable groups clearly call for targeted responses.

We have seen that as a conceptual construct, the analytical impoverishment framework captures not only the economic hazards but also the social and cultural ones. Since it shows that during displacement people lose natural capital, man-made (physical) capital, human capital, and social capital, this analysis concludes that strategies to assist displaced people must help them restore their capital in all its forms. This points to the need for fairly complex preventive and reconstruction programs, to which our conceptual model can, in turn, serve as guide.

Prediction and Planning: The Chance of a Self-Destroying Prophecy

The predictive-*cum*-planning capacity of the risks and reconstruction model results from the forewarning virtue of the knowledge packaged in it. By incorporating information about the outcomes of many prior displacements, the model predicts future outcomes certain to occur if its warnings are ignored. Without counteraction, these potential impoverishment risks will turn into real and hard deprivations.

Ideally, as Robert K. Merton has convincingly demonstrated, the prediction of an undesirable outcome may act as a "self-destroying prophecy" (Merton 1979). It follows that a risk prediction model becomes maximally useful not when it is confirmed by disastrous events but rather when, as a result of its warnings being absorbed and acted upon, the risks are prevented from becoming reality, or are minimized, and the consequences predicted by the model do not occur. This is how the predictive model acts as a self-destroying prophecy.

In this sense, risk recognition and analysis are a crucial prerequisites for the practice of sound planning. Indeed, more than offering just general warnings, the set of risk variables identified in the model provides a matrix directly convertible into planning provisions and substantive activities. Attempts to use this model as a tool for actual planning and resettlement preparation have started in India (described by Thangaraj 1996) and in the Philippines (Spiegel 1997). Other resettlement specialists have used this model in field supervision of resettlement operations (Downing 1996a, b). Furthermore, an all-India workshop was organized in New Delhi in 1996, with resettlement planners and practitioners from many states, to explore the model's research-cum-planning potential for projects entailing resettlement (Mathur and Marsden 1997).

For achieving the preventive potential inherent in the risks and reconstruction model, four steps are essential:

– A risk assessment in the field, tailored to the situation at hand;

- Adequate response of the decision makers and planners to predicted risks;
- The proactive response of the population directly at known risks; and
- Transparent information and communication between decision makers/planners and populations at risk.

The optimal response to anticipated risks is when planners and decision makers start searching for technical alternatives that altogether will obviate the need for displacing people, or at least will reduce the number of displacees. Such alternatives are some- times technically feasible, for instance, by modifying the routing of a planned highway to circumvent existing settlements, by changing the location of a dam, or by reducing the dam's height. When it is not possible to avoid displacement, however, the warned planners and managers are informed by the model to conceive special measures targeted against each one of the predicted impoverishment risks, rather than being general and vague in their "planning." Such measures could be of an economic, financial, technical, legal, and cultural nature.

The generic risks described above will of course each take on a different weight, varying from one location to another. An experienced planner will use the model as a guide and will identify which risks loom larger in each case, how they interact, and which to counteract first. In the ongoing Philippines Batangas Port Development project, for instance, a social planner is applying the impoverishment risks and reconstruction model in attempting to move away from "traditional planning" and to sharpen the project's reconstruction strategy. He used a simple five-point Lickert scale to hypothesize the risk intensity for Batangas relocatees (i.e., low risk potential, moderately low. medium, moderately high. high) for each one of the eight risk variables: landlessness, joblessness, homelessness, etc. The strategy he pursued was to tailor a comprehensive risk-response package which is not only more complete, but also allocates differential resources commensurate to each risk-intensity, in ways better tuned to specific circumstances in that location.

In tum, for resettlers themselves, the predictive- *cum*-warning utility of the model is that it enables them, and their organizations, to develop coping and resource-mobilization strategies with some lead- time. For this, resettlers must be informed transpar-ently, understand well the impending displacement, and overcome disbelief or the tendency to denial. Yet this "telling to resettlers" is a process that happens much too seldom or late, for reasons I will mention below. The model's utility to resettlers is that it enables them to explore alternatives, to resist unjustified or inadequately prepared displacement before it occurs, and to pursue their rights and entitlements when displacement is unavoidable.

Communication between planners and resettlers is instrumental for effective early warning and for making possible joint preventive activities. I use here the term "communications" in its broad sociological sense, encompassing: transparent information (regarding the causes of displacement and its likely impacts); consultation between planners and affected groups of resettlers, hosts, and their organizations; and genuine participation in finding acceptable solutions. Drawing from research on natural disasters, we emphasize that displacement warnings must be seen as a social

process "involving multiple actors, phases and feedback" (Quarantelli 1980, 1981; see also Drabek 1987). Yet, in development practice this still happens rather rarely.

Dysfunctional relationships between planners and groups affected by displacement are one of the roots of resettlement failure. It should not be surprising that absence of, or breakdowns in, communication processes tend to result in "reversed participation." i.e., in active opposition movements against development programs. as analyzed pertinently by Oliver-Smith (1994). In fact, such resistance is often almost guaranteed by the ill-advised position taken by some agencies, which try to maintain an information embargo about likely displacements and about resettlers' entitlements. Withholding information is sometimes "justified" by officials as intended to prevent panic and stress, but in fact it is deceptive and self-defeating because it deprives the program of the vast contribution which the energy of displacees (and their nongovernmental organizations), if mobilized early on, could provide to reconstructing their own livelihoods. This energy can be an exceptionally important factor, which so far the resettlement literature has seldom studied in depth.

To reinforce the argument that good communication is indispensable for actualizing the preventive potential of our risk and reconstruction model, I will use a representation of warning communication, adapted with modifications from a study on early warning mechanisms by Galtung (1994). The opportunity for counteraction and mitigation is much larger in the case of social risks than in natural disasters and the benefits from advance warning can be vast.

Galtung's key point is that situations that require "early warnings" and "preventive therapies" are basically similar for different categories of disorders. They imply interaction between four elements: "the situations" (which in our case is the project), "the warners," "the warning," and "the warned." Further, the warning process should function rapidly, moving as fast as possible the information about the "situation pathology" from the warners to the "early warned," which are the bulk of the population at risk.

In our case, a displacement risk situation, the loop is more complex but also requires quick and full warning and communication. The warners (in our case, the displacement planners), must not only issue warnings, but also prepare actual risk-offsetting reconstructive programs. In tum, in our adjusted scheme, the population at risk has two strategy loops: (a) one to "negotiate" with the source of risks, and simultaneously (b) a parallel one to develop its own actual "coping responses".

The crucial point that I want to emphasize, using the analogy with Galtung's argument, is the enormous importance of early systematic warning through transparent communication: only such warning gives full advance time to resettlers, both to negotiate with the project, and to initiate their own coping activities. If this information is not communicated from the outset to the population at risk (of course, with all the caveats that the planning stage may require) a great resource for reconstruction activities is not being mobilized early enough.

To sum up, the model's predictive capacity to warn early, trigger action, and inform the adoption of targeted counter-risk measures is exceptionally important and can greatly influence the final outcome of resettling displaced populations.

Flawed Approaches to Social Risks: The Ill-Logic of Cost-Benefit Analysis

Our next question is: if our model can diagnose, analyze, and predict the social risks of displacement, can it also guide problem resolution?

The answer is affirmative. The Impoverishment Risks and Reconstruction (IRR) conceptual framework contains, in a nutshell, the model for the socioeconomic reestablishment of those displaced. Thus, it is not just a model of inescapable pauperization, but one that is also a guide toward counteracting the risks and resolving the problems displacement creates. Turning the risks matrix on its head results in an action-matrix for reconstructing the livelihoods and incomes of those displaced. For instance, the risk of landlessness is prevented through land-based relocation strategies; joblessness—through sustainable reemployment; homelessness—through a house reconstruction program; and so on, as will be discussed in detail in the next section.

Before that, however, we need to examine the traditional risk-response pattern in programs that entail displacement, a pattern that has allowed impoverishment risks to run rampant in so many cases, but nevertheless continues to be practiced widely.

The currently predominant conventional response to the adverse impacts of displacement is methodologically inadequate. It has failed to achieve equity in resettlement and it has failed to prevent impoverishment. This approach has been traditionally based on aggregate cost-benefit analysis (CBA). But however adequate CBA may be for many purposes, it nonetheless is insufficient and ill-applied in this case.

Using CBA, economists and technical planners justify counter developmental impacts by claiming that the sum of a project's benefits outweighs the sum of project "costs," and they include some adverse effects in these costs. Superficially, a quantified "justification" of this kind may at first appear sufficient. Closer examination reveals, how- ever, that this answer is neither legitimate nor equitable, for two main reasons.

First, the costs of displacement are typically not included and accounted *fully* in projects' CBA. The first part of this chapter documented many of the social costs that are routinely overlooked under the current procedures. Yet a large share of the real costs are seen as "externalities" in current costing practice. They are externalized out of the projects' budgets and are left to be borne by those who suffer the displacement.

Second, the argument that harm caused to the displaced individuals is compensated by the aggregate benefits of development, *independent of the allocation of these benefits,* is grossly flawed. When one cannot predict and channel the allocation of a program's future benefits with reasonable certainty, this wholesale accounting of costs and benefits is morally and practically fallacious. This fallacy becomes physically obvious on the ground, when, by some "wheel of fortune"—as in the case of downstream development *vis-a-vis* upstream destruction—the program generates benefits for certain population segments (who, fortunately for them, reside

downstream) while it inflicts adversity upon other population groups (unlucky enough to live upstream) that are victimized. Thus, this methodology legitimizes—and helps perpetuate—situations where some people share the gains, while others share the pains.

The logically crude "justification" of individualized costs through aggregate cost-benefit accounting glosses over the real impoverishment risks and impacts. The devaluation of individuals' losses becomes the premise for giving priority to civil works, while people are put last; neither detailed social planning nor allocation of sufficient financial resources is typically required; and misguided implementation further allows many negative socio-economic effects to go unaddressed. This scenario understandably raises the fundamental question asked by a respected Indian resettlement scholar: "Development for Whom?" (Mahapatra 1991).

The fact that planned programs often produce long-term gains for those defined as "project beneficiaries" does not make the hardship of being uprooted any lighter for those displaced. In real life, personalized costs are neither fully subtracted from the aggregate benefits not paid for by the project's beneficiaries. These costs are only in part covered by the state and are borne in large part by the population that is victimized in the name of the "greater good for the greater numbers." This kind of spurious rationality conflicts with social justice, vitiating development philosophy and planning practice. This inadequate methodology of economic analysis also diverts planners from seeking alternative approaches and solutions. It is responsible for tolerating unnecessary risks, and even magnifying the ill effects of projects. which otherwise could be counteracted—by prevention or mitigation.

In contrast with this conventional approach, so deeply entrenched in the current practice of many developing countries, the correct principle for adequate resettlement is not simply to justify and "compensate" property losses, but to pursue the actual restoration and enhancement of the income- generating capacity and livelihoods of the displaced people. This principle is embedded in the fundamental policy adopted by the World Bank for involuntary resettlement operations occurring under Bank-financed projects (World Bank 1990; Cernea 1986, 1988, 1995a). This policy prescribes avoidance or reduction of involuntary resettlement, reconstruction of resettlers' livelihood and their sharing in project benefits, and allocation of project resources adequate to achieve these major objectives.[8] The comprehensive resettlement study carried out by a Bank Task Force (World Bank 1994/96) to assess the consistency of project practice with policy made a very strong case, derived from its critical findings, against externalizing displacement project costs on the resettlers themselves and for mobilizing the resources necessary to reestablish them equitably.

[8]The social content of the World Bank's policy on resettlement has been in recent years the subject of much analysis and discussion, and several other major agencies (aid agencies of OECD countries, the Asian Development Bank, and others) have adopted the same policy principles (see references). But many difficulties and deficiencies appear in sticking to policy standards during implementation, particularly because implementation performance depends primarily on the institutional capacity and political will of the borrowing governments.

The risks and reconstruction framework described in this chapter serves explicitly the principle of reconstructing resettlers' livelihoods. It goes far beyond "compensation of loss" and helps chart the spectrum of reconstruction activities.

The challenge to resettlement practice worldwide, today, is to adopt a new concept of resettlement goals, a new approach, and new methodologies. What we have had until recently, and in fact still have in many developing countries, are typically "minimalist, residualist, or welfarist approaches" (Marsden 1997), predicated on paying the least compensation possible, on externalizing a large part of real costs, and on abandoning the displaced people to fend for themselves with little follow-up assistance after the project uprooting them is completed. What is needed instead, as the record of many tragic failures in resettlement demonstrates, is a change in concept and method predicated on treating resettlement operations as opportunities for development, as development projects in their own right, benefiting the resettlers. This includes risk mitigation but goes on to construct a new socioeconomic basis on which resettlers' livelihoods can first be restored and then lastingly improved, so that their "income curve" could exceed predisplacement levels (Cernea 1995b; Shi and Hu 1994). The risks and reconstruction model expresses this concept and offers a framework for strategies aimed at such resettlement with development.

One essential implication of this approach must be spelled out clearly: the cost of reestablishing a family and a community is generally bound to exceed the strict market value of the physical losses imposed on that family or community. Compensation alone, by definition, is therefore never sufficient for reestablishing a sustainable socioeconomic basis for resettlers.[9]

> The key to development-oriented resettlement is to adopt a people-centered approach, not a property- compensation approach.

This is why resettlers' sharing in the stream of benefits from the development they make possible is not only an equitable way of financing the true costs of reconstruction but also a necessity, given the limitations of other available resources.

The survival of improper methodologies for costing resettlement is due in many countries to the absence of national policy and legal frameworks that define the rights and entitlements of people affected by state-imposed displacements. Within such policy vacuums arbitrariness easily sets in. The powerless are victimized, rather than being enabled to share in the benefits of the development project for which they incur sacrifices. Normally, policies and legal frameworks for resettlement must embody principles of equity and social justice. But in reality,

> in many countries the national legal framework of resettlement operations is incomplete... Resettlement legal issues [are treated] as a subset of property and expropriation law. For various reasons, these national laws do not provide a fully adequate framework for

[9]This, of course, has profound implications for the methodology of economic and financial analysis of the costs of displacement and reestablishment, which need to be addressed separately. In at least some organizations, however, it is already accepted that new methods of doing that assessment, financing, and budgeting of the full costs of displacement and reestablishment are indispensable (World Bank 1994/96).

development-oriented resettlement.... New legislation often must be introduced, or existing laws must be modified, in order to plan and carry out involuntary resettlement adequately (Shihata 1991).

Reconstructing Livelihoods and Reversing the Risks

The risks and reconstruction model for resettling displaced population derives its strength from complementing risk diagnosis with the approaches and concepts for the reconstruction of the displaced peoples' dwellings and livelihoods.

The policy message embodied in the model is clear: the general socioeconomic impoverishment risks intrinsic to displacement can be controlled by an integrated problem-resolution strategy, but not by piecemeal palliatives; and by allocating adequate financial resources. The adverse effects cannot be tamed simply through cash compensation for lost assets. Only concerted multifaceted cooperation and action by all the social actors involved can pursue development, rather than pursue just risk mitigation. Resettlement is apt to generate opportunities to improve lives, not only disrupt them.

The Components of Reconstruction Reversing the impoverishment risks and the reconstruction of livelihoods require convergence between the actions and resources of both the agent that triggers displacement—the state or private enterprises—and the population that is displaced. While it is incumbent upon the state to pursue a policy of reestablishment and allocate needed resources—financial, organizational, technical, etc.—it would be unrealistic to conceive of reconstruction only as a top-down, paternalistic effort, without the participation and initiatives of the displaced people. The strategy charted through the risk model is not a one-actor strategy, for the state alone; rather, it is an all-actors strategy. Despite the polarized situation to be expected in many displacement contexts, the participation of the relevant actors—including resettlers, local leaders, nongovernment organizations (NG0s) and other organizations, host populations, etc.—in reconstruction is necessary.

In examining the components of reconstruction, I will follow a slightly different order than in discussing risks. First, I will address the basic economic variables—land and employment then, those referring to community reconstruction and social integration.

Unfortunately, there is less empirical research on reconstructive aspects than on impoverishment processes, and considerably more efforts are needed to identify, analyze, and disseminate positive experiences in reconstructing livelihoods. Sociologists and anthropologists have been more concerned with describing and deploring displacement's pathologies than resettlements successes. Even though success is still far less frequent than failure, developing knowledge on the former remains nonetheless essential for policy and practical purposes.

(a) ***From landlessness to land-based reestablishment***
(b) ***From joblessness to reemployment.***

Settling displaced people back on cultivatable land or in income-generating employment 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, crop intensification or a shift to more valuable crops, diversification of on- farm/off-farm activities, use of project-created resources such as reservoirs, irrigated areas downstream, new employment, etc.

Selected empirical evidence. Land scarcity around the Shuikou dam (China) led project officials to make a bold effort to convert unproductive hillsides and uplands around the reservoir into regular terraces for horticulture or forested areas. Project-paid mechanical equipment was used for land recovery on a massive scale, and orchards were planted several years in advance of resettlers' relocation, so that trees were close to fruit- bearing at relocation time (personal observations). The approach resulted in some 53,000 mu of fruit trees, 10,000 mu of tea plantations, 26,000 mu of bamboo trees, and over 200,000 of forest trees.

This intensified agriculture and change in cropping patterns provided new land, work and livelihood to about 19,700 resettlers (World Bank 1996), and their average income from the new crops is actually higher than the level anticipated in the project's original resettlement plans. Significantly, this improvement in the resettlers' economic situation occurred even though on a per capita basis farmland was reduced from 0.98 to 0.32 mu. Complementary strategies and diversification benefited the remainder of Shuikou's resettlers: animal husbandry, including duck raising and reservoir fishing (6% of resettlers), jobs in the service sector and transportation (13.4%), jobs in new enterprises (19.3%), etc. Resettlers' initiative in Saguling (Indonesia) saved the fertile topsoil about to be lost in the reservoir area, moving it to upland plots and increasing their fertility (Costa-Pierce 1996). Project support combined with resettlers' initiative and resources, succeeded in turning many new reservoirs into an income source through aquaculture. In Mexico's Aquamilpa reservoir area fishing represented in 1989 a mere 4.1% of productive activities among those to be affected by the reservoir, but by 1995 about 60.8% of that population was engaged in fishing activities. In the Cirata reservoir area (Indonesia) cage aquaculture workers earned about Rp. 56,000 more a month than rice field workers in the same area before the dam construction (Costa-Pierce 1996). Training reset- tiers in new skills, when accompanied by actual employment, is effective: in Dudichua Coal Project in India, 225 of 378 fanners displaced by the new mine were retrained and employed (one job per family), reaching earnings about eight times the average rural wage (World Bank 1995b).

Resettling displaced reservoir farmers on land newly irrigated downstream is an excellent option for resettlement, but is nonetheless rarely used. Some states in India (Madhya Pradesh, Gujarat, and others) try to relocate oustees into command

areas by enacting land-ceiling laws for new irrigated land, an administrative measure that should be reinforced by gaining the cooperation of command area farmers.

(c) ***From homelessness to house reconstruction***

Improving shelter conditions is one of the relatively easier achievable improvements in reconstructing resettlers' livelihoods, even though it is still far from occurring widely. The improvements take one or more of the following forms: more square footage per capita; better quality housing materials; connection to services (electricity, water) and safer sanitation facilities; space for house gardens; and others.

Typical constraints are longer average commuting distances and transportation costs in urban areas; affordability issues and long-term mortgage burdens; and differential entitlements for the housing of former squatters. Best results are obtained when project compensation for housing (at replacement value) is supplemented by resettlers' resources (labor, cash, etc.)

Selected empirical evidence: Real gains through improved housing conditions, rather than just restoration, have been obtained by the initial cohorts of resettlers from Yacyreta dam (Argentina), by those from Shuikou—a total of additional 600,000 square meters, i.e., about 25 additional square meters per family (World Bank 1996) and from other urban resettlements in China, and by the resettlers from Kenya export development projects (World Bank 1995a), among others. In Shanghai, families displaced by a Sewerage Project can choose between state apartments supplied on rental basis, or private apartments available at one-third of the construction cost. Field studies have reported innovative approaches in reconstruction—house vouchers in Korea, daily transportation of resettlers by project vehicles to new sites in Togo's Nangbeto project enabling them to construct the core house-unit for each family, to which additional rooms can be added later (personal observation). Many displaced people show strong interest in improved housing and voluntarily use personal savings to supplement compensation. Evidence worldwide confirms the enormous potential for reconstructing shelter at improved levels.

(d) ***From social disarticulation to community reconstruction;***
(e) ***From marginalization to social inclusion;***
(f) ***From expropriation to restoration of community assets.***

The above three facets of a social reconstruction process are the least addressed in current approaches. Planners tend to overlook these socio-cultural and psychological (not just economic) dimensions, and are rarely concerned to facilitate reintegration within host populations, or to compensate community-owned assets. Addressing all of these three—partly distinct but partly overlapping—dimensions of reconstructing livelihoods can achieve synergistic effects. Community reconstruction refers to group structures, including informal and formal institutions, while overcoming marginalization refers primarily to the individual family/household level. Strategies

may differ when villages or neighborhoods are created as new social units, or when fill-in operations insert scattered resettlers within preexisting communities.

Selected empirical evidence: The most interesting experience in purposively maintaining communities or assisting new community formation comes from China. By law, project authorities in China must negotiate with prospective displacees simultaneously as individuals and as community groups. The state-allocated resources for financing resettlement are divided between individual households and community bodies (township committees) for some group-purposes. Community-owned assets lost in dis- placement are valued and financially compensated by the state, to enable the reconstruction of the same, or of comparable, community assets, which contribute to the livelihoods of resettlers (Shi and Hu 1994). Thus, by design, some patterns of the social organization of the displaced village are empowered to have a function in resettlement, and thus to continue their existence and role (personal observation). Furthermore, the Chinese approach is unique also in that it fosters community solidarity in sharing some of the losses (particularly land) and requires some amount of redistribution of non-affected village lands between the non-displaced farmers and their community neighbors who are displaced. Evidence regarding community assets is also reported from Mexico's Aquamilpa resettlement program, which both restored prior community services and built several new community facilities (Johns 1996). In Thailand's Khao Laem project a group of better-off farmers avoided marginalization by negotiating with the project a land exchange, which allowed them to develop business activities (OED 1993). The overwhelming evidence, however, indicates that restoration of access to common property assets occurs much less frequently than replacement of private property lands, causing adverse sociocultural effects that undermine both livelihood restoration and the formation of new working communities, while fostering conflicts between resettlers and hosts. Overall, in light of our conceptual model these three reconstruction processes appear complex because they require institution-building and response from all actors involved. Yet to date they are least understood by practitioners, are least addressed, and tend to lag behind other reconstructive processes.

(g) ***From food insecurity to adequate nutrition;***
(h) ***From increased morbidity to better health care.***

Nutrition levels and health will depend in the long term on progress in resettler's economic recovery (land and/or employment). But in the short run, the strategy that our reconstruction model calls for requires that sudden disruption in food supply and adverse effects on health are arrested through immediate counteraction, even before full economic reconstruction. This is necessary to lower morbidity and prevent increases in mortality rates. Displacement-triggered difficulties are compounded by suddenness of change and, sometimes, by resettlers' behavior and culture. Borrowing from successful experiences with assistance to refugees (emergency relief) can be highly effective for offsetting immediate nutrition and health risks to resettlers,

with focus particularly on most vulnerable groups (children, elderly, pregnant women, etc.). Sustainable reconstruction, however, requires long-term planning as well, beyond rapid relief measures, together with information and education, to foster resettlers' behavioral change and their learning to cope with the circumstances of the new habitat.

Selected empirical evidence: Existing evidence indicates that the risks of immediate food scarcity are more readily recognized by resettlement agencies than the health risks incurred by resettlers. Problem-resolution tends to gravitate around temporary food aid and allowances for a limited "transition" time. Long-term planning is seldom done. Resettlers' coping response tends also to address first the more easily perceivable food needs. Education campaigns among resettlers do little to stimulate adaptive behavioral changes in time, particularly regarding sanitation practices, which in the medium-term increases hazards to health. Thus, overall evidence confirms that the strategic directions indicated by the risk and reconstruction framework are indeed essential, yet not regularly incorporated into problem- resolution strategies in resettlement operations.

While I discussed above the constitutive elements of livelihood reconstruction one by one, or in subclusters, it is important to repeat that the risks and reconstruction framework emphasizes their interdependence and synergy. Therefore, every reconstruction strategy should ideally pursue these directions in an integrated manner. In tum, empirical research should attempt to identify the presence or absence of all of them in the same process or project cycle—something I have not usually found in current studies. Finding evidence that predisplacement levels have been restored (or even exceeded) in only one of these dimensions is an indicator that at least one sequence of pauperization has been broken and stopped. But it will take effective action on all or most to succeed in restoring livelihoods fully.

The Model as a Research Tool

The risks and reconstruction model can serve, last but not least, as a conceptual tool for guiding further research on resettlement. For researchers who may apply and test this model, there is a lot to do in terms of constructing new research strategies on resettlement, formulating hypotheses on risk correlation, testing the model in particular settings (Pandey et al. 1997), comparing with longitudinal studies (Scudder 1991) or measuring variables and outcomes. Despite all the recent expansion in research, there is much that we still do not know about resettlement, especially about the behavioral responses of various populations and subgroups, and about their own initiatives for coping and reconstructing.

As a conceptual codification of already accumulated knowledge, the model generalizes and theorizes about resettlement in a way that further invites, and hopefully may inspire, creative new research to be carried out. It presents in a

nutshell an entire program for further, and systematic, studies on resettlement. This refers both to operational and basic research.

For operational research, the preparation of any project that involves resettlement should include analysis of the issues *in situ,* carrying out first a local risks assessment. That means finding out how the risks identified in the generalized model manifest themselves in the given projects context, whether other risks are present, who will be affected, and how such risks can be prevented or reduced.

Beyond the preparation stage, during project implementation, the model can be further used to construct an indicator list for: monitoring specific progress; identifying undesired or unanticipated effects; and eliciting feedback from the affected and host populations about specific variables, e.g., land repossession, health, housing, common property assets, services, or the recreation of social networks. In turn, *ex-post* evaluation research has a rich and promising territory for comparing actual results achieved in reconstruction with predicted risks and with the effects expected from the project's "re-development package." Beyond immediate applicability, findings from various independent sites can be easily compared for revealing best practices and crafting, possibly, alternative strategies.

For basic social research, the model's potential is vast as well. Hypothesis formulation and testing is obviously needed to assess the correlations between the model's variables under different circumstances: for instance, it can be hypothesized that adverse impacts on health or on nutrition will be less acute if the emphasis is placed not just on emergency medical relief but rather on community reconstitution; or that the use of scarce resources for restoring access to common property assets may have stronger effects than incrementally higher investments in housing; or that there are gender-related differences in risks. An important research direction may be to explore the relationship between the psychological and economic aspects of marginalization; and so on. The model's variables also facilitate multivariate analysis, and coherent organization and aggregation of findings either around the risk variables *per se,* or around the social actors variables, with many possible correlations. Further, as has been done in research on natural disasters (see the remarkable Drabek inventory; Drabek 1987), an inventory of findings and propositions about human responses to development-caused displacements, could be constructed and classified by type of social group, or type of development program, in a manner useful to further theorizing and model building as well as to practice.

Actual applications of the risks and reconstruction model have been already initiated by some researchers, with very good results. A study on "countering impoverishment risks" was done on the displaced people from India's Rengali dam (Ota 1996), measuring for each risk variable actual impacts, analyzing counter-risk measures, and also formulating specific recommendations about what needs to be done in practice. Another, much larger scale study on resettlement caused by seven different projects (dam construction, thermal plants, mining and industry) was carried out by the Institute for Socio-Economic Development (ISED) in Orissa on a sample of 31 villages and 441 households, with 2274 people, selected from among 95 affected villages with 1977 households. That study has used the modeling of key impoverishment risks as an analytical tool, producing new and

comprehensive findings (see Pandey et al. 1997). These substantive findings, structured along the main impoverishment risks, are also a practical test of this conceptual framework under the demands of a large-scale field investigation.

The actual use, in practice and research, of the risks and reconstruction model for resettling displaced populations will certainly test its potential in many ways; it may change and improve it, and hopefully will enrich it further. Its key premise is that impoverishment through displacement is not inevitable or unmitigatable. After having done a great deal of field research and operational work on resettlement, I cannot emphasize enough the significant difficulties involved in actually preventing and mitigating these risks and in the arduous reconstruction of disrupted livelihoods and communities.

Yet forecasting impoverishment trends is important for initiating policy and practical measures that counteract undesirable outcomes. Failure to acknowledge and make known in a timely fashion the social risks inherent to displacement would allow them to unfold unimpeded in every case. Conversely, equitable policies and improved resettlement financing and implementation, with the participation of those affected, are apt to make possible the socio- economic reconstruction and development of resettlers' livelihoods.

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Michael Cernea started working as assistant researcher in the Institute of Philosophy of the Romanian Academy in 1958, became principal researcher, defended his PhD in 1962 and became the Chief of the Institute's social research section soon thereafter. During the 1960s, he helped break the official publication on empirical anthropological research in Romania at that time by shifting the research section h led at the institute of Philosophy from general social philosophy to empirical sociological field investigations in industrial and rural sociology. He was invited as visiting researcher at the *Centre D'Etudes Sociologiques* in Paris (1967) and as Fellow in residence at the *Center for Advanced Studies in the Behavioral Sciences* (CASBS), Stanford, USA in 1970–1971. The European Society for Rural Sociology elected him as Vice-President (1973–1977). The Romanian Academy awarded Dr. Cernea the Vasile Conta Prize, and other prizes and distinctions for his research publications.

In mid 1974, Cernea emigrated to the United States, where he has since lived, taught and practiced for the longest part of his professional sociological and anthropological career. In August 1974, the World Bank in Washington, D.C. selected him as its first in-house sociologist, then as its Senior Sociologist, and Senior Adviser for Social Policy and Sociology from 1982 to 1997. Between 1998 and 2003 he was appointed as member of the CGIAR Science Council (the group of 16 International Agricultural Research Centers). Professor Cernea has also served as Senior Social Adviser to international organizations such as the UN, OECD, UNDP, ADB, CGIAR, FAO, BP, Chevron, etc. on social policy, development, cultural and poverty issues. He was elected as officer in various capacities for international and national professional social science organizations, including as Vice-President of *The Gusti Foundation* (Romania) after 1990. He has worked also for non-profit organizations, served as currently Director in the Board of PACT (USA), and was a member of the Board of Trustees of the Bibliotheca Alexandrina (Egypt) (2000–2008).