resources of the host population. This causes both social tension and increased environmental deterioration. 'Second generation' adverse effects on the environment also occur when oustees do not receive cultivable land and are compelled to move uphill into the reservoir watershed, accelerating deforestation, erosion and reservoir siltation.

Planning for resettlement with a sense of social justice should mandatorily consider this type of incurred social costs—both in terms of natural resources and in terms of public services. This is fair also to host populations, since the absence of such planning implicitly externalizes these severe costs to them as well, not only to the displacees.

Social Disarticulation. Forced displacement tears the social fabric and the existing patterns of social organization. Communities are fractioned, production systems are dismantled, kinship groups and family systems are often scattered, local labour markets are disrupted, and people's sense of cultural identity is undermined. Life-sustaining informal social networks of mutual help, local voluntary associations, self-organized service arrangements, etc., are dispersed and rendered inactive. This unravelling represents a massive loss of social capital incurred by the uprooted people, yet a loss that is never quantified or compensated. Such 'elusive' disintegration processes undermine livelihood in ways uncounted by planners.

A monograph on the Hirakud dam in Orissa found that displaced households whose 'economic status has been completely shattered as a result of displacement' were not 'properly integrated' in the host villages many years after relocation (Baboo 1992). And in the Rengali dam project in India, for instance, a sociological study found various manifestations of social disarticulation at the kinship system level, such as the weakening of intimate bonds, growing alienation, and lower cohesion in family structures. Marriages were deferred because dowry, feasts and gifts became unaffordable. Resettlers' relationships with non-displaced kinsmen were eroded and interaction between individual families was reduced. As a result, participation in group action decreased; leaders became conspicuously absent from settlements; post-harvest communal feasts and pilgrimages were discontinued; daily informal social interaction was severely curtailed; and common burial grounds became shapeless and disordered (Nayak 1986).

Overall, if poverty is not just the absence of material means but also lack of power and great dependency, then the disorganization of communities and social networks increases poverty by reducing power and fostering vulnerability.

Household networks help cope with poverty through personalized strategies: informal loans, exchange of food, clothing and durable goods, mutual help with farming, building houses, and caring for children. Household networks also pass around significant amounts of money and services, and may substitute for public subsidies. Such transfers flow sometimes from better-off to poorer households. World Bank economists, measuring and quantifying the contribution of such informal social networks, have found that in developing countries 19 to 47 per cent of people report recurrent transfers, representing as much as 20 per cent of household income, compared to only 5 per cent in the United States. In the Philippines, for instance, private transfers among households in the lowest quintile boost their income by more than 75 per cent. In Peru, the pre-transfer income of households that are net givers of transfers is 60 per cent higher than recipient households. Such private transfers also function as informal credit arrangements and insurance mechanisms. Simulation analysis shows that in Colombia such transfers contribute up to 40 per cent to stabilizing incomes in households experiencing unemployment (Cox and Jimenez 1990).

The dismantling of such multifunctional, yet virtually 'invisible' social networks through displacement acts as one of the hidden but serious causes of impoverishment through displacement. It is difficult, and it takes time, to reconstitute similar social structures and networks among resettlers and their hosts, capable of exercising such support functions at the new relocation sites. This is a major loss of social capital that compounds resettlers' losses of physical capital (natural assets), manmade capital (infrastructural assets) and human capital (skills, relevant knowledge), discussed above.

Differential Impacts and Adjusted Solutions

The eight fundamental impoverishment risks discussed above affect various categories of people differentially. Therefore, the practical solutions for recovery must be adjusted accordingly.

Displaced populations are not a monolithic socio-economic

group; they have non-homogeneous interests, potentials and cultural characteristics. The evidence suggests that, depending on the economic sector and other variables (time, local contexts, etc.) resettlers at particular sites may face only some of these risks or may confront additional ones. Further, vulnerable population groups are hurt differentially, not uniformly. For instance, recent research revealed that women suffer more severe impact (Feeney 1995; Koenig 1995). Blatant discrimination against women in the criteria for compensation is documented by Agnihotri (this volume): she signals that eligibility for land compensation for unmarried individuals in Orissa is set at age 18 for men but at age 30 for women! In turn, tribal populations are more vulnerable than the general population to the impoverishment hazards discussed above. In India, the specific circumstances of tribal populations in the Narmada Sardar Sarovar projects have been at the heart of the huge Narmada controversy (see Patel 1997; Joshi 1997; Baviskar 1997; Fisher 1995; Gill 1995; Morse and Berger 1992). This is true not only of the Sardar Sarovar case: in fact, India's research literature has documented that the generic risks of displacement common to all populations take aggravated forms everywhere because of the different economy and culture of tribal groups (Fernandes 1991; Heuze-Brigant 1991; Mahapatra 1994).

Children, as a vulnerable age category, are subjected to particularly perverse consequences. Elaborating on the Risks and Reconstruction model in light of evidence from his own research, an Indian resettlement specialist suggests that one may add the educational loss affecting children to the Impoverishment Risks model (see Mahapatra, this volume). Indeed, relocation often interrupts schooling and some children never return to school. After displacement, as a result of a drop in family income, many children are drafted into the labour market earlier than they would have been otherwise. Differences between particularly vulnerable groups clearly call upon policy-makers and planners to provide targeted responses, attuned to special circumstances.

We have seen that the analytical impoverishment framework captures not only the economic hazards of displacement but also the social cultural ones. Since it highlights that people lose natural capital, manmade capital, human capital, and social capital, our 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 recovery programmes, to which the conceptual model can, in turn, serve as guide.

Planning for Resettlers' Recovery by Using the Risks and Reconstruction Model

The purpose of modelling the impoverishment effects of displacement is not academic: it is practical. The purpose is to equip planners with a compass for planning and for justly considering resettlers' rights and needs.

The predictive-cum-planning capacity of the Risks and Reconstruction model derives 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 risks will turn into real and hard deprivations.

The findings about resettlers' impoverishment strongly challenge the state's official development policies. It is always unexpected and disturbing to see destruction arriving on the wings of progress, and to find poverty striking within programmes designed to help alleviate poverty. But development is not linear: conflicts and contradictory outcomes are bound to appear at many junctures.

What is surprising, however, is not that adverse consequences occur, but that in many countries, India included, they continue to be widely overlooked or underestimated in planning. Thus, even though they are predictable, they become allegedly 'unanticipated' in particular programmes. As a result, growth strategies are ill equipped with safety-net measures designed to prevent risks or mitigate and compensate actual counter-developmental effects. Adverse effects are often dealt with in a perfunctory manner: plans and projects mention them, but do not really build barriers against them as meticulously as they build up barriers against technical risks in projects (Cernea 1988). Technocentric biases in projects mean that the physical components (e.g., civil works) are addressed first while people are put last; detailed social planning and execution are not done, and necessary resources are not allocated; misguided implementation then compounds the inevitable negative socio-economic effects. That legitimately raises the basic social justice question: 'Development for whom?' (Mahapatra 1991).

The explanation usually offered by many decision-makers and planners to such criticism is that the sum of development benefits outweighs the sum of its costs and negative effects. Arithmetically, this may be so in many (not all) cases. Upon closer analysis, however, this answer is neither legitimate nor convincing. It implies that the harm caused to the individuals subjected to displacement is compensated by the aggregate benefits of development, independent of the allocation of these benefits.

This reasoning, based on desk macro-accounting of costs and benefits, is morally and practically fallacious when one cannot predict with reasonable certainty the allocation of the future benefits of a programme. The fallacy is tangibly obvious when—as in the case of upstream displacement *vis-à-vis* downstream development—the programme randomly generates benefits for some, while it inflicts negative effects upon others, with no balance. This kind of random distribution of benefits and losses, of gains and pains, has little to do with social justice or equity. Equity requires that those who endure the losses and the pains should deliberately be enabled to overcome them and to also share in the benefits of development.

True enough, planned programmes often produce long term gains and development for those labelled 'project beneficiaries'. But this does not make the hardship any lighter for those suffering the immediate misfortune of being uprooted. In real life the negative effects are not shouldered by the project beneficiaries. They are compensated only in part by the state, while a large part of the costs is externalized and forced upon the population that is being victimized in the name of the 'greater good of the greater number'. This kind of spurious rationality plagues rather than serves development philosophy and planning practice. It distracts planners from seeking alternative approaches and solutions. It is responsible for tolerating or even magnifying some of the ill effects of such programmes, which otherwise could be counteracted—either prevented or mitigated.

To the contrary, recognizing the risks and compensating for the costs is a crucial prerequisite for equitable planning. More than offering just general warnings, the risk variables of the model provide a matrix directly convertible into planning provisions. Attempts to use this model as a tool for actual resettlement planning and preparation have already started in some projects, in India and in the Philippines.

What needs to be done for practically using the Risks and Reconstruction model as a tool in planning resettlement with recovery? Four steps are essential:

— *First,* making a risk assessment in the field, when the survey of people and assets in the displacement areas is carried out. This assessment must identify which risks are higher and which are lower in the given situation.
— *Second,* designing risk-targeted responses to the predicted hazards, commensurate with the intensity of each risk. This will include: avoidance measures, a re-development package as the core of the resettlement plans; and allocation of necessary financial resources and institutional capacities.
— *Third,* encouraging the participation and pro-active response from the outset of the population directly at risk.
— *Fourth,* establishing transparent information and communication between decision-makers/planners and the populations at risk.

The optimal response to anticipated risks is when planners and decision-makers start searching for technical alternatives that will obviate the need for displacing people altogether, or at least will reduce the number of displacees. Such alternatives are sometimes 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 its height. When it is not possible to avoid displacement, however, the planners and managers are prompted 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'.

Because each of the generic risks will register a variable severity from one location to another, an experienced social planner will use the model as a guide to identify which risks loom larger for each population group, how the risks interact, and which one must be counteracted first. For instance, in the ongoing Batangas port development project in the Philippines, co-financed by Japan, a social planner applied the model in an attempt to move away from 'traditional planning' and instead sharpen the reconstruction strategy of his project (Spiegel, personal communication). 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.[3] This approach allows to allocate resources commensurate with the intensity of each risk, in ways better tuned to specific circumstances in the given location.

In turn, 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 transparently, understand well the impending displacement, and overcome disbelief or the tendency to denial. Good communication of officials with resettlers is seldom, and it needs radical improvements. The utility of the model to resettlers consists also in enabling them to pursue alternatives, to resist and militate for recovery entitlements when displacement is unavoidable.

The use of the model proposed above is not limited, however, to the initial stages of the project cycle—preparation and planning—but should be extended to the resettlement implementation stage, particularly to the monitoring of early outcomes. Early monitoring studies focusing on the initial cohorts of resettled people in each project to assess how their livelihood is being restored can improve the relocation of subsequent cohorts in the same project. Such monitoring studies (see Barth and Williams 1994) can be structured along the eight elements of the model, and would produce practical recommendations tailored to the circumstances of the project.

Policy Message of the Resettlement Model

The overall policy message that the Risks and Reconstruction model sends to the planning process is that these specific socio-economic risks must be brought under control through a comprehensive strategy and by allocating financial resources. They cannot be tamed through piecemeal random measures, based on meagre cash compensation for lost assets, but only through concerted multi-sided action. Standing the risk model on its head provides the action model for the constructive re-establishment of those displaced. In other words, landlessness risks should be met through planned land-based re-establishment; homelessness through sound housing programmes; joblessness through alternative sustainable employment; increased morbidity through adequate prevention, education and improved health care assistance; and community disarticulation through

purposive community reconstruction of host-resettler integrative strategies. One way to accomplish such reconstruction is to enable those displaced to directly share in the specific benefits generated by the programme which pushed them out in the first place.

Worldwide resettlement experiences converge in showing that, in the last instance, the single most damaging factor to the quality and outcomes of resettlement is the absence in many countries of policy and legal frameworks that define the rights and entitlements of people affected by development-related displacements. Policy vacuums offer room to arbitrariness and to the victimization of the powerless. Relevant in this respect is the World Bank's general counsel observation:

> lessons derived from Bank-assisted projects involving resettlement [show] that 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 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)

This is why the World Bank has recommended policy reform in this area to all governments whose projects entail involuntary resettlement, including to India, together with the build-up of the institutional capacity for resettlement.

The debate about the need for a national policy on resettlement and for legal frameworks protecting oustees' entitlement to recovery goes on for long in some countries. While the civil society increasingly demands policy and legal regulations, some governments resist this demand. A draft national policy for resettlement was written years ago in India (Joshi 1997) but the draft has not yet become either formal policy or law. The prolonged lack of policy frameworks only worsens the condition of resettlers (Cernea 1996). In plain terms, this means that hundreds of thousands of people are undergoing unnecessarily amplified losses and hardships, hardships that otherwise could possibly be avoided or mitigated. This is an irrefutable argument for adopting national policies and legal frameworks for resettlement in all developing countries. 'Bank experience shows, as Ismail Serageldin noted, that if a government

adopts its own national policy to reintegrate displaced people into the national economy, resettlement is successful for more than just Bank-financed policy, not a property-compensation policy' (Serageldin 1995).

To conclude, it is crucial to emphasize that impoverishment through displacement is not inevitable in resettlement. Having done much field research and operational work on resettlement, the author has no illusions about the major difficulties associated with preventing and mitigating these risks. But the advantage of forecasting trends is that the forecast offers the possibility to adopt counteraction. Failure to acknowledge the social risks inherent in resettlement can only make these risks unfold unimpeded in every case. Conversely, equitable resettlement policies and improved planning, financing, and implementing are apt to transform the prediction of impoverishment into a self-destroying prophecy and apt to facilitate the socio-economic recovery of resettlers.

Notes

1. A volume dedicated to the re-establishment of displacees' livelihood is currently under preparation (M. Cernea and C. McDowell (eds), 'Reconstructing Livelihoods: New Approaches to Resettlement'. This volume results from an international conference devoted to synthesizing field experiences in restoring livelihood of displaced people—both development oustees and civil war refugees—that was held in September 1996 at the University of Oxford, England.
2. Among others: the Gezhouba dam (China), Tucurui dam (Brazil), Ataturk dam (Turkey) and Srisailam dam (India) . all not Bank-financed; Nangbeto hydropower dam (Togo-Benin) and Chungju dam (Korea), Bank-financed projects.
3. Personal communication from Hans Spiegel.

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