

Compensation and benefit sharing: Why resettlement policies and practices must be reformed

Michael M. Cernea*

Anthropology Department, the George Washington University, 2110 G Street, NW, Washington, D.C. 20052, U.S.A.

Abstract: Many public and private sector projects, such as hydropower dams or mines, trigger forced population displacement but fail to resettle people sustainably and instead cause their impoverishment. Social science research has found that one root cause of such failures and of impoverishment is asset dispossession and the insufficient financing of resettlement. Most governments, however, state that (1) compensation alone is sufficient for restoring the income and livelihood of those displaced, and (2) resources to supplement compensation with additional financing are not available. The author critiques and rejects these positions. He offers a theoretical analysis of the limits and flaws of compensation payments for expropriated assets, and argues that resources are available for supplementing compensation with financial investments for resettlers' development. The sources for supplementary financing are the *economic rent* (windfall profits) generated by natural resource projects such as hydropower or mining and the regular stream of benefits generated by all projects that require resettlement. Further, the author argues that financial investments in resettlers' welfare are indispensable and that *benefit sharing* is feasible. Therefore, both should become basic principles of resettlement legislation and practice. In addition to theoretical analysis, the author documents with empirical evidence that some countries (China, Brazil, Canada, Columbia and Japan) already make investments *additional to compensation* for post-displacement reconstruction. The author sums up his argument in these key points:

- (1) Compensation alone cannot prevent the impoverishment of resettlers and cannot in itself restore and improve their livelihoods;
- (2) Additional financing is needed for direct investments in resettlement with development;
- (3) Compensation levels must be increased;
- (4) Financing resources are available in most cases for investing in resettlers' development, but allocation of investments depends on the political will of governments and project owners;
- (5) Firm opposition to displacement and under-compensation is growing in many countries and the strength of resettlers' demands and political opposition does influence allocation levels;
- (6) Mechanisms for benefit sharing and transfer are known and effective and these mechanisms can be adjusted to different country and economic sector conditions;
- (7) The introduction of benefit-sharing rules requires legislative enactment for robust application.

Key words: *compensation; hydropower dams; displacement; resettlement; risks; poverty; impoverishment; benefit sharing*

1 Introduction

This paper discusses several ideas that are moving to the forefront of the international debates around development-caused population displacements and resettlement. These ideas are examined by economists, sociologists, engineers, and legal specialists in a new book, which in its very title asks a stark question: *Can Compensation Prevent Impoverishment?* (Cernea and Mathur 2008).

*Corresponding author (e-mail: Mcernea@worldbank.org)

Received Feb. 14, 2008; accepted Mar. 16, 2008

Challenging whether compensation can – or cannot – prevent impoverishment reaches deep into the heart of development policy, practice, political economy, law and ethics. Compensation is presumably the basic remedy for eminent domain dispossession and forcible displacement. But if this remedy fails to prevent people’s impoverishment, where should responsibility be placed and accountability demanded? And what are the alternatives for avoiding impoverishment?

There is a growing awareness that the majority of projects that displace people, including projects sponsored by international agencies or by private sector corporations, end up failing to resettle them equitably. The outcomes of most development-caused forced displacements and resettlements (henceforth, DFDR) leave a disgraceful stain on development itself, conflicting with its rationale, objectives and morality. But the situation varies across the developing world. This article brings evidence from many developing countries of the severity of such issues. In China, major policy measures were adopted in the last two decades, and particularly in 2006, to correct past errors and substantially increase both compensation payments and financial investments in “resettlement with development”. Also, data on legally enacted benefit-sharing mechanisms in hydropower projects in some industrialized countries (Canada, Japan and Norway) support our argument.

Our ultimate conclusion is that profound reform in how involuntary resettlement is currently conceived, conducted and financed in most developing countries is indispensable. Such reform must begin with the economic and financial foundations of planning for displacement and resettlement.

2 Flawed compensation and under-financing: An essential cause of resettlement failure

What are the root causes of this impoverishment that triumphs again and again over all official and project promises that forced resettlement will not result in impoverishment?

In most countries, compensation is used by the state as the virtually single financial tool for handling expropriation, displacement and resettlement. In official vocabularies, compensation is vested with almost mythical virtues, as if it were able to cure all the ills of uprooting, dispossession, emotional pain, expropriation and economic impoverishment inflicted by forced displacement. In real life, however, compensation reveals itself to be both impotent and misleading: it is unable to perform the restorative miracles with which it is officially and rhetorically credited. Compensation is flawed and reconstruction is under-financed. The revealing fact is that numerous projects that do pay compensation fail to restore livelihoods and leave people worse off. This is why we argue that a basic and recurrent cause of failure in DFDR in most developing countries is financial.

Without any doubt, compensation for expropriated land and assets is economically justified, legally obligatory, and indispensable. But it is not capable of achieving what it is

assumed to achieve: livelihood restoration and improvement. It leaves a financial gap, unfilled by other financing sources.

Compensation has been found again and again, in study after study, to be not only poorly conceived and implemented, but also financially insufficient – in short, not up to its task of restitution and of actually “compensating” in the full sense of this term (Fernandes and Thukral 1989; McDowell 1996; Drèze et al. 1997; Picciotto et al 2001; McDonald 2006; Jayawardene 2008). By its nature, as defined in economics, compensation is neither a “benefit” to displaced oustees nor an “investment” in their development (as it is often falsely claimed to be): it is only an (incomplete) restitution for what is taken away from those displaced.

The scholarly critique of compensation theory, of its financial insufficiency, and of its operational dysfunctions (Cernea 1999, 2008) has sharpened in recent years, striving to pierce the deafness of officialdom. Such critique has multiplied particularly in India, more at the level of empirical observation and reporting, however, than at the level of theoretical deconstruction and critique.

In their book on India’s ongoing development, Jean Drèze and Amartya Sen noted, without elaborating, that “it has been possible for large development projects to displace millions...over the years, *without any compensation worth the name and without anyone taking much interest in them in the corridors of power*”. In addition to being functionally insufficient from a strictly financial viewpoint, even if it were calculated objectively, compensation is further vitiated by corrupt subtractions and distortions during delivery, as aptly described by Mathur: “Poor people don’t get in their hands the full amount of compensation for their properties, meant to aid them in getting back on their feet. Rampant corruption hits the poorest the hardest. Government agencies are not known for their integrity in seeing that the rightful claimants get their due amounts promptly...” Even in land acquisition for private sector projects, government’s unnecessary interference in transactions that should be market-based, between a willing buyer and a willing seller, results in a much diminished amount of compensation for the small landowners, largely accounting for their impoverishment.

Worldwide research on DFDR is increasingly focusing on revealing the impoverishment risks to which displaced populations are exposed and on the need for targeted counter-risk and reconstruction strategies (Mathur and Marsden 1998; Cernea 1997, 2000; Pandey 1998; Downing 2002; Schmidt-Soltau 2003; Scudder 2005; Guha 2007). During the last decade, the widespread use of the IRR model and methodology in DFDR research worldwide has generated a new and enormous body of empirical data confirming that impoverishment is the dominant outcome for displacees in the overwhelming majority of cases reported in the scientific literature (Mahapatra 1999; Scudder 2005; de Wet 2006). The findings consistently converge around paradigmatic, recurrent risks and pauperization outcomes, rather than on

idiosyncratic, accidental occurrences. One key factor of such pauperization is the political and policy stance of many governments, which, in various ways, deliberately maintain compensation payments at low levels, including through state interference in land acquisition by private sector projects, and infringe on people's rights.

Amartya Sen (Sen 2007) has recently weighed in substantively on this key issue, with an acid critique of the “big mistakes” in the thinking and action of the West Bengal government in the case of the Singur and Nandigram SEZ projects. Sen's critique raises a key theoretical and policy objection against the non-market, noncompetitive way in which land-compensation levels are determined now. In his words, “Where there is a mistake in the government's thinking, and I think it is a big mistake of a tactical kind, is not to recognize that if this land were available for industry in general, and not just for the Tatas, the value of the land would have been much greater. While the compensation paid is greater than the value of the land seen as agricultural land, the compensation paid by the government is less than what the value would have been had it been free for competition with industries. If you are part of the market economy, then you have to take into account what the value of the land would have been had it been freely available for industry...I think it is a mistake, an honest mistake and it can be corrected in the future.”

The theoretical and policy implications of Sen's critique converge in suggesting the need to reform both the thinking and the practices of compensation. Sen asks the state to promote competition among industries for the land they need, and points also to industries' ability to increase the financing above what is the conventional norm in current by-the-state compensation practice.

The financial insufficiency of compensation as a source for restoring and improving livelihoods is by now well known, better documented empirically and more recognized than ever before (Cernea and Mathur 2008). Absent change, it is fully predictable that the outcomes will continue to be de-capitalization and impoverishment, with countless people becoming worse off. To continue a financing pattern based on compensation alone means largely to continue *financing the certainty of repeated failure* and further impoverishment. Financing is in itself a factor of such paramount importance for achieving economically sustainable resettlement that, when flawed, it causes failure, even if other necessary factors of success are present. Certainly, money *alone* wouldn't solve all resettlement's problems either. But the absence of adequate financing *foreordains failure by definition*. This makes it indispensable, as the author will argue further in this paper, to mobilize additional financing sources for carrying out DFDR; indeed, financing can be complemented by a fraction of project benefits to supplement compensation payments.

3 Investment financing for sound resettlement

Financing for achieving success in resettlement does not only require radical reform of

the current norms and practices of compensation as restitution. It also requires, as the author will argue, making proactive financial investments in the reconstruction of resettlers' economic and material income basis.

The sharing of project benefits, as documented below, has become in a number of countries another financial instrument used towards securing the resources for such investments in reconstruction post-displacement. The conceptual rationale and the legal and practical mechanisms available for such *benefit sharing* are the main subjects of the present paper. Avoiding altogether or reducing displacement whenever possible remains always the desirable and paramount goal. But when compulsory displacement becomes unavoidable, these mechanisms are crucial for placing the people who are physically or economically displaced on a new and economically robust productive foundation.

Post-displacement reconstruction – in particular, its complex economic anatomy – is still little studied in the resettlement literature. Much more is known from the socio-anthropological literature about how displaced people become impoverished than about how they are coping and trying to overcome and rebuild their dismantled economic and income base. Endowing development projects that cause displacement with the budgeted financial resources needed to correct the harm through sustainable resettlement is nothing more than a normal, elementary prerequisite for creating the capacity to do the job. Yet although this is a fundamental premise, project economists underestimate it. Most Resettlement Action Plans (RAPs) are not supported by an economic feasibility analysis capable of examining whether the rehabilitation promised by RAPs will or will not lead to economic recovery. The budgets included in RAPs (when such budgets are attached – often they are missing altogether) are not the result of a professional economic and financial analysis, as project appraisal doesn't mandate it. Thus, the projects that forcibly dispossess people of vital productive assets and dismantle their existing economic systems are seldom equipped by the project sponsors with sufficient financial resources to rebuild the livelihoods they dismantle. Even the best manager of a resettlement project component would not be able to produce miracles and prevent the severe impoverishment that looms over those displaced if not given adequate financial means (Cernea 1999, 2000, 2008). Analysis of the compensation principle and practices cannot but conclude that compensation is structurally insufficient to achieve full restoration and is even less capable of generating improvements in livelihoods. Empirical findings show beyond any doubt that the delivery of compensation is subject to structural dysfunctions, diverting practices, delays, etc., leaving the goal of oustees' reintegration and reconstruction unachieved.

Moreover, our analysis of a large number of resettlement action plans has identified the specific type of missing resources: RAPs tend to list the compensation resources allocated for restorative activities, but in the vast majority of cases are devoid of allocations for investment in development activities for the resettlers. The resettlement policy statements of the World

Bank, Asian Development Bank (ADB), African Development Bank (AfDB), and other development agencies are not explicit about investing in resettlers' development over and above the payment of one-off compensation for lost assets. They remain vague in this respect, far from being directive towards financing resettlers' development. As a result, insufficient financing not only chronically ruins resettlers' livelihoods, but also undermines the total economic performance of projects with resettlement components. Conversely, better resettlement financing could result in overall better performing projects.

Fortunately, however, new experiences in some countries also reveal the seeds of alternative approaches. Moreover, these are not piece-meal or accidental acts, but rather significant macro-societal measures. They include adoption of legislation creating adequate financial capacity for resettlement. Such approaches suggest valid alternatives to current under-financing patterns in other countries as well.

4 “Where would the resources come from?”

When the question of allocating more resources for resettlement is raised, the official responses are either outright negative or skeptical: “We pay compensation. There are no other financial resources for the resettlers”; or “Where would the resources for more funding come from?”

Certainly, resource scarcity is a real constraint. But is it a constraint that cannot be overcome?

Financing shortages during resettlement implementation are more often an artifact of inadequate pre-project cost calculations for this component, and of initially unrealistic budgets, than of absolute resource scarcity (Pearce and Swanson 2008). Undervaluation of losses and underestimates of resettlers' forthcoming reconstruction costs coalesce into under-allocations of financing at projects' start. This initial under-budgeting is hard to correct during implementation, even if RAP implementers realize that initially allocated resources are not up to their complex tasks.

Despite constraints and scarcity, there are ways to mobilize the necessary financial resources to do the resettlement programs well and achieve resettlement with development. Economic theory points to the significant resources generated by the very projects that impose the displacement.

As long as the mindset of decision makers and financial planners is entrenched in the belief that compensation is all that is due and needed for resettlers to recover, we can expect only (1) a limited up-front budget allocation, and (2) attempts to push this allocation to the lowest level tolerable. This belief is cultivated and reinforced by the long-persisting (but never actually proven empirically on a large scale) assumption – originating in obsolete economic theory – that compensation alone is sufficient for income restoration.

We challenge this belief as unconfirmed in practice and mistaken. Many evaluations of

project outcomes have empirically proven that these assumptions are incorrect (Picciotto et al. 2001). For a policy to succeed, the means for achieving its objectives must be commensurate with these objectives, at the level necessary to render the objectives feasible. Furthermore, a basic economic principle, germane to the circumstances of expropriation and forced (non-market) acquisition, is that project costs should not be externalized. Yet such selective externalization occurs (Daly 2004) whenever the financial means are short of covering all costs imposed on the displaced people, leaving them worse off than they were before the project.

Consequently, resource allocation should be keyed to the pursuit of the policy's objectives in resettlement. The economic feasibility analysis of resettlement plans and the dial of the budgeting balance must be set not just on restitutionary compensation, but also on reaching the policy goal of livelihood restoration and improvement. Then, the allocation of required means would be much larger from the outset.

Compared to the mega-costs of large-scale projects, the outlays for resettlement remain a small fraction of the total budget. Resettlers claim that if the public sector has resources to finance the physical infrastructure built by the project for the general good, it is only right to allocate a sufficient amount for economically restoring those whose livelihoods are put at grave risk. This is a powerful argument, which can be discounted only at the peril of moral discredit and political instability.

5 Economic rent as potential resource for resettlement

Returning to the question of where the resources would come from to increase the financing of resettlement, we will refer to the experience of several countries that found novel solutions. We believe that these approaches are replicable.

In essence, these solutions revolve around using (1) the windfall economic rent generated by the exploitation of natural resources, and (2) a fraction of those projects' normal benefits to reconstruct resettlers' livelihoods at higher than pre-displacement levels.

These solutions are not limited to hydropower projects: the rationale applies to other categories of projects as well, especially in the extractive industries.

The economic theory of rents supports the argument that certain categories of projects, usually unfeasible without population displacements, also generate surplus (or windfall) benefits. Economic rent is defined in classic economic theory as a surplus return over and above the value of the invested capital, materials, labor costs, and other factors of production employed to exploit natural resources. This surplus return can be used for overcoming resource scarcity in financing resettlement.

A World Bank study dedicated to "measuring and apportioning rents from hydroelectric power developments" (Rothman 2000) examines several rent-capture mechanisms and the reallocation of rent, drawing on a large body of economic literature. Though it was not written

for the purpose of resettlement financing, the study speaks to the issues we address here about allocating a percentage of the economic rent towards better funding the population dislocated – and to be resettled – by the same projects.

Projects that exploit natural resources, such as mining projects, oil and gas projects, hydropower projects, and others, secure access to lands rich in natural resources (through displacement, expropriation or free market purchase). This way, such projects buy the opportunity to harvest a substantial economic rent, additional to the average returns in other sectors. The higher the quality of a resource compared to the same resource at a different location, the higher the rent that can be captured by exploiting the former. Yet the lower-quality resource would still yield an economic rent over normal returns to capital and entrepreneurship.

Once such rent is captured through various mechanisms, the questions relevant to our argument here are: How should the surplus be used? Is it appropriate to redistribute it evenly to the population at large? Or should some particular groups be allowed to benefit with priority from its capture?

The only logical answer is: Given the asset-dispossession and de-capitalization that occur when such projects are built, it is fair and necessary that populations that lose their livelihood should have a priority call on such resources. The state and governments are ultimately those who decide on allocation priorities and on the proportions in which the captured rent is allocated.

In addition to economic rents, another financing source upon which the novel practices emergent in resettlement have begun to rely is the project's normal stream of benefits. Regardless of sector, each successful project has its expected stream of benefits, even if it does not capture an economic rent from natural resources extraction. The avenue of benefit sharing can serve the goals of the resettlement policy in those situations of scarcity when sufficient up-front budgetary resources cannot be fully found and allocated ex-ante. The investments needed for resettlers' reconstruction can be increased not only from the up-front budget allocations to a project, but also on account of the project's future benefit streams. In 1999, a study by Van Wicklin found projects that already introduced some benefit-sharing mechanisms, and argued that this approach is legitimate on four powerful grounds: economic, financial, moral, and political (Van Wicklin III 1999).

6 Policy support to benefit sharing

In international resettlement policies, benefit sharing is already enunciated in principle, but in practice this principle has been little applied.

For instance, the World Bank's policy affirms verbatim the principle of "enabling resettlers to share in project benefits" (World Bank 1990, 2001). In turn, ADB's involuntary resettlement policy requires that ADB projects entailing resettlement "make development not

only economically but also socially and environmentally beneficial” (ADB 1995) for their target population and “turn the people dispossessed or displaced into project beneficiaries” (ADB 2003; Price 2008).

However, in practice, the benefit-sharing policy provisions, when they exist, are far from being implemented even in many projects that the international agencies co-finance. Such implementation also depends on the political will of borrowing governments. This is one of the explanations for why many resettlement project components lack the investment resources they need to succeed. In most national policies the benefit sharing principle is absent. Several positive cases will be described further in this chapter. These are what we call *advanced practices*, innovative practices, but they are still far from being adopted as general practice in all developing countries.

Therefore, the room for replication is vast and wide open.

The theoretical rationale for project benefit sharing for financing resettlement rests on several solid grounds. Benefit-sharing mechanisms:

- (1) go a long way toward reducing or preventing the potential risk of impoverishment;
- (2) contribute to achieving the overarching goal of reducing poverty;
- (3) are economically rational for the project itself, facilitating and speeding up its execution by reducing delays resulting from resistance or protracted negotiations, which allows projects to be completed sooner rather than later and to open up the stream of project benefits earlier;
- (4) are equitable, meeting the ethical demand on development to spread benefits widely;
- (5) are politically sound and necessary to increase satisfaction and prevent growing adversity vis-à-vis the project among the surrounding population.

The financing of post-displacement rebuilding through benefit-sharing mechanisms is slowly being embraced as legitimate and incremental individual compensations paid on a family-by-family basis. Countries tend to use this mechanism for investing in the welfare of the relocated groups and their hosts as large collectivities, through area-development programs around reservoirs.

In sum, the advantage of using economic rents and project benefits is that the financing necessary to avoid displacees’ pauperization becomes part of the economics of the displacing project itself. This type of financial capacity can be incorporated from the outset into the overall project’s economic and financial architecture, easing the pressures on ex-ante budgetary resources.

7 Political will: Financing is not just a resource matter

The financing of improved resettlement is obviously not just a financial matter. Certainly, there are always competing demands on the rent and benefits that projects generate. How these competing demands are prioritized depends, once again, on the ownership of the natural

resources, on assuming responsibility for causing the displacement, and on political will. The project owners are those who decide to begin a project predicated on population relocation. Therefore, the project owners have to will the resources for rectifying the harm and extending development benefits to those displaced.

The projects in which these issues emerge are of two categories: public sector projects or private sector for-profit projects. Differences among them are numerous, including significant differences in decision-making mechanisms.

In public sector projects, the major decisions on benefit allocation are made at the political level, where priorities are ranked. This is why we define the use of a fraction of project benefits for sound resettlement as a matter of political will at the state and national or sub-national levels. Compensation, at least in principle, is not in dispute, because it must be secured as a matter of property restitution, legally guaranteed by all constitutions. But compensation alone is insufficient to achieve resettlement objectives, as we argued before. Allocating an increment of financing – by using a fraction of economic rent and of normal project benefits – may make the critical difference between failed resettlement with impoverishment and successful resettlement with development.

The choice is stark, and the outcomes – either way – are predictable.

Given that the historical record of forced displacements is a reliable predictor, the absence of legislation mandating benefit sharing in public sector projects causing displacement means, in unambiguous terms, *accepting in advance that resettlement will most likely fail to achieve restoration of livelihoods*. Equally starkly, it means not repaying in full the society's debt to those expropriated and condoning cost-externalization and impoverishment.

8 The displaced people as “shareholders”

In public sector projects, the key issue – and the political choice – is not so much about the principle of re-channeling the economic rent back to the public as it is about the *specific segments* of the public to which resources are returned.

The remarkable cases described further down in this paper are of a type regarded as still “rare” in the hydroelectric sector (Rothman 2000). However rare, they do embody a novel trend. The new element is that the respective governments have enacted in law explicit procedures for regularly channeling a percentage of benefits to areas where most of those displaced and their hosts live. These procedures distinguish the benefits to resettlement areas from the benefits to electricity consumers of the general public (as lower tariffs). The examples will show that such distinctions can be made and that these mechanisms chart a novel path.

Furthermore, these cases also implicitly suggest the feasibility of replicating such procedures in other public sector projects, not only in hydropower but also in extractive

industries such as oil, gas and minerals. In fact, delivering the captured economic rent back to the general public is not in itself a new practice: it has long been used in many countries. What is novel is the enactment of the priority entitlement of a *special sub-group of the public* (those displaced and their hosts) to an earmarked amount. The earmarking of a certain percentage for the area of populations affected by displacement *is a financial and social innovation*. Generalizing the application of these novel mechanisms to an increasing number of projects and legislating such incremental financing would go a long way in counteracting the risks of impoverishment.

When private sector corporations own such natural resources-related projects, these entities capture the same kind of economic rent as a “windfall” gain additional to “normal” rates of return to investments. The argument for channeling a share of benefits to reconstruction post-resettlement is therefore similar. If anything, it is even stronger in private sector projects undertaken for profit because the rent and other benefits are not returned to the general public but go only to the parties investing in the project.

The capital investors (shareholders) in such companies are entitled to benefits and dividends because they invested the up-front financing or invest by purchasing shares of these companies on the stock market. In contrast, the poor smallholders displaced for building such enterprises cannot afford to invest capital or purchase shares, but the indispensability of their lands for creating the enterprise makes them an indispensable party, a “stakeholder” in the new enterprise.

The lands formerly owned by the displaced population are used and “invested” in the new companies, but the people themselves are bought out and economically excluded through imposed expropriation. The price they receive in a non-market transaction forced upon them, a price that carries the label of “compensation”, may, at the very best, be equal to the replacement value of their land itself as a piece of agricultural land (though in practice it is often much lower, and they often fail to be recognized as legal owners), but does not pay for the lands’ developmental potential. What the land purchasers buy are, in fact, the yet unused opportunities for development embedded in these lands. Without these lands, the new enterprises would be impossible. This is why the people yielding their lands to the projects can reasonably be regarded as shareholders. Their contribution is not only their land but also its development potential, i.e., the opportunity to realize this potential.

The social contract embedded in the principle of land acquisition for development purposes must involve the obligation of the purchasers (or expropriators) not to worsen the condition of the land sellers but to enable them also to benefit from the opportunities for development and improve their livelihood. Since they surrender not just any non-essential, indifferent good, but the very economic foundation of their pre-project existence, *it is this economic foundation that must be reconstructed*.

Because compensation payments up-front are incapable of ensuring reconstruction of this

foundation, as empirical evidence has proven, mechanisms for access to benefit sharing are indispensable to securing financing for such reconstruction.

This certainly poses a major theoretical question to the principle of compensation itself, in social and economic theory, and in policies: why is this principle not explicitly extended to the *lost development opportunity intrinsic in the asset*, left uncompensated, instead paying only for the current value of the undeveloped asset?

The important principle of treating displaced landowners as shareholders requires prudent translation into practical mechanisms, which have not yet been designed and tested. Clearly, this principle is not to be understood as just replacing traditional compensation payments with shares (in the form of paper stocks) in the new company. The principle involves using shares as a vehicle for incremental support to those displaced, additional to the compensation for what they lost, and as a form of sharing in the benefits created by developing their land in order to enable the improvement of their livelihood beyond the pre-project level. In India, in the wake of recent strong protests against dispossession and flawed compensation (paid by the state for smallholders and tribal lands transferred to private companies), media reports also mention some novel approaches. For instance, the JSW Steels Ltd Company expressed willingness to offer some shares in a new mega-steel plant to be constructed on the land of the Salboni farmers, who will be displaced by the new company (Guha 2007). Consideration of payments in the form of shares in the equity of the new firms is also reported from Vietnam as well (the Vincom group), and from a couple of other countries. However, information on actual steps taken is still too sketchy for analysis, even though consideration of such instruments is certainly a new step.

When their land becomes part of the equity of the new enterprise, the displaced people give up their daily livelihood source. This makes it imperative that an alternative livelihood source be established immediately, through the offer of alternative land, or of a cash lump sum for alternative land purchase, and through guaranteed access to employment for the economically uprooted families in the new enterprise being built. Paper shares cannot be eaten, and, anyway, the point is not for the displaced to sell and convert the shares into cash as soon as they receive them. In addition, giving shares to displaced people as an increment toward full basic compensation, while positive in itself, also exposes the displaced people to a whole new set of risks related to how the shares will be priced by markets. The displaced people have no knowledge of how to manage shares in a share market. Therefore, giving out shares is only one possible means, but the land acquiring company has the obligation to meet the goal involved in the benefit-sharing principle – namely, effectively improving the incomes, welfare, and development capacity of the population group whose prior means of production are taken away (a solution of this kind, applied in Japan, is described in section 9.6).

9 Types of mechanisms for sharing and conveying benefits

We can distinguish several mechanisms for sharing and reinvesting the benefits in resettlers' development. These mechanisms encompass not only the people displaced and relocated, but also the host populations, who suffer risks and impacts associated with "hosting". Resources are allocated and directed to the geographic zone around the hydropower reservoir, inhabited by both resettlers and hosts.

The seven main mechanisms are:

- (1) direct transfers of a share of the revenue streams to finance specific post-relocation development schemes;
- (2) establishment of revolving development funds through fixed allocations, whose principal is preserved while generating interest used for post-resettlement development;
- (3) equity sharing in the new, project-created enterprises (and other productive potentials) through various forms of co-ownership;
- (4) special taxes paid to regional and local governments, additional to the general tax system, to supplement local development programs with added initiatives;
- (5) allocations of electrical power on a regular and legally mandated basis;
- (6) granting of preferential electricity cost rates, lower water fees, or other forms of access to in-kind benefits;
- (7) sharing of projects' non-financial benefits.

Obviously, every mechanism requires legal enactment to ensure implementation over time and financial accountability. Through legal commitments, the state recognizes its responsibility in reestablishing the resettlers.

Over the last 10 to 15 years, the adopted regulations have gone through rounds of testing and repeated refinements, to improve on initial rules. Each country has designated a somewhat different share of benefits to be invested in developing the resettlement areas. Since these financial resources are *additional* to the resources provided as compensation to individual families, the flows of shared benefits have incremental impacts. In fact, in some countries, compensation standards have been increased in parallel with enactment of benefit sharing – for example, in China (see further below). Together, they stimulate post-relocation development.

In all cases described below, the flows of shared benefits are not limited to a short period: they are required by law to continue for long periods, sometimes for the life of the enterprises constructed by the project. The continuity of benefit flows becomes a foundation of long-term development for those uprooted and relocated.

Brief country-by-country descriptions of such practices follow, after which we will distill some common characteristics.

9.1 Colombia: Benefit-sharing through royalty transfers

Starting in the early 1990s, Colombia began allocating a percentage of benefits from hydropower plants to the development of the areas into which the displaced reservoir populations were relocated. In 1993 Colombia enacted a legal framework for benefit transfers, National Law No. 99. It was shortly followed in 1994 by official regulations (“Decree 1993”) which specified the provisions of the National Law. Two years later, this Decree was supplemented by National Law No. 344, which created an “Environment Compensation Fund”, financed through revenue from development projects. Shortly thereafter, the allocations to this compensation fund were increased to 20% of project revenue.

The Colombian laws also define the proportions of revenues to be returned to the relocation areas. For instance, 3.8% of the revenue of hydroelectric plants is to be transferred to the region’s watershed agencies for new productive investments in water saving and local irrigation, 1.5% of the project revenue must be transferred to the municipalities bordering the reservoir, and another 1.5% is allocated to upstream municipalities, beyond the reservoir proper.

These transfers, being mandated by the country’s legislation, must be reported publicly and are monitorable. Moreover, the laws require that the revenue be used only for the purposes outlined in the respective laws: these are either social development activities or environmental protection activities such as watershed maintenance or tree planting. This way, the benefits are helping to lengthen the lifetime of the hydroelectric plants (e.g. controlling siltation), while also enhancing the welfare of the area populations (Van Wicklin III 1999; Egge et al. 2008).

9.2 Brazil: Benefit sharing through royalties distribution

Massive investments in hydropower are a pillar of Brazil’s transition from an underdeveloped country to a middle income country. Enormously rich in natural resources, the country needs vast electrical power for the industries created to process natural resources, industries that in turn provide employment for its large population. This is why the country has embarked over the last 30 years on one of the world’s largest hydropower programs, comparable to that of China and India.

The multiplication of big reservoirs, however, has led to large displacements. When the program started, the country was not prepared to appropriately handle such massive displacements. The early social results were dismal. The affected people were severely impoverished and many moved anarchically into slums around big towns. National policy guidelines for regulating displacement and resettlement did not exist and commensurate financing, apt to address displacement-caused economic distress, was not made available either. A key political step to redress this somber situation was the Brazilian parliament’s decision in 1988 to revise the country’s constitution and include in it the principle of re-investing a percentage of royalties from hydropower in the resettlement areas.

Subsequent to this constitutional change, Brazil proceeded to adopt, in rapid succession, a series of laws to translate the new principle into practice by defining entitlements and specific amounts of transferable royalties, together with procedures for assuring a regular timetable for such allocations. Moreover, since Brazil is a federation of states, the laws were adopted at the federal level, to be binding for all of Brazil's states.

Another task was to define an agreed balance between resource transfers to federal and to state authorities. Four federal laws to define this balance were adopted in the space of twelve years, between 1989 and 2000: Law 7990 (in 1989), Law 8001 (in 1990), Law 9433 (in 1997) and Law 9984 (in 2000) (Gomide 2004; Trembath 2008). From the outset, the policy decision was to direct the lion's share of resources – roughly 90% of all royalties from public hydropower plants – to the states and municipalities and only 10% to federal agencies. For instance, the laws of 1989 and 1990 specified a distribution of 45% to the overall budgets of affected states, another 45% to the directly affected municipalities within those states, 8% to the federal electrical regulatory agency and 2% to the Brazil Ministry of Science and Technology. Significantly – in order to ensure proper resource management consistent with the objectives of this special legislation – the laws also mandated how the funds should be further divided: 40% for the maintenance of electrical services, 35% for water resources management and data gathering and no less than 25% for environmental protection (Gomide 2004). Royalties are to be paid throughout the power plants' lifetime, to help provide for the long-term “economic sustainability of affected communities” (Gomide 2004; Egge et al. 2008). Subsequent laws, in 1997 and 2000, took the previous legislation further, nationally regulating water resource use and introducing payment for the use of reservoir waters. Although the compensation is set as a very small fraction per MWh of generated power, the aggregate amount becomes significant.

What have been the results? A 2004 assessment of this program informs us that 137 hydropower plants (which own 145 reservoirs) paid the requisite royalties and financial compensation to 22 of Brazil's states and 593 municipalities. Of the latter, 252 municipalities received financial compensation, 16 municipalities received only royalties, and 325 municipalities received both royalties and compensation. Annually, the amount of financial compensation and royalties exceeded US \$400 million (Gomide 2004).

9.3 China: Benefit sharing for financing development through resettlement

The early history of unsuccessful DFDR processes, particularly in hydropower, has been in China a source of many lessons. Some of China's largest dams were built in the 1960s and 1970s, including Xinanjiang, Sanmenxia and Danjiangkou, each of which displaced more than 300000 people. At that time, the lack of an equitable resettlement policy and inadequate financing of resettlement led to disastrous impoverishment, deep population resentment, and political instability.

China finally learned from failures and radically changed its DFDR policies and financing practices. Heggelund offers an informed and insightful analysis of the transition from impoverishing approaches in China's DFDR to developmental, incomparably better approaches. China's authorities, Heggelund wrote, acknowledge that "resettlement has been unsuccessful due to lack of comprehensive resettlement plans... Emphasis has traditionally been put on project construction, rather than resettlement...The relocatees were not successful in restoring their livelihood". Heggelund is correct in observing that "China's resettlement history itself urged the Chinese authorities to think about new alternatives in resettlement work".

To gradually overcome the errors of the 1960s and 1970s and their tragic effects on the population and the national economy, China embarked on a radically different course. Starting in the 1980s, China began to enact a series of government policies to regulate and improve the quality of resettlement, increasing its financing in stages. Regulations were passed, first in 1981 with a ministerial decree that directed each power plant to allocate RMB 0.001 per kilowatt hour to a development fund for investments in the reservoir area throughout the existence of the power plant itself; then, in 1985, China's State Council decided to create a countrywide "Post-Resettlement Development Fund" in which contributions from power companies would be deposited. That was the beginning of a series of policy and financing decisions consisting of repeated increases in compensation levels and supplemental investment above compensation. Given the relevance of these new reforms to the argument put forth in this study, we discuss them in a special later section on China (section 11).

9.4 Canada: Benefit sharing based on equity Investments

Among industrialized countries, Canada stands out for the magnitude of its hydropower potential. To exploit this potential, Canada has embarked on a systematic program of building major dams. Indigenous tribal populations, who have customary land rights recognized under Canadian law, populate some areas in which many of these dams are being built.

In 1971, HydroQuebec, Canada's major power utility, announced plans for launching the James Bay project, which would include the construction of as many as 20 dams (Scudder 2005). The project would have negatively affected the entire homeland of the tribal Cree Indian population. The Cree organized themselves for military actions, protested intensely, and resorted to legal action as well. The Canadian courts decided in their favor and stopped project construction.

The protests of the Cree, who were later joined by the indigenous Inuit populations and NGOs advocating indigenous and environmental protection, led to significant changes in the position of the Canadian government and its public utilities.

Recognizing the contribution of this population to the country's hydroelectric development in the form of land, Canada's government and hydroelectric utilities adopted a

strategy of partnering with the local indigenous communities. HydroQuebec announced that it would enter into agreements with the affected indigenous groups for *equity-sharing* in the envisaged hydropower capacities. The key premise in these agreements is that local indigenous communities are also direct investors in hydro projects, because they contribute their lands and their development potential. Equity-sharing was offered in addition to up-front compensation, paid to the Inuit population for loss of land and for assistance in adjusting their fishing activities to the new circumstances. This equity stake entitles the tribal Inuit communities, as partners, to a share of project benefits for the long term proportionate to their land share in the construction of the project. The power utility provides the full financing and constructs the dam and power plant, the indigenous population provides the lands, and then they proportionally share in the profits. This approach avoided the economic displacement of local communities, and the risks of impoverishment through under-compensated displacement, by recognizing their shareholding status and financial entitlement to part of the project's benefits. This economic and financial arrangement is currently in full operation.

9.5 Norway: Taxation as mechanism for redistribution

Electricity production and export is one of the main branches of the economy of Norway. Therefore, this country's response to the same challenge – protecting areas and populations affected by hydropower projects – is of particular interest.

In contrast to the benefit-sharing mechanisms described above, Norway relies primarily on tax mechanisms. First, compensation for land lost to reservoirs and for lost access to river water is paid up-front according to a set of well defined norms and prices. Furthermore, the benefits harvested by public power companies from producing and selling energy are recognized as an additional source of financing for the development of areas and populations affected by hydropower dams. The heavy use of taxation mechanisms contrasts with the benefit-sharing approaches described above. But while the tools are different, the outcomes are considerably similar. Norway's special tax mechanisms result in plowing back substantial financing for local investment in alternative development, without hampering the production of clean energy.

The crucial piece of legislation is a relatively new law, adopted in 1997 – the “Power Taxation Act” – intended to ensure new and higher tax payments from power companies, which could then be redistributed. The law entitles counties and municipalities to receive three different types of tax revenue from the power sector. First, all electricity companies must pay a 28% tax on all of their profits. The proceeds from these taxes are distributed in virtually equal shares to the central budget and to the respective county budget, while 4.75% goes directly to local municipality. Second, a 0.7% property tax must be paid by the companies to the municipalities they are located in. Lastly, a tax on the use of natural resources, based on the average power generated over the previous seven years, is levied and then redistributed at the

municipal and county levels. The state also collects a tax for the use of natural resources, at a flat rate, from the companies' net revenues (Egre et al. 2008).

In addition to the financial transfers through taxation, *in-kind benefit sharing* is promoted in Norway as well. Norway requires that electrical companies provide, at their own cost, 10% of the electricity that they produce to the local municipality. And of course, companies that are owned by the local governments are required to hand over all dividends to the local owners.

Given Norway's low population density, displacements of people have historically been rather limited. Nevertheless, these mechanisms transparently channel substantial finances to the populations residing in the areas of the hydropower development, whose energy potential is being exploited by the country at large and who are exposed to the risks of adverse impacts from such development.

9.6 Japan: Land lease and adding rent to up-front compensation

In an attempt to minimize the tensions and conflicts inherent in land expropriation and population relocation, Japan has conducted land-leasing experiments and voluntarily abstained from expropriating lands required for reservoirs.

When the series of three Jintsu-Gawa small dams were built, the Japanese government, instead of applying the country's expropriation law, decided to lease the land required for the reservoirs from its owners (Nakayama and Furuyashiki 2008). Payment for the land lease was structured as two types of financial transfers, intentionally designed to keep revenue accruing to the affected people for a long period rather than to make only a one-time compensation payment before dislocating them. The twin financial transfers consisted of: (1) one payment up-front to the landowners leasing the reservoir to the state electric companies, to enable these farmers to develop alternative livelihoods and invest the money received in non-land-based income-generating activities; and (2) regular rent payments for the leased land, paid continuously to the local small holders for the life of the project.

This way, the leased land, although now deep under the reservoir waters, remains a source of constant income for the affected farmers and their children. The regular payments of rent supplement the initial up-front compensation. They ensure livelihood sustainability for the former farmers even if their new, alternative economic activities do not succeed from the outset or do not produce enough.

This twin financing mechanism proved to be an effective risk-preempting mechanism. The test of time validated it 50 years after the construction of the three Jintsu-Gawa dams. Nakayama and Furuyashiki (2008) confirmed that the power companies are still paying the rents. The payments are not a significant burden on the power companies and they accrue to the new generations of the families of the initial landowners.

Another innovative strategy was envisaged in planning Japan's large-scale Numata Dam, whose reservoir was designed to displace some 10000 people. To secure new arable lands for

this sizeable rural population, the government made plans to convert 15 km² of dry land on the slopes of Mount Akagi into padi rice fields, introducing and paying for irrigation. The defined objective was to achieve physical resettlement with improved livelihoods for the resettled people. Each resettler was to receive an area approximately twice as large as what he or she had previously owned. If not all of the land of a certain family was needed for the reservoir, the government planned to pay rent for the submerged portion as if the land were leased by the farmers to the state, rather than merely paying a one-time compensation (Nakayama and Furuyashiki 2008). Both the construction and the resettlement plans were ready for implementation, but, for other macro-economic reasons, the building of Numata dam was cancelled. Nonetheless, this original, creative approach in Numata planning is appropriate for possible testing and replication.

10 Sharing the non-financial project benefits

The reason for describing several ongoing benefit-sharing practices above was to demonstrate that channeling more financing to displaced populations is not just an utopian, esoteric ideal. It is realistic, feasible now, and is actually implemented in several countries. But it is not yet done in the majority of developing countries. The entrenchment of a country in anachronic practices unfailingly leaves displaced people victimized and unprotected against impoverishment risks, exactly as outlined by the IRR model. Practice confirms: financial resources do exist to invest in resettlers' re-development, distinct from and in addition to the payment of compensation. Knowledge on where to find these added resources exists as well. The new patterns are tested and validated by experience. What is missing in countries where such mechanisms are not favored yet is the political will of the governments responsible for projects forcibly displacing people. What is also missing is the political power of displaced people to organize resistance strong enough to obtain better solutions to their displacement ordeal.

10.1 Irrigated land: options

The mechanisms for accessing project benefits are not confined only to *financial* transfers, however important these are. Other options are available, options that are not financial in form but produce convergent results. What matters is not the form, the mechanisms of transfer, but the principle we are arguing for: equipping evicted people with means *additional to compensation* for socio-economic reconstruction. Other ways of access to other benefits of the same project are available and must be employed.

Two specific forms of sharing non-financial project benefits are: (1) in the case of hydropower and irrigation projects, enabling reservoir-displaced people to share in the new irrigated land in the downstream command area, a method only sporadically employed worldwide at present; and, (2) in many other projects, giving displaced people priority

entitlement to employment in the civil works for the new project that displaces them.

The irrigation systems built downstream of dams vastly contribute to increasing agricultural productivity in the command areas. They enable many farmers to cultivate more than one crop per year and increase the productivity of each crop. It is therefore only logical to consider the possibility of resettling at least some of the reservoir farmers, left landless, in the command area. Of course, once irrigated, downstream lands are more expensive and coveted. However, farmers who get their land irrigated at no cost to themselves could participate in sharing their benefits with the farmers upstream who lost their land to make the irrigation downstream possible.

Such solutions have been considered in the past. India has taken a pioneering position by adopting legislation – the “ceiling laws” – that makes land redistribution in the command areas legal and enforceable. Previously rain-fed farms, enabled through irrigation to substantially increase their productivity, are legally subjected to size-limits, which will still allow an increase in their productive capacity but will also free up some land for allocation to farmers who are deprived of their lands. For instance, a farm of about 7.5 acres of rain-fed land could be limited to only 4 to 5 acres of irrigated land, which would considerably exceed the production of the former non-irrigated 7.5 acres, while at the same time making 2 to 3 acres available. At the scale of the entire command area, this produces a substantial amount of newly irrigated land that could host many displaced farmers.

However, while the ceiling laws exist on India’s legal books, they are not applied in practice. This important option remains unused and the displaced farmers are not able to share in this new stream of agricultural benefits from the project that displaced them. It is true enough that applying such laws is not easy politically, but this could be facilitated if ceiling limit arrangements and reallocation are agreed upon with communities’ area cultivators before project dam construction. This assumes that the state must play a strong role in initiating the process, implementing the laws and protecting the interest of reservoir farmers, rather than only the interest of the command area farmers. The state not only has the legal leverage but also the financial leverage necessary to do so. Indeed, it is the public sector that invests vast finances to build the dam and to construct the irrigation canals in the command area, thus making irrigation benefits possible. Proper project preparation should include reaching agreements with downstream farmers before the start of the project, as a condition of proceeding with the dam-building investment. This option is an excellent avenue for avoiding impoverishment risks for many displaced upstream farmers, while also bringing large benefits to farmers downstream.

(1) Land pools. Other options can also be feasible, if the state exercises its role responsibly and displays political will. Land for displaced farmers can be made available not only through ceiling laws but also by the state, using project benefits to purchase land which routinely comes up for sale on the market. Arrangements are possible by instituting the “right

of first refusal,” the right of the state to be the first purchaser of any privately owned land coming up for sale. This would enable the formation of *land pools*, usable for relocating displaced farmers.

(2) Employment. Providing priority entitlement to jobs in the construction of the new project is a means of giving those displaced immediate access to an opportunity created by the project itself to gain income. This can help temporarily substitute for losses of prior means of production. The “one job per displaced family” option is a well-known mitigation measure and there is no need to elaborate on it here. Unfortunately, this much-talked-about option is practiced in only few projects. Many internationally and domestically financed projects do not exploit this opportunity. The potential of this option is vast and legislation is necessary to enact much firmer obligations for projects to grant employment and training opportunities effectively.

In sum, the general idea underpinning the examined solutions is the need for creative approaches for identifying and using existing options to supplement compensation and productively resettle farmers. It is not superfluous to repeat, in conclusion, that those forcibly displaced to make way for development projects should be regarded as among the first entitled to access the projects’ benefits. Once this principle is accepted, much further groundwork will have to be laid. Still, identifying the right measures remains a challenge for all project planners, sponsors and owners. It is their obligation to facilitate the productive reestablishment of those whom they displace.

10.2 Refuting a false objection to benefit sharing

Pernicious objections to the principle of sharing benefits are made by those opposed to supplementing compensation on the grounds that those displaced already have access to benefits from the new projects just because they’re part of the general public. Such objections must be rejected outright as missing the point. But because they are voiced recurrently, it is important to stress why such objections are fallacious.

Indeed, the displaced groups are part of the population, and some project benefits ultimately percolate to them too, mostly in the long or very long run. Yet what the fallacious arguments miss is the fact that the displaced groups suffer the kind of dispossession, dislocation and impoverishment that the general population certainly does not endure. They also miss the hard fact that those displaced have to go through years of enormous efforts to reconstruct their economic and social situation, an ordeal and a set of risks not imposed on the “general population.” This is what makes the displaced people different from the general population. This is also what justifies their priority entitlement to receive, more rapidly than the general population, a fair share of the benefit stream of the project.

The ex-ante compensation itself is not a share of project benefits: it is nothing other than simple restitution for the “takings,” and usually unequal to the losses. Denying to displaced

groups benefit sharing germane to their contributions toward making projects feasible is nothing less than a hypocritical denial of equity and reality — the reality of the heavy negative impacts they endure to make the given developments possible.

The country examples described above refer mostly to projects in the hydropower sector, where displacements tend to be largest and the risks to resettlers very severe. These cases have proven the availability of additional financial resources for people's resettlement and development. In other sectors, where displaced populations may be less numerous, appropriately tailored benefit-sharing arrangements are not only possible, but may also be easier to carry out, given smaller affected groups.

Similar resources are generated in other kinds of development projects, particularly in other branches of extractive industries. All development projects, even those that do not generate a windfall economic rent, pursue the generation of a benefit stream and the highest possible returns to capital. What is most important is to accept that the principle of benefit sharing in all categories of projects is a *crucial, fair principle*, and that political will and legal regulation to implement it are indispensable. As a percentage, the benefits allocated to displaced groups are still a relatively limited fraction of the total project benefits. But these allocations make a big difference in restoring and improving the welfare of displaced populations. The specific forms and proportions can also vary.

It is up to policy makers, planners, or project managers, in consultation with those affected, to design the appropriate grammar of redistribution rules and procedures for translating this principle into effective practical use in each country context.

11 China's innovative twin approach: Higher up-front compensation and additional ex-post financing

Financing resettlers' development through *ex-post* approaches should not become a perverse incentive to underpay the required up-front compensation (restitution) for losses, which is the first *ex-ante* payment (in kind, in cash, or both) towards recovery. This would undermine the purpose of both compensation and benefit-sharing.

By the mid- and late 1980s, China had started to move towards a far-reaching shift in resettlement policy. China's government announced that, based upon 30 years of experience, the country must change a resettlement policy focused primarily on people's physical transfer into a developmental resettlement policy. In terms of financing resettlement, the key change was to move from state subsidies only for compensation to additional investment by the state to support the introduction of new development activities, as well as new productive capacities to gainfully employ the masses of farmers separated from their lands. The formal acceptance of the new concept – “resettlement with development” or “developmental resettlement” – was introduced in 1991 in the special policy guidelines for the Three Gorges Project.

To unify existing parallel laws and regulations as well, China adopted in 1986 the “Land

Administration Law” (LAL), which placed explicit emphasis on limiting excessive land acquisition and forced displacement of people. The LAL was reexamined and improved again in August 1998 by the National People’s Congress. The revised law considerably restricted the authority of China’s provincial governments and of counties to requisition land on behalf of the state. As distinct from Land Acquisition Acts in other countries, China’s 1998 Land Law contains explicit norms for people’s sustainable resettlement, rather than only procedures for how to acquire their lands. The Law’s objectives are defined in terms of helping resettlers to develop new forms of livelihood and productive activities.

Furthermore, over the last two decades, China has increased in several successive stages the financing for compensation of the displaced populations. After its initial costly mistakes, China made consistent policy and financial efforts to supplement the improvements in ex-ante compensation financing by adding the kind of ex-post benefit sharing described above. A series of policy decisions reflect this approach, repeatedly improving not only the norms for ex-post benefit sharing, but also the state-mandated norms for ex-ante compensation. This enables the financing of resettlement, in a colorful Chinese metaphor, to simultaneously “advance on two legs.” That these twinned policies have financial substance, and are not just flourishing metaphors, is demonstrated by the concomitant allocation of huge amounts of financing.

This new policy and financial efforts are informed by systematic research. China has established the world’s first national research center on development-caused resettlement (NRCR) at Hohai University, specialized in resettlement policies, research, planning, implementation, and monitoring, as well as a large decentralized network of other resettlement institutions in all provinces. The repeatedly revised and strengthened resettlement regulations in China have also gradually tightened the restrictions on land expropriation, reflecting the central authorities’ intent to reduce the loss of arable lands, reduce abusive land seizures and recognize the peasants’ protests against them by limiting the aggregate size of involuntary resettlements.

11.1 Four distinct sets of financial instruments

China’s rapid industrialization, urban development, and agricultural changes continue to require massive DFDR processes, and the country’s high population density and scarcity of arable land compounds the difficulties of resettlement. The set of recent financial reforms for DFDR legislated in China over the last 3 to 4 years are directly relevant to the themes of enhancing compensation, financing, investment and benefit sharing discussed in this paper, and their ultimate policy objective is to achieve resettlement with development. They also contain rich lessons of experience for other developing countries facing comparable DFDR issues. Some of these reforms are very recent (end of 2006) and there is still little information about their unfolding, but the economic rationale and the practical relevance of these reforms

deserve careful review.

Four clusters of financial measures can be distinguished in China's approaches, all relevant to the conceptual and operational dilemmas discussed in this study. These are:

(1) measures to radically upgrade the nation's *basic land compensation system* for all families and communities uprooted by development projects and increase the restitutionary ex-ante financing for lost land and assets;

(2) measures to supplement the ex-ante compensations with ex-post financing via targeted investments in area development to create a functional economic platform for those whose prior production systems were dismantled by relocation;

(3) measures to increase the self-investing capacity of resettlers by transferring incremental financing additional to that described in points (1) and (2) directly to resettled families and giving resettlers a choice of using the proceeds either for consumption or for productive investments (or both);

(4) measures to retroactively correct past under-compensation of displaced people.

All these measures inject additional financing either with a safety net function or as an ex-post remedial investment.

Some of these recent reforms are innovations not just for China itself; they are unprecedented in the international practice of DFDR processes. Their diversity and their financial magnitude express China's lucid recognition of the socio-economic and the political importance of sound resettlement, as well as of the risks and inevitable effects of failure. Some of these measures are not yet applied in all of China's economic sectors; the water resources sector is ahead of other sectors. Preparation for further legislation appears to continue.

Other important measures converge and have, by law, a distinct source of funding. We may lump such measures under the "capability development" concept proposed by Amartya Sen, on which the author do not elaborate in this paper, but which is germane to the effort to improve resettlers' livelihoods. For instance, the training of resettlers is a mandated obligation for all projects in China, and by law they are to be financed with at least 1% of the resettlement cost. The emphasis on training is linked to the Chinese strategy of resettlement with development, predicated on the simultaneous planning and financing of new economic capacities in the areas earmarked as host sites (e.g., new industrial enterprises, irrigation and roads), intended to create job opportunities for the incoming, resettling population.

The four types of measures outlined above are as follows:

(1) Reform of compensation norms. Land compensation for land losses has been paid in China starting from the early 1950s. In retrospect, the author distinguish two stages in the history of China's compensation curve: the 1953 to 1985 period and the period from 1986 to 2006 (to date).

During the first stage, lasting more than 30 years, compensation for land was kept at very low levels; within this stage it was, in fact, decreased by almost half. From the early initial

range set in 1953 at 3 to 5 times the annual output value (AOV) per unit of land, the compensation was reduced in 1958 to only 2 to 4 times the AOV per unit of land. It stayed at this lowest level for over 25 years, from 1958 to 1985 (Figure 1; Shi et al. 2006). This period is now critically reassessed by China's policy makers as one of erroneous approaches to DFDR; the affected people were severely impoverished by displacements and had little legal recourse to defend their entitlements and rights.

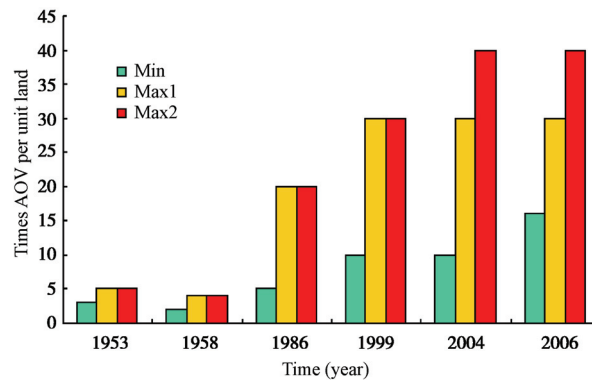


Figure 1 Land compensation in China: Policy provisions and minimum and maximum levels

The turnaround in compensation policy began in the mid-1980s. The compensation range for land more than doubled in 1985, from 2 to 4 times the AOV to 5 to 20 times the AOV, and then increased again several times.

Also, the 1986 decision made it *illegal* to compensate farmland below 5 times the AOV and gave local administrations the authority to use higher levels, up to 20 times the AOV. But the bottom level of the range was still very low. A decade later, in 1999, the compensation rates for the lowest level were doubled, with the option of paying as high as 30 times the annual output.

China's current calculation of compensation is based on the actual output of land, which produces a much more generous compensation than conventional calculations based only on farmers' income returns per unit of land. The value of a farm's annual output is always much higher than the farmer's net income from the land, since it includes the cost of inputs and labor. Net income from the annual crop is only about 50% of total output value. This means that compensation that is equal to 20 times the AOV is in fact equal to a farmer's real income for a 40-year period (per unit of land). Similarly, a compensation level of 30 times the AOV is equal to a farmer's net income for 60 years. In parallel, China has revised and tightened land-taking procedures.

In 2004, the maximum compensation level for land in urban and peri-urban areas was raised to 40 times the AOV, much above other land categories. Shortly thereafter, China's State Council decided to also raise the minimum permissible compensation from 10 to 16

times the AOV for farmland acquired by water resources projects. The mandated higher minimum floor makes it illegal in China to pay farmers less than this minimum. The aim of raising the floor is to prevent local attempts to keep compensation close to the lower levels of the range (it was previously 10 times the AOV).

The increased levels of mandatory compensation act also as a disincentive and restraint to excessive land acquisition and displacement. Other legislative measures converge: a comprehensive land law was adopted first in 1986, and revised in August 1998 by the Ninth National People's Congress. As distinct from land acquisition acts in other countries, China's 1998 Land Law contains explicit support for sustainable resettlement.

China is probably the only country that has instituted a legal prohibition against compensating the land *below* a certain level. Recent legislation (State Council of PRC 2006a, 2006b) has limited the authority of local governments (particularly the counties) to expand land acquisition – an authority that these local governments have tended to overuse, causing peasants' protests. This interdiction is directed against abuses committed by local officials who, in several places, distorted the policy in two ways: they took excessive land out of agriculture and they used very low valuation levels in order to pay less compensation to affected farmers. That was both contrary to policy and contrary to peasants' interest. In many places, the peasants strongly protested land takings. Official statistics reflect, year after year, a growing number of rural unrest incidents and local conflicts, involving both peasants and workers: reported unrest incidents have grown from 8 700 in 1993 to 32 000 in 1999 and to over 87 000 in 2005 (Yu 2007). The single most frequent cause of such local conflicts and events of unrest is related to land. The changes in China's policies aim, among other goals, to curb excessive land seizures and the aggregate size of forced displacements by instituting both legal limits and financial disincentives to local authorities.

(2) Investment financing after relocation. Once the reform of compensation levels started in 1986, China began in parallel to adopt measures for investing in resettlers' post-relocation development. The source for this financing was the benefits from generated electricity (as in Brazil and Columbia, described earlier). The vehicles for this are the "Development Funds" introduced first in the hydropower sector. The "Development Funds" add investments through ex-post benefit sharing, complementing the higher ex-ante compensation and allowing the "financing to advance on two legs." The relevant measures are several regulations from the 1980s, starting with the decree of the Ministry of Finance and of the Ministry of Electric Power that required each power plant to allocate a tiny fraction per kilowatt hour to investments in the reservoir area for the life of the power plant. In 1991, China's State Council decided also to create a national "Post-Resettlement Development Fund" in which contributions from power companies would be deposited.

The relative downside of development funds targeted to an impacted area is that the additional financing is only partly managed by the resettlers themselves, at the level of the

family unit; a large part tends to be used by programs managed by local authorities' area-based interventions. For activities resettlers might initiate themselves, other measures were adopted that enable *self-investment*.

(3) Measures for financing resettlers' self-investments. A wholly new financing instrument was introduced in the economics of DFDR in China through legislation adopted by the State Council in 2004 and 2006. This consists of an annual allowance (grant) of RMB 600, equivalent to US \$75 per year per capita, to be paid after relocation by the state to every individual involuntarily resettled, for a period as long as 20 years after the date of physical relocation. Recipients will be able to invest this new financial resource for productive purposes or use it for consumption needs.

Retirement support and pensions for old people who are displaced is not an issue usually considered with respect to displaced populations. However, China's recent legislation introduces another new principle in this respect, which is an innovation compared also with current international standards for resettlement policy. The new Chinese legislation recognizes that displacement causes a particularly sharp loss of security for people of old age who have been farmers most of their lives and whom displacement may leave without any land. This situation is quite common in many countries, where it affects countless former farmers who end up as slum dwellers around major cities.

For older farmers who are left without land and become urban citizens, China's new decision provides for the introduction of a "safety net" measure: payments toward a "Social Security Fund", comparable in its effects to a retirement pension (State Council of PRC 2006a, 2004; Shi et al. 2006; MLSS 2007).

This new financial instrument may be seen, in conceptual terms, either as a straightforward vehicle for decentralized development investment or as a generalized safety net, of the type envisaged by Kanbur (2008). Empirical research on how this instrument works out operationally will be necessary, beyond its legal description. But, either way, this instrument appears to be an important financial innovation aimed at injecting massive resources towards the improvement of resettlers' economic status and capacities.

(4) Financial measures for rectifying past under-payments. Coupled with the open recognition of under-financing errors committed earlier in China's resettlement practices, the decisions to channel more financing towards investing in reconstruction led to another step. China's State Council, concerned with the lingering effects of past failures in income restoration, adopted legislation to rectify past under-financing through *retroactive payments* to tens of millions of people displaced in the past 5 decades (State Council of PRC 2006a, 2006b).

Compared with current international standards, this is an extraordinary policy change, unprecedented in any other country. Specifically, an annual sum of 600 yuan (US \$75) per capita will be retroactively paid by the state during the period of 2006 to 2026 to all farmers

displaced by dams between 1949 and 2006. (This incremental payment alone almost equals the full annual income of a person at the poverty line, set in China at 682 RMB/year). For a peasant family of 4, the inflow of RMB 2400/year every year for 20 years is very significant.

Overall, the financial outlays for retroactive payments are indeed huge. Data from China's National Research Center of Resettlement (NRCR) put the number of dam-displaced people between 1949 and 2006 at about 18 million, which over 20 years will entail retroactive payments totaling US \$27 billion, about 210 billion RMB. Yet the total number of beneficiaries will be even larger than the 18 million originally displaced. The adopted legislation takes into account the natural growth rate of the formerly displaced populations and extends the corrective measure to all current members of the displaced families who have been born after displacement. This increases the number of beneficiaries from the 18 million mentioned above to about 22.88 million people. The retroactive payments will total US \$34.3 billion.

The way China secures the financial resources for such additional financing is by asking the society in its entirety to respond to resettlers' sacrifices and needs. Just before enacting the September 2006 measures, the government announced that additional financing for the people displaced by dams would be covered through a very small increase in the cost of a kilowatt hour (0.025 yuan, or less than one third of one cent). Of this additional aggregate hydropower revenue, 40% would be returned to benefit the farmers displaced and resettled (by direct deposit into personal accounts set up for them). This is both an act of self-correction and reparation for past losses, as well as a modality of continuous state investment in developing the capabilities of tens of millions of displaced people – to our knowledge not applied by any other state. In terms of our general argument in this paper, this is noteworthy as a new and additional transfer mechanism for investing in redevelopment after dislocation. It diversifies China's range of financial and legal tools for resettlement.

The cumulative implementation of China's reforms described above will continuously inject large incremental financing, every single year, into the economy of populations affected by past and future DFDR operations for hydropower projects. The conventional form of ex-ante compensation has ceased to be, in China, the single mechanism for financing resettlers' reestablishment. The new tools are topping off compensation with outright investments in resettlement in multiple forms.

The problems faced by China in DFDR, which have led to the adoption of such major reforms towards financing resettlement with development, are not, however, challenges limited to China alone. The measures described above are certainly China-specific, but the causes that led to them are not. The basic issues in development-triggered displacements are virtually universal in the developing world and require country-specific solutions and reforms in every country, adjusted to the conditions of every country and tailored for maximizing effectiveness.

12 Main conclusions on benefit sharing and investments in DFDR

In closing this extended examination, several conclusions invite emphasis.

(1) Impoverishment is not prevented by compensation alone. The experience of countless development projects and their DFDR processes shows that impoverishment is frequent and recurrent in most projects despite the payment of compensation. The author must inescapably conclude that the values extracted through expropriation are not restituted adequately through compensation alone. Costs are largely externalized. As long as resettlement processes remain chronically under-financed, DFDR processes will chronically and predictably fail and further pauperize those affected.

(2) Compensation must be restructured and increased. While compensation remains indispensable in DFDR, its levels, calculation, and delivery must be radically restructured and improved.

(3) Additional financing for sound resettlement is indispensable. The insufficiencies of financing cannot be corrected by only reforming compensation levels and processes, although such reform is essential and a priority. Additional financing is indispensable because the very goals of sound resettlement require not only restitutionary financing but also development-investment financing.

(4) Additional financing depends on political will. Resource allocation for DFDR processes is a matter of political will even before becoming a matter of finance availability. Allocation is a matter of distribution. Project benefit sharing cannot be enacted by project managers themselves; it requires political decisions at high levels of national governments or at high levels of the private sector, corporate management and ownership. At the state level, the rethinking of the place of DFDR processes in a specific country's development and poverty reduction policy means not just tinkering with piece-meal, marginal measures. It requires recognizing and addressing the political economy issues of DFDR and determination to reform legislation, policy approaches, and the patterns of financing economic recovery after relocation.

(5) Financing resources are available. The practices of several countries discussed above demonstrate beyond doubt that resources can be mobilized, when there is political will. The fact that such mechanisms are being crafted and implemented not only in industrialized countries, but also in developing countries, is the best response to the question we mentioned at the beginning of this paper: "where will the money come from?" The response is clear: the financial resources for resettlement can be enhanced not only ex-ante, through budgetary allocations for correct compensation before inception, but also by mobilizing resources that become available due to the project itself, ex-post. The need for fully overcoming displacement's dysfunctions and for sharing the fruits of development is strong and

long-lasting. Projects' ability to provide benefits for restoring the livelihood of those displaced would provide a good practical test of the claims made about their profitability and justification. As Jean Drèze pointed out, if development projects that displace people "are as profitable as their promoters claim, (they) ...should have little difficulty in offering displaced persons an irresistible resettlement package" (Drèze 1994).

(6) Growing opposition to displacement and its impact. Strong opposition to displacement and to under-compensation that cause impoverishment is expanding in many countries. In India alone, the massive solidarity movement triggered by the killings of people resisting displacement at Kalinga Nagar, Singur, and Nandigram in 2006 and 2007 epitomizes such resistance. It appears that the strength of resettlers' demands and their militant opposition are increasingly forcing government decisions and resource allocation in private-sector projects toward more recognition of resettlers' losses and impoverishment.

(7) Multiple investment mechanisms are available. The benefit-sharing mechanisms described in the paper are partly different and partly overlapping, but all have one purpose in common: to transfer financial resources to the resettlers as resources *additional* to compensation payments. Different procedures reflect country particularities, history, culture, and preferences. The differences suggest that there is not necessarily a "one prescription- fits-all" solution. But there is a vast space for replication, adaptation, and creative innovations, open to many other countries.

(8) Policies require legislative enactment. The country experiences examined above demonstrate the need for more than policy statements. To ensure long-term consistency in implementation, transparency for the public, and legal accountability of managers and implementers, the policy decisions for better financing of DFDR were *translated into law*. In most cases, governments enacted legislation to enforce systematic application and compliance. Laws enable legal recourse in cases of transgression. The legislation described above also specified the proportions of sharing among various stakeholders, in an effort not to leave distribution to chance or subjective decisions. The laws also prescribed specific uses of the financial allocations to prevent distortions of the new regulations. Adopted laws were, in turn, subsequently revised and strengthened, based on lessons from their initial application.

The answer to our fundamental question is that compensation alone cannot prevent impoverishment: it must be enhanced, to become fairer, and it must be supplemented by *investments for development*. If used alone, its corollary for the countless people affected is impoverishment, not development. Maintaining unchanged the current financing patterns based on compensation alone would only mean *financing for repeating past failures* in different forms. It will predictably cause further impoverishment. Financing is in itself a factor of such paramount importance for achieving economically sustainable resettlement that, when it is flawed, it causes failure even if other necessary factors of success are present. Other variables of DFDR policies must be changed as well. Money *alone* will not solve all of

resettlement's problems either, but absence of financially adequate compensation *foreordains failure by definition*. Reform is indispensable and possible in the ways resettlement operations are legislated, planned, financed, and implemented. And with political will, the means necessary for investing in resettlement with development can be mobilized.

It is not superfluous to repeat, in ending, that the people placed at grave risk and forcibly displaced to make way for development projects ought to be seen as among the first entitled to access the substantial benefits that their ordeal makes possible.

References

- Asian Development Bank (ADB). 1995. *Involuntary Resettlement Policy*. Manila: Asian Development Bank.
- Cernea, M. M. 2008. Compensation and investment in resettlement: Theory, practice, pitfalls and needed policy reform. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* New Delhi: Oxford University Press.
- Cernea, M. M. 2002. For a new economics of resettlement: A sociological critique of the compensation principle. Cernea, M. M., and Kanbur, R., *An Exchange on the Compensation Principle in Resettlement*, 20–46. Ithaca, N.Y.: Cornell University.
- Cernea, M. M. 2000. Impoverishment risks and reconstruction: A model for population displacement and resettlement. Cernea, M. M., and McDowell, C., eds., *Risks and Reconstruction: Experiences of Resettlers and Refugees*. Washington, DC: World Bank.
- Cernea, M. M. 1999. Why economic analysis is essential to resettlement: A sociologist's view. Cernea, M. M., ed., *The Economics of Involuntary Resettlement: Questions and Challenges*. Washington, DC: World Bank.
- Cernea, M. M. 1997. The risks and reconstruction model for resettling displaced populations. *World Development*, 25(10), 1569–1587.
- Cernea, M. M., and Mathur, H. M., eds. 2008. *Can Compensation Prevent Impoverishment? Reforming Investments through Resettlement and Benefit-Sharing*. Delhi, New York: Oxford University Press.
- Daly, H. E. 2004. Forced displacement: Allocative externality or unjust redistribution? Presentation at the U.S. National Academy. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* New Delhi: Oxford University Press, 2008.
- de Wet, C., ed. 2006. *Development-Induced Displacement: Problems, Policies and People*. New York: Berghahn Books.
- Downing, T. E. 2002. *Avoiding New Poverty: Mining-Induced Displacement and Resettlement*. (www.iied.org)
- Drèze, J. 1994. Resettlement of Narmada Oustees. *The Economic Times*, New Delhi.
- Drèze, J., Samson, M., and Singh, S., eds. 1997. *The Dam and the Nation: Displacement and resettlement in the Narmada Valley*. Delhi: Oxford University Press.
- Egre, D., Roquet, V., and Durocher, C. 2008. Benefit sharing to supplement compensation in resource extractive activities: The case of multipurpose dams. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* New Delhi: Oxford University Press.
- Fernandes, W. 2008. India's forced displacement policy and practice: Is compensation up to its role in India's resettlement policy? Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* New Delhi: Oxford University Press.
- Fernandes, W., and Thukral, E. G., eds. 1989. *Development Displacement and Rehabilitation*. New Delhi: Indian Social Institute.
- Gomide, F. L. S. 2004. *Benefit Sharing: Experiences from Brazil*. United Nations Symposium on 'Hydropower and Sustainable Development', October 2004, Beijing, China.
- Guha, A. 2007. Peasant resistance in West Bengal a decade before Singur and Nandigram. *Economic and Political Weekly*, 3706–3711.

- Mahapatra, L. K. 1999. *Resettlement, Impoverishment and Reconstruction in India: Development for the Deprived*. New Delhi: Vikas Publishing House.
- Mathur, H. M., and Marsden, D. 1998. *Development Projects and Impoverishment Risks: Resettling Project-Affected People in India*. New Delhi: Oxford University Press.
- McDonald, B. 2006. *From Compensation to Development: Involuntary Resettlement in the People's Republic of China*. Ph. D. Thesis. Melbourne: University of Melbourne.
- McDowell, C. ed. 1996. *Understanding Impoverishment: The Consequences of Development-Induced Displacement*. New York.: Berghahn Books.
- Nakayama, M., and Furuyashiki, K. 2008. From expropriation to land renting: Japan's innovations in compensating resettlers. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* Delhi, New York: Oxford University Press.
- Pandey, B. 1998. *Depriving the Underprivileged for Development*. New Delhi: Institute for Socio-Economic Development.
- Pearce, D., and Swanson, T. 2008. The economic evaluation of projects involving forced population displacements. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* Delhi, New York: Oxford University Press.
- Picciotto, R., Van Wicklin, W., and Rice, E., eds. 2001. *Involuntary Resettlement: Comparative Perspectives*. New Brunswick and London: Transaction Publishers.
- Price, S. K. 2008. Compensation, restoration and development opportunities: National standards on involuntary resettlement. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* Delhi, New York: Oxford University Press.
- Rothman, M. 2000. *Measuring and Apportioning Rents from Hydroelectric Power Developments*. Washington, DC: The World Bank.
- Schmidt-Soltau, K. 2003. Conservation-related resettlement in Central Africa: Environmental and social risks. *Development and Change*, 34(3), 525–551.
- Scudder, T. 2005. *The Future of Large Dams: Dealing with Social, Environmental, Institutional and Political Costs*. London: Earthscan.
- Sen, A. 2007. *Interview on the Use of Agricultural Land for Industries*. The Telegraph, India.
- Shi, G. Q., Zhou, J., and Chen, S. J. 2006. *China: Improvements in Resettlement Policies and Practices: Compensation Norms, Institutions, and Development*. The IASP Conference, September 2006, Alexandria, Egypt.
- State Council of PRC. 2006a. *Regulation for Land Requisition, Compensation and Resettlement from Large and Medium Water Conservancy and Hydropower Projects*. September 01, 2006, Beijing. (in Chinese)
- State Council of PRC. 2006b. *Circular on Relevant Issues of Land Control*. August 31, 2006, Beijing. (in Chinese)
- State Council of PRC. 2004. *Decision on Deepening Reform and Strictly Enforcing Land Administration*. September, 2004, Beijing. (in Chinese)
- Trembath, B. P. 2008. Beyond compensation: Sharing rents arising from hydropower projects. Cernea, M. M., and Mathur, H. M., eds., *Can Compensation Prevent Impoverishment?* Delhi, New York: Oxford University Press.
- Van Wicklin III, W. A. 1999. Sharing project benefits to improve resettlers' livelihoods. Cernea, M. M., ed., *The Economics of Involuntary Resettlement: Questions and Challenges*. Washington, DC: World Bank.
- World Bank. 2001. *Operational Policy 4.12: Involuntary Resettlement*. Washington, DC: World Bank.
- World Bank. 1990. *Operational Directive 4.30: Involuntary Resettlement*. Washington, DC: World Bank.
- Yu, J. R. 2007. Social conflict in rural China. *China Security*, 3(2), 2–17.