Financing for Development

Benefit-Sharing Mechanisms in Population Resettlement

Adequate rehabilitation and the proper resettlement of those displaced as part of development-induced displacement have always been a difficult issue to resolve. The method usually favoured by governments has been to offer compensation, but this is never sufficient, for such sums accrue to the ultimate project costs and the invariable tendency is to minimise these. This article, by citing diverse examples pursued by different governments, shows how innovative methods of "benefit-sharing", wherein proceeds from the proposed project also assist the displaced in rebuilding their lives, offer a possible solution to the question of satisfactory rehabilitation and resettlement.

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A statement frequently repeated, yet seldom explored, holds that development-caused involuntary resettlement requires "better capacity" to succeed sustainably. When displacements cannot be avoided, the absence of resettlement "capacity" becomes painfully obvious. Yet only endlessly repeating the capacity truism is of dubious benefit: instead, the notion of capacity in resettlement must be deconstructed and clearly defined. As long as capacity remains a vague, elusive notion, it is hard to know what to build into "better capacity": even harder, how to avoid impoverishing people and achieve socially responsible resettlement. The ongoing debates on resettlement policy vitally require a content-definition of capacity, primarily of institutional and financial capacity to carry out any policy. Short of this, it is unclear what provisions are indispensable for making policy and legislation effective.

This article attempts to bring under the lens of public examination and debate several experiences and ideas, as well as factual evidence, from countries where major resettlement capacity-building changes have been already implemented. However desperate the global picture of displacement's impoverishing effects continues to be, research shows also that counter-trends are at work. Some innovative approaches have been emerging in recent years. In most cases, these are still little known outside their countries of origin. Since these innovations may make a big difference, the new approaches, and the ideas they embody, deserve exposure, robust discussion, and in many instances – adaptive emulation.

I
Institutional and Financial Capacity

Two indispensable components of capacity for undertaking sustainable resettlement are the institutional and financial determinants of capacity. Of these two, most usually mentioned, and always controversial, are the institutional aspects of capacity: specifically, the adoption or non-adoption by states of resettlement legislation; resettlers' structured participation in decision-making; the formal recognition of special group vulnerabilities; and even the creation of a dedicated ministry or authority for resettlement and rehabilitation at the national level, as was proposed in India,[1] etc.

Less analysed than the institutional elements are the economic and financial building bricks of sound resettlement operations, that is, the material resources needed to carry out the unavoidable displacements responsibly, without worsening people's incomes and livelihood, but rather using resettlement as an opportunity for development. The synergy between these two elements – institutional and financial – is equally critical. But the legal mechanisms for institutionalising financial levers able to prevent state-induced new poverty through displacement – prevention which, we believe, is an elementary, minimal state obligation – are also far from being researched and defined.

With few exceptions, researchers stay away from these topics, for not very clear reasons. Sociologists and anthropologists report on such issues at the case-study level but rarely address them in terms of basic theory, legislation, or policy. They tend to leave the economic and financial aspects to economists. However, as a professional community, economists have paid almost no attention[2] to the economic dysfunctionalities and financial failures in the design and execution of resettlement components of projects, an omission long recognised publicly by some economists, but still an omission [Schuh 1993, Kanbur 2002, Pearce and Swanson 2004]; for a critique of India's development economics and its resettlement forgetfulness [L K Mahapatra 1999, pp 17-21].[3]

Worldwide research on development-caused forced displacement and resettlement (henceforth, 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 [Cernea 1997, 2000; Agnihotri and Ota 1989; Pandey 1998; Mathur and Marsden 1998; Downing 2002; Schmidt-Soltau 2003; Koenig 2006]. During the last decade, the widespread use of the Impoverishment Risks and Reconstruction (IRR) model and methodology in DFDR research worldwide has generated a new and enormous body of empirical

data confirming impoverishment as the dominant outcome for "displacees" in the overwhelming majority of cases reported in the scientific literature [Mahapatra 1999, Cernea 1999, 2005; Scudder 2005, de Wet 2006]. The key causes are the same, and the findings consistently converge around paradigmatic, recurrent risks and pauperisation outcomes, rather than on idiosyncratic, accidental occurrences.

One of these key recurrent causes of failure is financial: flawed compensation and the under-financing of reconstruction.

Compensation is still the main financial instrument used for "restoring" those dispossessed and displaced. But compensation has been found again and again to be financially insufficient, and poorly conceived and implemented – in short, not up to its task of restitution and "compensating" [Fernandes and Thukral 1989, Drèze Samson and Singh 1997, Picciotto van Wicklin and Rice 2001, Jayawardene 2007]. Since this is long known, and by now documented empirically better than ever before,[4] it is fully predictable that – absent change – the outcomes will be recurrent impoverishment, with countless people becoming worse off than before.

Therefore, repeating the currently predominant financing patterns means financing for repeated failure and worse impoverishment. Financing is in itself a factor of such paramount importance for achieving economically sustainable resettlement that financing alone, when flawed, would cause failure, even if other necessary factors of success are present. Money alone would not solve all of resettlement's problems either. But the absence of financially adequate compensation foreordains failure by definition.

Financing for success in resettlement requires therefore not only to radically reform the current norms and practices of compensation as restitution. It also requires, as we will argue further, making proactive financial investments in the reconstruction of the resettlers' economic and material income basis. The sharing of project benefits, as we will further argue and document, becomes another necessary financial instrument towards securing the resources for such investments in reconstruction post-displacement. The conceptual rationale and the legal/practical mechanisms available for such benefit-sharing are the main subject and argument of the present paper. To avoid altogether or reduce displacement remains always the desirable and paramount goal, wherever possible. But when compulsory displacement becomes unavoidable, these mechanisms are crucial for placing the people who are displaced physically or economically on a new and robustly sustainable economic productive basis.

Post-displacement reconstruction – in particular, its complex economic anatomy – is still understudied in resettlement literature. More is known from socio-anthropological literature about how displaced people become impoverished than about how they cope and try to overcome and rebuild their dismantled economic and income base. In one of the few studies available on the nature of post-displacement reconstruction, Oliver-Smith emphasises, in the same way as we do here, that "some basic level of materiality is a necessary precondition for social reconstitution ... Conversely, social reconstitution in some form of cooperative action undergirds and enables material reconstruction" [Oliver-Smith forthcoming]. Thus, from different angles, the call intensifies for zeroing in on the economic and material dimensions of displacement and reconstruction.

Giving development projects the financial ability needed by budgeting adequate financing for resettlement operations is nothing more than a normal, elementary prerequisite for creating the capacity to do their job. Although this is a fundamental premise, decision-makers and planners regularly underestimate it. Misconceptions abound on the functions and effectiveness of the budgets of Resettlement Action Plans (RAPs), and such misconceptions deeply distort resettlement practice. The projects that forcibly dispossess people of vital productive assets and dismantle their existing economic systems are seldom equipped by the project owners 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.[5] Yet, our analysis of the compensation principle and practices has concluded that compensation is structurally insufficient to achieve full restoration and is even less capable of generating improvements in livelihoods. Empirical findings have shown beyond any doubt that the delivery of compensation is subject to structural dysfunctions, diverting

Box: Under-Financing Undercuts Resettlers' Livelihood and Overall Project Performance

A study carried out in the World Bank on resource allocation for resettlement found a strong correlation between the level of resettlement financing and implementation performance. It also identified country trends regarding higher or lower of financing resettlement. The study included 31 projects with substantial resettlement components, under implementation in 15 different countries. For each project, the study calculated the ratio between the per capita average cost allocated for resettlement in each project component and the per capita GNP in the respective country, and then ranked the projects according to their ratio. Independently, the research then examined the projects' implementation files, extracting the rankings given to each projects' implementation performance in resettlement, and compared them with the ratios of resource allocation to the resettlement components.

The study's main finding was that

> "none of the projects with a ratio of 3.5 or higher reported major resettlement difficulties. In contrast, virtually all of the projects with a ratio lower than 2.0 were experiencing serious implementation difficulties."
>
> –(World Bank 1996, pp 145-46)

By country, the analysis found that the projects ranked among the first 10 had a resource allocation ratio between 4.1-10.5. Of these 10 projects, eight were in China. None of these were on the Bank's list of projects with implementation problems.

At the bottom of the list, the 10 projects ranked last had very low resource-allocation ratios, ranging only between 0.5 and 1.9. Six out of these 10 projects were in India, and one each in Madagascar, Nigeria, Brazil and Argentina. The 10 last projects, with low financing ratios were all beset with serious implementation problems.

The study's conclusion was:

> "Throwing money at resettlement will not solve all resettlement problems. But starving resettlement of resources is clearly the *first step towards resettlement failure."*
>
> –(World Bank 1996, pp 146-47)*

* That same study was sharply critical of the World Bank's own hesitant and insufficient financial support for resettlement components in its projects. It found that "fewer than 15 per cent of the 192 projects with resettlement reviewed included Bank funding for the resettlement component." In 85 per cent of the projects, the funding of resettlement components was left only in the charge of national resources. To change this, the study recommended that "constrained (country) budgets and unreliable financial provisioning can be overcome by increasing the World Bank's share in resettlement finance…" (p 147). The Bank's Board adopted the study's recommendations, and the World Bank significantly increased its financing share in the total cost of resettlement components.

practices, delays, etc, leaving the goal of oustees' reintegration and reconstruction unachieved.

Moreover, research has found that RAPs are too often devoid of allocations for investment in development activities for the resettlers, as distinct from restorative activities. The resettlement policies of the World Bank, ADB, and other development agencies do provide room for investing in resettlers' development over and above the payment of individual compensations. But because these policy provisions are seldom implemented (a World Bank study), the insufficient financing not only chronically ruins resettlers' livelihood, but also undermines the total economic contributions of projects with resettlement components. Conversely, better resettlement financing results also in overall better performing projects.

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

II
'Where Would Resources Come From?'

When the question of allocating more resources for RAPs is raised, the official responses usually are: "We pay compensation. There are no other financial resources for the resettlers"; or "Where would the resources for more funding come from?"

In fact, and fortunately, much better responses are possible. Certainly, resource scarcity is a real constraint. But is it a constraint that cannot be overcome?

Resource constraints during resettlement implementation are often an artefact of inadequate pre-project cost calculations for this component, not of absolute resource scarcity [Pearce 1999, Pearce and Swanson 2004]. Undervaluation of losses and underestimates of resettlers' real reconstruction costs coalesce into under-allocations in financing at the very start of the project. This underbudgeting is much harder to correct later, during implementation, even if RAP implementers realise that initially allocated resources are not up to their complex tasks.

Despite constraints and scarcity, there are ways to mobilise the necessary financial resources to do the resettlement programmes well and achieve resettlement along with development. Economic theory comes to help, pointing to significant resources generated by the very projects that impose the displacement.

The usual resource for financing RAPs and compensation obligations has been and still is today an upfront budget allocation for payment of compensation. 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 (i) a limited upfront budget allocation, and (ii) attempts to push this allocation to the lowest level tolerable. This belief is cultivated and reinforced by the long persisting (but never actually proven) assumption – originating in obsolete economic theory – that compensation alone would be sufficient for income restoration.

We question this mindset. These assumptions have been empirically proven as incorrect. For a policy to succeed, the means for achieving its objectives must be commensurate with these other 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 externalised. Yet, such externalisation does happen [Daly 2004] whenever the financial means are short of covering all costs imposed on the displaced people, making them end up worse off than they were before the project.

Consequently, resource allocation should be keyed to the pursuit of the policy's objectives in resettlement. If the project's budget balance has its dial set only on the narrow task of delivering some compensation but not on what compensation can actually achieve, then the incentives will be to minimise payments and to set the compensation dial low from the outset. If, however, the dial of the budgeting balance is shifted to reaching the policy goal of livelihood restoration and improvement, then the allocation of required means would be much higher from the outset.

This dilemma confronts project designers particularly in large-scale projects, which have to pay substantial aggregate amounts as compensation, while being under pressure to minimise total costs in order to increase the project's attractiveness to funding authorities. However, these "substantial aggregate amounts" tend to obscure the fact that, because of the high numbers of displacees in large infrastructure projects, on a per capita basis the compensation amounts to pitifully little.

Furthermore, large-scale projects are by definition high cost and require mega-investments. Compared to these mega-costs, the outlays for resettlement remain a limited fraction of total budgets. Resettlers claim that if the public sector has resources to finance the physical infrastructure built by the project, then it is only right to also allocate a sufficient amount for economically restoring those whose livelihoods are put at grave risk by the project. This is a powerful argument, which can be discounted only at the peril of growing political discontent and instability.

III
Economic Rent as Potential Resource

Returning to the question about "where would resources come from" to increase the financing of resettlement, we will refer to the experience of several countries that have faced the same question and found novel answers and solutions. We believe that these approaches hold lessons that can be replicated.

In essence, these solutions revolve around (a) using the windfall economic rent generated by the exploitation of natural resources, as well as (b) using a fraction of those projects' normal benefits and channelling them to reconstructing resettlers livelihoods at higher than pre-displacement levels. These solutions are not limited to hydropower projects: the rationale applies to other categories of projects, especially in the extractive industries.

The economic theory of rent is of particular relevance for the argument that certain categories of projects, usually unfeasible without population displacements, also generate surplus (windfall) benefits that can be used for overcoming resource scarcity in financing resettlement.

To clarify the potential role of economic rent, we draw on a relatively recent World Bank study focused on "measuring and apportioning rents from hydroelectric power developments" and on how economics defines the concept of economic rent [Michael Rothman 2000]. The study's author 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 such projects.

Economic rent is defined in classic economic theory as a surplus return over and above the value of the invested capital, materials, labour costs, and other factors of production employed to exploit natural resources. The footprints of projects that exploit natural resources require considerable amount of land (and/or water) and they trigger forced displacement. These include mining industry projects, oil and gas projects, hydropower projects, etc. By securing, through expropriation (or purchase) access to lands rich in natural resources, such projects buy the opportunity to harvest a substantial economic rent, above the average returns in other sectors. Economic analysis shows that economic rent,

> …arises when exploiting a resource that Nature has endowed with a value that is independent of any labour, capital or entrepreneurial effort applied to the resource. Resource developers, therefore, do not "earn" rent as they do normal profits (i e, return to capital and entrepreneurship). Rather, rent is a windfall created by exploiting the bounty of Nature. The owner of the natural resource is the owner of the rent. Typically, the natural resource is an attribute of a particular piece of land that has minerals under it, or water falling over it, or some other attribute that produces rent [Rothman 2000:5].

The amount of the rent depends on various factors, such as the quality of the resource and its scarcity. 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.

The scarcity of certain natural resources, and the inherent quality differentials in resources ensure the long continuity of economic rent accrual to the owners (or users) of the resource. Such rent – and this is an important point directly relevant to the subject of compensation and benefit-sharing – is defined in economics as a "windfall", significantly in excess of the normal rate of return to capital and results from exploiting the "bounty of nature". Therefore, ownership over the resource becomes most important since ownership gives entitlement over returns and determines how these are allocated and used.

When such resource exploration and exploitation projects are undertaken by public sector enterprises, the economic rent captured through such projects is usually delivered back to the state, which represents the resource owners, the public at large. Of course, given the great variety in tenure regimes, the rights to the rents must be regulated by laws:

> Ownership of the land and of the rights to its rents differ with the nature of the resource and with local law. In some cases, the owner of the land may also own outright all the rights to it. In many cases, governments own the land or the rights to its attributes that produce the rents. Governments, in the name of the public that owns the resources, then typically try to "capture" the rent through royalties, stumpage fees, competitive auctions, development licence fees and other mechanisms. A very large body of literature examines the efficiency and effectiveness of rent-capture mechanisms [Rothman 2000:5].

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 decapitalisation process 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.

IV
Project Benefits as Financial Resource

In addition to economic rents, however, another financing source upon which the novel practices emergent in resettlement have begun to rely on is the project's normal and long-term expected stream of benefits.

The investments needed for resettlers' reconstruction can be increased not only from the upfront budget allocations to a project, but also on account of the project's future benefit streams. Regardless of the 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 upfront budgetary resources cannot be fully found and allocated ex ante. In a detailed study of such approaches, van Wicklin provides numerous examples of projects in several economic sectors that already are putting in practice such mechanisms of benefit-sharing, and argues that this approach is legitimate on four powerful grounds: economic, financial, moral and political [van Wicklin 1999].

True enough, the project's stream of benefits emerges later, while the financial resources for good resettlement may be needed early in the project's life. However, as in many other respects, credit arrangements can be made from the project's start to resolve this time-conflict, counting on benefits that will emerge after the project's full completion (sometimes starting even during its implementation). While the upfront budgetary resources are available in the initial stages of relocation, a share of project benefits can start flowing into the resettlement areas during the reconstruction period, and continue. This will sustain the post-displacement reconstruction effort long beyond the completion of the given project.

Policy Support to Benefit-Sharing

At this point, a policy query may come up: is using a share of project benefits allowed by existing resettlement policies? Or is this a policy innovation, which was not envisaged and included when existing resettlement policies were conceived and adopted?

The latter is not the case: at least in international policies, benefit-sharing is not an unheard of innovation, but a clearly stated principle. Whether the principle of benefit-sharing with resettlers is explicitly included in national policies varies from one country to another. International resettlement policies such as the ADB policy on involuntary resettlement and the World Bank's resettlement policy include verbatim the principle of "enabling resettlers to share in project benefits" [World Bank 1990, 2001; ADB 1995, 2003]. ADB's involuntary resettlement policy requires that ADB development projects entailing resettlement "make development not only economically but also socially and environmentally beneficial" [ADB 1995: 8] for their target population. Further, ADB Operations Manual F2 on involuntary resettlement (2006) requires that projects

> treat involuntary resettlement as a development opportunity, allow planners to manage impoverishment risks and turn the people dispossessed or displaced into project beneficiaries" [ADB 2003: 2].

However, in resettlement practice this supportive provision of international policies is far from being consistently implemented even in projects that these institutions co-finance, thus as such implementation depends also on political will in various countries. This is one of the explanations for why numerous resettlement project components are not endowed with the sufficient resources that they need to succeed. The non-use of benefit-sharing mechanisms in public sector projects expresses, ultimately, the absence of local political will to do so.

During the last 10-15 years, the need – and the advantages – of channelling a fraction of benefits to the people and areas adversely affected have been gradually recognised in various countries. This has led to laws and regulations mandating benefit-sharing. For instance, explicit measures for channelling a percentage of the project's financial benefits back to resettlers are now implemented, legally and systematically, in developing countries such as Brazil, China, Colombia, and sporadically – in some other countries. These are what we call "advanced practices" or innovative practices. But they are still far from being adopted as general practice in all developing countries.

The room for replication is therefore vast and wide open.

Rationale for Benefit-Sharing

The theoretical rationale for project benefit-sharing rests on several solid grounds. Such approaches:
– go far toward reducing or preventing potential risk of impoverishment from becoming real impoverishment outcomes;
– contribute to achieving the overarching goal of poverty reduction;
– are economically rational for the project itself, facilitating and speeding up the technical construction process by reducing delays resulting from resistance or protracted negotiations. Projects can be completed sooner rather than later, and the stream of project benefits begins earlier;
– are equitable, meeting the ethical demand on development interventions to spread development benefits widely; and
– are politically sound and necessary to increase satisfaction and to prevent growing adversity vis-à-vis the project among the surrounding population.

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

In sum, the advantage of using economic rents and project benefits is that the financing necessary to avoid displacees' pauperisation 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 demands on ex ante budgetary resources.

V
Political Will

Financing Is Not Just a Resource Matter

Certainly, there are always competing demands on the rent and benefits that projects generate. How these competing demands are prioritised depends, once again, on the ownership over the natural resources, on the direct responsibility for the project causing the displacement and on political will.

The financing of improved resettlement is – obviously – not just a financial resource matter. Like all matters pertinent to resource allocation, it depends on political will and political decision-making by project owners. The project owners – either the state, or a private corporation – are those who deliberately will a forced displacement, when they decide to begin a project predicated on population relocation. The same actors have to will the resources for rectifying the harm inflicted by displacement.

In this respect, distinct consideration should be given to the two typical categories of projects in which these issues emerge. Such projects are either public sector projects, or are private for-profit projects in the business sector. Differences among them affect 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 using a fraction of project benefits for sound resettlement is regarded as an issue of political will at the state and government levels. Compensation resources, in principle, are not in dispute, because these must be secured by existing law as a matter of property restitution, guaranteed in all constitutions. But compensation alone is not sufficient to achieve the objective of livelihood restoration, and the statistically common outcome is failure and impoverishment. Allocating the increment of financing – by using a fraction of economic rent returns and of normal benefits – may make the critical difference between failed resettlement with impoverishment and successful resettlement with development.

The choice is stark, and the outcomes predictable.

Given that the historical record of displacement is well known and a reliable predictor, the absence of an explicit legislation for benefit-sharing from public sector projects causing displacement means, in unambiguous terms, accepting in advance that resettlement will fail to achieve restoration of livelihoods. The displaced groups will be left to end up worse off than before. Equally starkly, it means not repaying in full society's debt to those expropriated and condoning cost-externalisation and impoverishment.

In fact, the issue in public sector projects – and the political choices – are not so much about the principle of returning economic rent from resource development to the public, as it is about the specific segments of the public to which resources are returned.

The remarkable cases described further in this paper are among the cases seen by the World Bank study as still "rare" in the hydroelectric sector [Rothman 2000:1]. But they embody a new trend. The novel element in these cases is that the respective country governments have enacted in law explicit procedures for regularly allocating a percentage of benefits to resettlement areas. These procedures distinguish the benefits to resettlement areas from benefits channelled to the general public of electricity consumers in the form of lower tariffs. The examples will show that such distinctions are feasible and that these mechanisms chart a novel path.

Furthermore, these cases implicitly suggest also the feasibility of replicating such allocative procedures in public sector projects, and not only in hydropower, but also in mining projects and other extractive industries (oil, gas, minerals, etc). In fact, delivering the captured economic rent back to the general public is in itself not a novel practice: it has been used for a long time in many countries. What is novel is the enactment of the priority of a special sub-group of the public (those displaced and their hosts) and of its granted entitlement to an earmarked amount. The earmarking of a certain percentage for the area populations

affected by displacement is a financial and social innovation. Applying these novel mechanisms to an increasing number of projects, and allocating by law such incremental financing, would go far in counteracting the risks of impoverishment.

When private sector entities own such resource-related projects, these entities capture the same kind of economic rent as a "windfall" additional to "normal" rates of return to investments. The argument for channelling a share of benefits to reconstruction post-resettlement is therefore similar. If anything, it is even stronger: in private sector projects undertaken for profit, the rent and other benefits are not returned to the general public, but goes only to the parties investing in the project itself.

The initial investors and the shareholders of such private companies are entitled to benefits and dividends because they invested by upfront financing or invest by purchasing shares of these companies on the stock market. Generally, the people displaced for building such enterprises cannot afford to be shareowners. But the indispensability of their lands for creating the enterprise makes them an indispensable party, a "stakeholder" in the project building the new enterprise. The lands formerly owned by the displaced population are used and "invested" in the new companies, but the people themselves are being bought out and excluded through imposed expropriation before construction. 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,[6] but does not include the land's developmental potential. Yet without these lands and house plots and communal assets, the new enterprises themselves would be impossible. This is why the people who are yielding their land to the projects could be reasonably regarded as "shareholders". Their contribution is their land, holding great development opportunity.

The social contract embedded in the principle of land acquisition for development purposes involves the obligation of the purchasers (or expropriators) to not worsen the condition of the land sellers but to enable them to recover and improve their livelihood. They surrender not just any non-essential, indifferent good. They surrender the economic foundation of their existence.

It is this economic foundation that must be reconstructed. If compensation payments upfront are incapable to ensure reconstruction of this foundation, as empirical evidence has proven, mechanisms for access to benefit-sharing are indispensable to secure financing for such reconstruction. And this certainly poses a major theoretical question to the principle of compensation itself, in economic theory: why is this principle not extended to the lost development opportunity intrinsic in the asset, left uncompensated, and is narrowed only to the current value of the undeveloped asset?

VI
Good National Practices for Benefit-Sharing

The approaches to benefit-sharing can become trendsetters. It is therefore worth learning about them.

Types of Mechanisms

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

The six main mechanisms are:

(i) Direct transfers of a share of the revenue streams, to finance specific post-relocation development schemes;

(ii) Establishment of revolving development funds through fixed allocations; while the principal of those funds is being saved and preserved, the interest generated from saving the principal is used for post-resettlement development;

(iii) Equity sharing in the new, project-created enterprises (and other productive potentials) through various forms of co-ownership;

(iv) Special taxes paid to regional and local governments, additional to the general tax system, to supplement local development programmes with added initiatives;

(v) Allocations of electrical power, on a regular and legally mandated basis;

(vi) Granting of preferential electricity cost rates – or, for example, lower water fees, or other forms of access to in-kind benefits.

Obviously, every such mechanism requires legal enactment to ensure implementation over time and financial accountability. Through legal commitments, the state recognises its responsibility in re-establishing the resettlers.

Over the last 10-15 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 enacting benefit-sharing – see further, the case of China. 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 deemed 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 description of such practices in various countries follow, after which we will distil some common characteristics.

Colombia

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 Nr 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 Nr 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 per cent of project revenue.

The Colombian laws also define the proportions of revenues to be returned to the relocation areas. For instance, 3.8 per cent

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 per cent of the project revenue must be transferred to the municipalities bordering the reservoir; and another 1.5 per cent 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, tree planting, etc. 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 1999, Egre Roquet and Durocher 2007].

Brazil

Massive investments in hydropower are a pillar of Brazil's transition from an underdeveloped country to a mid-level 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 Brazil's large population. This is why the country has embarked over the last 30 years in one of the world's largest hydropower programmes, comparable to China and India.

The multiplication of big reservoirs, however, has led to large displacements. When the programme started, the country was in fact 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[7] and commensurate financing, apt to address displacement-caused economic distress, was not made available either.

A politically important step to redress this sombre situation was the decision to revise the country's constitution. Brazil's parliament included in the constitution (1988) the principle of reinvesting 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 in 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 state authorities and transfers to federal authorities. Four federal laws to define this balance were adopted in the space of 12 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 2007].

From the outset, the policy decision was to direct the lion's share of resources – roughly 90 per cent of all royalties from public hydropower plants – to the states and municipalities and only 10 per cent to federal agencies. For instance, the laws of 1989 and 1990 specified a distribution of 45 per cent to the overall budgets of affected states, another 45 per cent to the directly affected municipalities within those states, 8 per cent to the federal electrical regulatory agency and 2 per cent 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: for instance, 40 per cent for the maintenance of electrical services, 35 per cent for water resource management and data gathering and no less than 25 per cent 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; Egre, Roquet and Durocher 2007].

Subsequent laws, in 1997 and 2000, took the prior legislation further, regulating national water resource use and introducing payment for the use of reservoir waters. The legislation also distinguished between royalties and financial compensation: the latter is to be paid to the municipalities with areas inundated by the reservoir. The compensation is calculated as a very small fraction per MWh of generated power (amounting to US$ 0.93/MWh),[8] which becomes significant country-wise, on the aggregate. To firmly implement these provisions, a national water agency was created by Law 9984 (2000).

What have been the results? A 2004 assessment of this programme informs us that 137 hydropower plants with 145 reservoirs paid the requisite royalties and financial compensation to 22 of Brazil's states and 593 municipalities. Of these, 252 municipalities received financial compensations, 16 municipalities received only royalties, and 325 municipalities received both royalties and compensations. Annually, the amount of financial compensation and royalties exceeded US $ 400 million [Gomide 2004].

China

Some of China's largest dams were built before 1980, such as Xinanjiang, Sanmenxia and Danjiangkou, each one displacing more than 3,00,000 people. The inadequate financing of resettlement at that time led to disastrous impoverishment, deep resentment among the affected populations, and political instability.

After realising 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 from the 1980s, China began to enact a series of governmental policies to regulate and improve resettlement, gradually increasing the state-financing of Development-caused Forced Displacement and Resettlement (DFDR) processes. Regulations were passed, starting in 1981 with the decree of the ministry of finance and of the ministry of electric power that required each power plant to allocate 0.1 Fen/kWh to investments in the reservoir area for the life of the power plant. In 1985 China's state council decided to create a Post-Resettlement Development Fund in which contributions from power companies would be deposited. A comprehensive land law was adopted in 1986, the Land Administration Law (LAL) which contained detailed provisions regarding acquisition and displacement operations. Subsequently, regulations were issued in 1991 to specify and enhance the compensation norms of the LAL for re-settlers from medium and large reservoirs. The entire Land Administration Law was re-examined and improved in August 1998 by the Ninth National People's Congress (NPC).[9] The objectives of all these regulations were

defined in terms of helping resettlers to develop new forms of livelihood and production.

As distinct from land acquisition acts in other countries, China's 1998 Land Law contains explicit and detailed provisions and norms for people's sustainable resettlement, rather than only for acquiring cultivated lands. More recent legislation adopted by the state council of China [State Council 2006a, 2006b] has restricted further the previous authority of local governments (particularly, the counties) to resort to land acquisition – an authority that these local governments have often abused, sparking peasants' protests. These added restrictions on expropriations reflect the central authorities' efforts to reduce the loss of arable lands,[10] counteract abusive land seizures and the resulting peasant protests, and to keep tighter checks on the aggregate size of involuntary resettlements.

The Chinese institutional and administrative system provides for, and requires, that each province establish its own institutional capacity for resettlement, as a "Provincial Resettlement Bureau" equipped with a large multiprofessional staff specialised in resettlement operations and mandated to look at virtually all aspects of DFDR operations in that province.[11] These are important agencies on their own, despite their modest title as "bureaus", given that the population in each of China's provinces is in the tens of millions. Significantly, the legislation confers on these agencies the responsibility of managing the reservoir development funds and initiating development interventions to benefit the resettlers. Keeping in mind that China has increased, in several successive stages, the amount of resources channelled as "compensation" to the displaced populations, it is obvious that the combination of financing through multiple channels results in much more support for sustainable reconstruction post-resettlement. This is one reason why the incidence of impoverishment of displaced people has been decreasing in China over time, despite the increase in numbers of people displaced, as reported by evaluation studies by the World Bank and other agencies [Piccioto, van Wicklin and Rice 2001].

Canada

Among industrialised countries, Canada stands out by the large size of its hydropower potential. To exploit this potential, Canada has embarked on a systematic programme of building major dams. Indigenous tribal populations, who have customary land rights recognised 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 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 organised themselves, protested intensely and publicly, and resorted to legal action as well. The Canadian courts decided in their favour and stopped project construction. The protests of the Cree, who were later joined by the indigenous Inuit populations, along with NGOs advocating for indigenous and environmental protection, determined significant changes in the position of the Canadian government and of its public utilities.

To address the needs of this population and to recognise their contribution in land to the country's hydroelectric developments, 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, by contributing their lands. Even though an up-front compensation is being paid to the Inuit population for the land, and also for helping them to adjust their productive fishing activities, the option of equity-sharing was made available as well. This equity enables the tribal Inuit communities to receive a share of project benefits as a partner, for the long term, proportionately with 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 populations provide the lands, and then they proportionally share in the profits. This approach avoided the economic displacement of local communities, and the risks of impoverishment from undercompensated displacement, by recognising their shareholding status and financial entitlement to part of the project's benefits. This economic and financial arrangement is currently in full operation.

Norway

Distinct from the approaches to benefit sharing described above, Norway employs special tax mechanisms. A country in which electricity production and exportation is one of the main branches of the economy, Norway adopted a new law 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 per cent tax on all of their profits. The proceeds from these taxes are distributed in virtually equal shares going to the central budget and to the county budget, and with 4.75 per cent directly to local municipalities. Second, a 0.7 per cent 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, to the municipal and county levels is levied and then redistributed. The state also collects a tax for the use of natural resources, at a flat rate from the companies' net revenues [Egre, Roquet and Durocher 2007].

Beyond taxation, benefit-sharing occurs in Norway in other ways as well. Norway requires that electrical companies provide, at their own cost, 10 per cent 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 been, historically, very limited. Nevertheless, these mechanisms transparently channel very substantial financial amounts to the local populations residing in the areas of the hydropower development, whose energy potential is being harvested and where impacts from development occur.

Japan

In an attempt to minimise the tensions and conflicts inherent in land expropriation and population relocation, Japan has conducted land-leasing experiments, while renouncing the process of expropriating lands required for reservoirs. When the series of

three Jintsu-Gawa small dams were built – the Jintsu-Gawa Dams Nos 1, 2 and 3 – the Japanese government, rather than applying the country's expropriation law, decided to only lease the land required for the reservoirs from its owners [Nakayama and Furuyashiki 2007]. Payment for the land lease was structured into two types of financial transfers, deliberately designed to keep revenue accruing to the affected people for a long period rather than to make only a one-time compensation payment and dislocate them.

Twin financial transfers were made:

(i) One payment upfront to the landowners leasing the land for the reservoir, which would enable those farmers to develop for themselves alternative livelihoods, and invest the money received into non-land-based income generating activities;

(ii) Regular rent payments for the leased land, to be continuously paid to the local small holders for the life of the project. This way the leased land, although now deep under the reservoir waters, remains nevertheless a source of constant income for the affected farmers and their children. Rent payments supplement the initial upfront compensation and help to ensure livelihood sustainability even if the new alternative economic activities do not succeed from the outset or do not produce enough.

This twinned financing proved to be an effective risk-preempting mechanism, and the test of time validated it. Recent research in the Jintsu-Gawa Dam areas, reported by Nakayama and Furuyashiki (2007), has confirmed that the power companies are still paying the rents today, 50 years after the construction of the three dams. 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.

Japan has pursued another innovative strategy in planning the large-scale Numata Dam, whose reservoir was anticipated to displace about 10,000 people. To procure new lands for this sizeable population, the government made plans to convert 1500 ha of dry land on the slopes of Mount Akagi into paddy rice fields, introducing irrigation at the government's cost. 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 than what they had previously owned. When not all of the land of a certain family was to be submerged, the government planned to pay rent for the submerged portion as if the submerged land was leased by the farmers to the state, rather than merely paying a one-time compensation [Nakayama and Furuyashiki 2007]. Construction and resettlement plans were ready for implementation, but for other macro-economic reasons the construction of the Numata dam was cancelled in 1972. Yet, this original, creative approach in Numata planning is relevant for possible replication and actual future testing.

VII
Conclusions on Benefit-Sharing

The experiences described above enable us to distil some conclusions.

(i) Need for additional financing beyond compensation payments: While mechanisms employed by these different countries are largely distinct from one another, with some overlaps, it is obvious that they have a common purpose: the transfer of financial resources to the resettlers as resources additional to compensation payments. Different procedures reflect country particularities, history, culture, and preferences. The differences in themselves suggest that there is not necessarily a "one size fits all" solution. There is vast space for replication, adjustments, and innovations in this respect, open to many other countries.

(ii) Benefit-sharing requires political will: A further, obvious conclusion is that political will is indispensable for introducing benefit-sharing. Such mechanisms cannot be enacted by project managers themselves; they require political decisions at the highest level of country governments and other elected organisations.

(iii) Policies require legislative enactment and enforcement: Additionally, it is clear that all of the countries mentioned above consider that more than policy decisions and statements are necessary. To ensure long-term constancy in implementation, transparency for the public, and legal accountability of managers and implementers, the policy decisions for better financing in displacement and resettlement situations were translated into law. Governments promoted the enacting of legislation to enforce systematic application, compliance, and enable legal recourse in cases of transgressions. In some cases, government decisions or ministerial decrees were regarded as sufficient to guide the practices of the public companies subordinate to those authorities. But in most cases the adoption of laws by the countries' parliaments was the more common solution. Adopted laws were, in turn, subsequently revised and strengthened, based on lessons from their initial application.

We can also note that the legislation described above specified the proportions of sharing among stakeholders, in an effort to not leave distribution to chance and to subjective, idiosyncratic decisions. The laws also prescribed specific uses of the financial allocations, to prevent distortions in the new regulations' application.

The concept of use itself, in the context of these financial transfers, has received several meanings in various legislations. Sometimes "use" is meant for specific social development activities, intended to alleviate the impoverishment risks and effects of displacement and increase the affected populations' welfare. Other provisions refer to investing a part of the benefits in better environmental protections for the project area, which also have subsidiary positive effects on the populations' welfare. In all situations, benefit-sharing becomes an added mechanism, incremental to compensation and not a substitute for it, diversifying the instruments used to counteract the risks of impoverishing the displaced groups.

Last but not least, the fact that such mechanisms are being crafted and implemented not only in industrialised 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 to the project before inception, but also by mobilising resources that become available due to the project itself, ex post, since the need for fully overcoming displacement's dysfunctions and for sharing the fruits of development remains strong and is a long-term need.

VIII
A False Objection

Objections to the novel mechanisms of the kind described in the present paper are sometimes made on the grounds that the displaced groups will have access to sharing in the benefits of the new projects simply by being part of the general public and

thus enjoying, like all others, the positive effects of the development projects that displace them. Such objections must be rejected, for obvious reasons, as pernicious and missing the point. But because they are heard again and again, it is important to mention why such objections are fallacious.

Indeed, the displaced groups are part of the general population, and as such, some project-benefits ultimately percolate to them as well, mostly in the long run, or the very long run. Yet what the fallacious arguments miss is the fact that the displaced groups suffer obvious 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, and their communities face 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 entitlement to receive, with priority, and more rapidly than the general population, a fair share in the benefit stream of the project. The ex ante compensation itself is not a share in the benefit: it is nothing else than simple restitution for the "takings", and usually "restitution" that is unequal to their losses. Denying them benefit-sharing in ways 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 earlier refer mostly to projects in the hydropower sector, where displacements tend to be the most massive, and the risks to resettlers are 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 be also 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 which 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 allocated benefits are still a relatively very limited fraction of the total project benefits, but these allocations will make a big difference to displaced populations, compared to the absence of any share from benefits. The specific forms and proportions would also certainly vary.

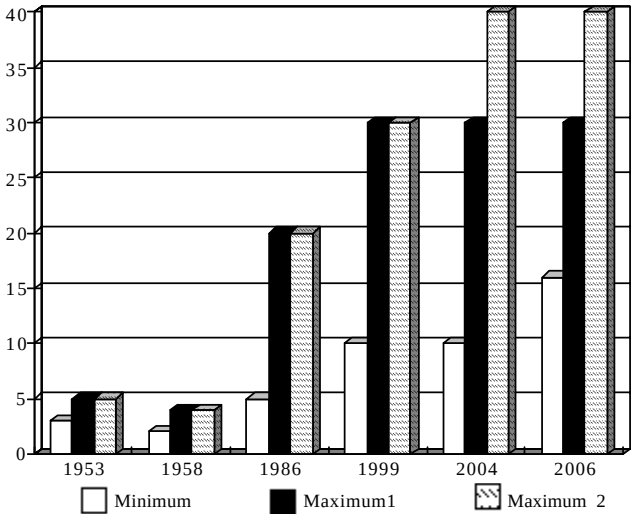
It is up to policymakers, planners, or project managers, in consultation with those affected, to design the appropriate grammar of redistribution rules and procedures for translating this principle into effective practical use in each country context.

IX
China's Twin Approach

Another distortion that needs to be avoided is the argument that compensation for losses could be decreased on account of giving some access to project benefits.

Financing resettlers' reconstruction and development through benefits-sharing, an essentially ex post approach that can be planned for the post-displacement period, must not become a perverse incentive to underpay – on account of subsequent benefit-financing for reconstruction – the required upfront compensation (restitution) for losses, which is an ex ante payment (in kind, or cash, or both). This will defeat the purpose of both compensation and benefit-sharing.

Figure: China: Policy Provisions on Minimum and Maximum Levels of Land Compensation*



Notes: Calculated as a multiple of annual output value – AOV.
1953 = Compensation: set at between 3-5 times AOV
1958 = Compensation: lowered to between 2-4 times AOV
1986 = Compensation: raised to between 5-20 times AOV
1999 = Compensation: raised to between 10-30 times AOV
2004 = Compensation: ceiling raised to 40 times AOV, in certain conditions;
2006 = Minimum level of compensation raised from 10 to 16 times AOV

* The graph is relevant in several important respects: first, it conveys the rather dramatic increase, starting from 1986, in China's legal provisions regarding compensation levels. Second, the setting of a mandatory minimum compensation level is intended to prevent local authorities from false "savings" in compensation by lowering the payment below the legal limit and thus externalising costs on resettlers and impoverishing them severely. Third, the recent years, 2004-2006, brought a considerable increase in the maximum instituted level from 30 times Annual Output Value (AOV) to 40 times AOV. It took 13 years (between 1986-99) for a similar increase from 20 times AOV to 30 times AOV, while the China's central Government enacted the new increase much faster. Fourth, the latest decision (2006) focused exclusively on "raising the floor", that is enacting in low a much higher mandatory minimum payment, namely – a 50 per cent increase, from 10 times AOV to 15 times AOV. China may be the only developing country that prevents by law project promoters to push compensation downward at will. The explanation given in the documentation accompanying the decision reflected the fact that the minimum level is, in practice, the most important one because it is applied for the largest number of cases and the law aims to make sure that even the minimum is high for most affected.

Source: Shi, Zhou, and Chen (2006)

Compensation ex ante should be correctly calculated from the outset and, since the real cost of replacement change from year to year, compensation norms and amounts for material losses need to be revised constantly. The efforts made by China after initial costly mistakes to double up the improvements in ex ante compensation financing with the kind of ex post benefit-sharing described above, deserve highlighting.

Over the last decades, China has adopted a series of policy decisions that reflect this principle, improving repeatedly 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 colourful Chinese metaphor, to simultaneously

"advance on two legs". That these twinned policies have financial substance, and are not just flourishing metaphors, is demonstrated by a series of far-reaching political and economic decisions made during the 1980s and 1990s and intensified during the current decade. These measures concern the levels of compensation payments and how these should be calculated. These measures have been and continue to be issued in parallel with the laws described above on mechanisms for benefit-sharing with resettlers.

China's compensation standards for farmlands, for instance, after having been stagnant (or even been once lowered) during a long period of 30-32 years, between 1950 and 1981,[12] have been radically modified in the last 25 years, between 1981 and 2006, through a series of massive increases introduced through high level policy decisions and translated into building legislations.

Both the stagnation period and the increases are reflected in the following time-sequence and in Figure 1.

The 1986 decision made it illegal to compensate farmland below five times AOV and gave local administrations the authority to use much higher levels, up to 20 times AOV. Only a decade later, the 1999 decision broadened the bracket, elevating the legal minimum to 10 times AOV, with the option of going as high as the 30 times output.

However, central authorities realised soon that many local administrations do not take advantage of the option to pay compensation at the higher levels of the brackets, close to 30 times AOV, even when conditions require it. Local administrations tended to keep compensations too close to the lower point of the bracket of 10-30 times AOV (Shi 2007, personal communication). This, together with abusive land takes, triggered a significant number of peasant protests. The central government took into account the protests and responded by encouraging local administrations to use the entire range of the compensation bracket. In addition, in 2004 the government increased the upper ceiling of the bracket to a "second maximum", enabling the payment of up to 40 times AOV amounts for certain lands, under defined circumstances. Figure 1 (based on Shi, Zhou, and Chen 2006) reflects graphically the introduction of the "second maximum", (Max 2) in 2004, while in prior years the columns for Max 1 and Max 2 were the same.

A little perceived but major difference is in the calculation method itself. Indeed, basing land compensation calculations not on the replacement cost for land at market prices, but on annual output value is, in most cases, a calculation which begins from a higher starting point than is apparent. In most developing countries, land is transacted on the market; thus, market prices for land are taken as reference for calculation.[13] In China, however, no land market exists and instead, the annual output value of the crop is considered as reference. But the AOV is much higher than the farmer's net annual income from the land, since it includes the cost of labour and inputs. Actual net income from the annual crop is only around 50 per cent of output value, on average. This means that compensation that is equal to 20 times 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 AOV is equal to a farmer's net income for 60 years.

The critical examination of land takings and compensation practices has continued in China after the compensation increase of 2004. In September 2006, the state council of China adopted another important decision. While the maximum level of compensation was kept the same, the decision raised the minimum compensation for farmland acquisition from the prior level of 10 times AOV to 16 times AOV. This is a mandated minimum that makes it illegal to pay less. This measure is particularly significant because it is intended to counteract the trend, identified in some provinces and counties, to keep the average compensation too close to the previous 10 times AOV minimum line. The new decision prohibits any local government in China, however intent that local government might be on reducing project costs, from paying farmers a compensation for farmland that is less than 16 times the average value of an annual crop.

Most significant as well is the introduction in 2006 of an annual post-relocation fund equivalent to US $ 75 per year per capita to all people to be resettled for a period of 20 years after their relocation. For farmers who, after land acquisition change their registration status from rural inhabitants to urban citizens without farmland, the new decision provides for the introduction of a new payment toward a "social security fund", somehow also comparable in its effects to a retirement pension [State Council of PRC 2004, 2006a; Shi Zhou and Chen 2006]. These cash payments, to be made with continuity over a long period, are in essence another form of development financing. They represent a supplement (over and above the ex ante compensation) of state-made investments in the development, reconstruction and improved welfare of those displaced: "to satisfy basic necessities or to use as 'seed money' for further development". In other words, this supplement is to be used by recipients either as a resource to invest for productive purposes, or for consumption items.

Financial payments for rectifying past under-payments: Once adopted, the principle of chanelling more financial resources for investing in post-displacement reconstruction, coupled with the open recognition of mistakes committed earlier in China's resettlement practices, led to another step. China's state council announced its readiness not only to recognise prior insufficient financing and past failures in income restoration, but also to rectify it through retroactive payments to large numbers of people displaced in prior years.

This massive payment was publicly announced in the landmark 2006 decisions by the state council (2006a and 2006b). Specifically, the newly instituted annual allocation of 600 yuan (US $ 75) per capita for every peasant who will be displaced after 2006 by dams-reservoir projects during the next 20 years will also apply retroactively. It will be paid also to all farmers displaced by dams during all the prior 57 years, since 1949. On a micro-scale, say at the level of a peasant family of four persons, the payment represents a total of $ 300 per year every year as a "rent" for 20 years, a very significant amount for China's rural population.

To our knowledge, this measure is unprecedented in the resettlement practice of any state. Its significance of principle, as an act of self-correction and reparation, as well as a forward looking decision of development policy and social protection, is not less meaningful than its financial weight.

The financial outlays these retroactive payments entail are indeed huge. Data received by the author from China's National Research Centre of Resettlement (NRCR) put the number of dam displaced people between October 1949 and June 2006 to about 1,80,00,000 individuals, which over 20 years will entail retroactive payments totalling $ 27 billion.[14]

Further, the state council decided to extend this corrective reparatory measure also to the population growth in the families affected by displacement during the prior 57 years. This increases

the number of beneficiaries from the 18 million mentioned above to about 22.88 million people [Shi 2007]. The total retroactive payments will therefore amount to $ 34.3 billion, or 270 billion yuan.

Noteworthy, in terms of our general argument in the present paper, this is an additional financial transfer mechanism to accelerate redevelopment, supplementing China's mechanisms described earlier in the discussion of legislation for benefit-sharing.

All together, the cumulative implementation of China's state council's 2006 decisions will inject an additional very large financial amount every year into financing DFDR operations in projects. This financing is likely to contribute directly, together with the other measures described earlier, to improving the economic and financial prospects for tens of millions of resettlers considerably above the level of only a few years ago.

X
Alternative Options for Sharing Benefits

However innovative and important the benefit-sharing mechanisms discussed above are, they are only some of the many possible ways for enabling displaced populations to share in projects' financial benefits. The stream of financial revenues which incorporate project benefits in financial form are not the only project benefits.

Another set of benefits, for instance, are those resulting from irrigation. So far, known international practices report only sporadic uses for resettlement of the benefits created by irrigation. This is a missed opportunity. Indeed, the irrigation systems made possible downstream of dams contribute vastly to increasing agricultural productivity in the command areas. They enable many farmers to cultivate more than one crop per year and can increase the productivity of each crop. It is therefore only logical to consider the possibility of resettling at least some of the upstream farmers who were left landless into the downstream areas. 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 laws called the "ceiling laws", that make land reallocation and redistribution in the command areas legal and enforceable. Previously rain-fed farms, enabled through irrigation to substantially increase their productivity, are legally subjected to limits on their farms to a size which will still allow an increase in their productive capacity, but will also free some land for redistribution to the people displaced who are deprived of their lands. For instance, a farm of about seven acres of rain-fed land could be limited to only five acres of irrigated land; this irrigated land would considerably exceed the production of the former un-irrigated seven acres, so the farmers downstream would still be major beneficiaries of the dam project. However, two acres will be made available. The owner would be reimbursed for the cost of the two freed acres of land, which could then be allocated to a displaced farmer from upstream as compensation for his lost land. Obviously, multiplying that example on the scale of the entire command area would produce

a substantial amount of newly irrigated land, which could host many displaced farmers and offer them a sustainable productive base.

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 the new stream of agricultural benefits from the project which displaced them. True enough, applying such laws is not easy politically, but nevertheless, this could be facilitated if ceiling limits arrangements and reallocation are agreed upon with communal area cultivators before project implementation and dam construction. This assumes a strong role for the state in initiating the process, implementing the laws and protecting the interest of upstream farmers, rather than only the interest of the downstream farmers. The state has not only the legal leverage necessary to do so but also the financial leverage. Indeed, it is the public sector which provides and invests vast financial resources to build the dam and to construct the irrigation canals in the command area, thus making irrigation benefits possible. Proper project preparation could and should include reaching agreements with downstream farmers before project start, as a condition of proceeding with investment and the dam building project. The use of this option could provide an excellent avenue for avoiding impoverishment and destitution for many upstream farmers displaced by reservoirs, while also maintaining substantial benefits for farmers downstream.

Other options can also be feasible if the state is playing a responsible role and exercises the political will necessary. Land for the displaced farmers can be made available not only through ceiling laws but also by purchase land which comes up for sale on the market, under usual circumstances. Arrangements for such purchases are made possible by instituting the "right of first refusal", namely, 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, which could then be used for relocating displaced farmers.

In sum, the general idea underpinning the examined solutions is the need for creative approaches for identifying and using existing potential to effectively 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 benefits, which their ordeal makes possible. Once this principle is accepted, much further groundwork will have to be laid and political will have to be exercised. Still, recognising and identifying this potential remains a challenge for all project planners, sponsors and owners. This recognition is essential, however, as it is their obligations to assist and facilitate the reestablishment of those whom they displace. EPW

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Notes

1 It must be noted that one of the earliest definitions of "institutional capacity" for resettlement has come from India, brought forward by Vasudha Dhagamwar about 20 years ago. "One has to think", she wrote, "of the policy and institutional changes that are required…" As main institutional changes, Dhagamwar listed "early planning", "people's participation", "education and technical training", "reforming the Land Acquisition Act", and also proposed a special ministry: "Even more important, one must ask for a ministry or Authority for Rehabilitation, for a given area or even the whole state or province. That authority must be independent of any department or ministry which causes displacement. It must be given top ranking and make overall plans for rehabilitation for the whole area. Such an agency will also make it possible to ensure that certain principles for rehabilitation are worked out and followed, as uniformly as possible…If there is a separate agency for rehabilitation, then it will be evaluated in terms of the rehabilitation done by it" [Dhagamwar 1989: 174, 179]. While this was written some 18-20 years ago, the need and the argument remain the same, validated even stronger by the time that passed.

2 Notable exceptions to this widespread indifference are, among a few other studies, the valuable contributions to the economics of displacement made by David Pearce (1999), Ravi Kanbur (2002), David Pearce and Timothy Swanson (2004), Herman Daly (2004), and the two books written by Vijay Paranjpye (1988, 1990) on the economics and resettlement of two major dam projects in India, Narmada Sardar Sarovar and and Therri Dam. A handful of other writings have come out more or less recently, signaling perhaps some increase in attention.

3 L K Mahapatra wrote in 1999:
"there is hardly any writing by Indian economists on the impoverishment caused by or through the displacement or expropriation for development projects... As the economists occupy the highest positions as planners and decision-makers in the government and corporate sectors, which determine the fate of millions in India, their awareness of, and sensitisation to, the impoverishment of the project-affected persons and their proper rehabilitation as a part of the development planning for nations are crucial" (p 17-18).

4 The empirical research literature reporting on the flaws and distortions of compensation is extremely vast; the sources quoted above are only a small fraction of the available evidence.

5 For a detailed discussion of the resettlers income curve after forced displacement of their induced inability to catch up, and of the inadequacies built into prevalent compensation norms and practices, see Cernea 1996, 1999, 2000, 2007.

6 In real practice, it is rarely equal. Usually it is lower, or much lower, and in the case of customary ownership of land they are often not even recognised as legal owners.

7 Like in India, where a national policy was non-existent until 2004, and only a small minority of India's states adopted a state policy for resettlement.

8 In the case of Brazil's largest dam, Itaipu, the law requires a higher payment, double that for other power generation companies, equivalent to US$ 1.99/MWh [Gomide 2004].

9 China's Ninth National People's Congress, *Land Administration Law of the People's Republic of China*, printed by the ministry of land and resources, Beijing, 90 pages. Protecting cultivated land from unlawful or excessive acquisitions is one of the Law's basic thrusts. The revised law considerably restricted the authority of China's provincial governments and of counties to requisition land on behalf of the state, established higher thresholds for compensation and enacted additional subsidies.

10 The seriousness of the issue was reflected in data published by China's ministry of land resources, reporting that China's total cultivated land area dropped in 2005 to 123.t mil. ha. compared to 130.1 mil. ha. in 1996. In an open teleconference on stricter land management , China's Premier Wen Jiabao issued a stern warning: "*Tightening land management is vital to grain security and sustainable economic and social development….Those who violate land use laws should be strictly punished*" (October 28, 2004).

11 The institutional capacity and responsibilities for resettlement work in China are structured into a complex set of organisations. Specialised institutional capacity for resettlement work has been created at every administrative level, starting from the central government and ministries and going down to the provincial level, to prefecture level, to each county, and to the village. The local village committees are required to be involved in the day to day implementation of resettlement.

12 This is a period that, in retrospect, is now reassessed by China's policy-makers critically, as a period of erroneous approaches to DFDR, a period during which China lacked a sound resettlement policy, and affected people were severely impoverished by displacements, with little legal recourse to defending their entitlements and rights.

13 As is well known, the starting point may be subject to various manipulations, when the quality of the land is not properly recognised and the land classification is based on land recordings for tax purposes.

14 Equal to some 210 billion Yuan ($ 1 = 7.76 Yuan).

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