

Impact Assessment and Project Appraisal



ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/tiap20

Improving Post-Relocation Support for People Resettled by Infrastructure Development

Theodore E. Downing, Guoqing Shi, Mohammad Zaman & Carmen Garcia-Downing

To cite this article: Theodore E. Downing, Guoqing Shi, Mohammad Zaman & Carmen Garcia-Downing (2021) Improving Post-Relocation Support for People Resettled by Infrastructure Development, Impact Assessment and Project Appraisal, 39:5, 357-365, DOI: 10.1080/14615517.2021.1980277

To link to this article: https://doi.org/10.1080/14615517.2021.1980277

	Published online: 19 Dec 2021.
	Submit your article to this journal 🗷
Q ^L	View related articles ☑
CrossMark	View Crossmark data 🗹





INTRODUCTION TO SPECIAL ISSUE



Improving Post-Relocation Support for People Resettled by Infrastructure **Development**

Theodore E. Downing^{a,b}, Guoqing Shi pac, Mohammad Zamana,d and Carmen Garcia-Downinga

alnternational Network on Displacement and Resettlement (INDR); bOffice of Research, Innovation and Impact, University of Arizona, Tucson, AZ USA; 'National Research Center for Resettlement (NRCR) of Hohai University, Nanjing, China; dAsian Research Center of Hohai University, Nanjing, China

ABSTRACT

Lagging other components, project-induced resettlement rarely, if ever, is completed after those resettled are compensated and replacement infrastructure handed-over. Initiating livelihood restoration programs may jumpstart but fall short of re-articulating dismantled local economies. Successful resettlement requires pre- and post-relocation actions that will help resellers and their hosts re-articulate new routine social and economic arrangements and improve their well-being. This Special Issue examines the distinct challenges of the postrelocation phase of resettlement. During this phase, the resettlement burdens shift from the relocation project to the resettlers, their hosts, and third parties; from individual to collective issues; and from mitigation to development. For decades, China has experienced with a variety of long-term, post-relocation policies, programs and methodologies. The contributors provide a glimpse of an extensive toolkit being crafted for use in this localized context-defined phase. Some are transferable. Others are not. Post-relocation support (PReS) adds value to improving the likelihood of successful outcomes.

ARTICLE HISTORY

Received 9 September 2021 Accepted 10 September 2021

KEYWORDS

Involuntary resettlement; post-relocation support (PReS); benefit-sharing (BS); social impact assessment: project affected people (PAP); land acquisition; development-induced displacement and resettlement (DIDR); postresettlement support (PRS): economics of well-being; social stability risk assessment (SSRA)

Project-induced resettlement

Why is post-relocation support critical to correcting project-induced declines in resettlers' living standards, livelihoods, and well-being? Are resettlement appraisals misjudging what is needed? Is planning flawed? Resettlers' greedy? Local governments unable to assume their post-relocation responsibilities? Incompetence? Corruption? Or misunderstandings about what happens in the displacement and resettlement process? Or all or some combination or none of the above?

Land acquisition for development projects often force displacement and resettlement of people who are in their way. Resettlement is a major psycho-socio-cultural and economic process involving the destruction, repair, adjustment, rehabilitation and reconstruction of very complex population-resource-environment-social-

economic interactions, exchanges, and arrangements (Downing and Garcia-Downing 2009). It triggers the 'resettlement effect' (ADB 1998) - a wide spectrum of physical and non-physical losses, including homes, communities, productive land, income-earning assets and sources of subsistence, communal resources, cultural sites, business, markets, social structures, networks and ties, cultural identity, access to health and educational services, mutual help mechanisms, and civil and human rights.² Unmitigated and unmanaged, the resettlement effect is very likely to generate 'new poverty' among the displaced, greater than their 'pre-displacement poverty.' Impoverishment includes multiple variants: landlessness, homelessness, joblessness, food insecurity, erosion of health conditions, marginalization (downward mobility), and social disarticulation, including disruption of educational opportunities (Cernea 1995, 1997, 2000; Ota 1996; Mathur 1998; Gu and Chen et al. 2000; Huang and Shi 2000; Downing 2002b). Resettlement might also lead to short-term, relative deprivation for resettled people and their host communities (Zhang et al. 2021).

These losses and risks are symptoms of more profound, but poorly understood socio-cultural and economic processes. Involuntary displacement and resettlement dismantle the organizational infrastructure that underpins local economies and lives, negating the outcomes of generations of social and economic arrangements. Project-induced displacements and involuntary resettlement lead to mega-psycho-socio-cultural and economic transformations. And they may lead to social unrest, instability, and anti-government opposition that spills over project boundaries (Ministry of Water Resources (MWR) of Peoples Republic of China 1992, World Bank 1994; Partridge and Halmo 2021, Zaman et al. 2021). Reestablishing a new socio-economic routine, institutions, rebuilding lost wealth, financing, planning all take time for individuals, families, communities, institutions and enterprises to negotiate and rearrange their relationships (Downing and Garcia-Downing 2009, Aronsson 2002; De Wet 2009). Properly constituted, the new arrangements become the scaffolding for economic growth and well-being.

Given the magnitude of likely harms, recognition and distribution of resettlement responsibilities and liabilities become critical to project design and success.3 Governments, agencies, project owners, investors, contractors, consultants, and financiers strive to define and limit their liabilities and responsibilities in legislation, policies, standards, plans, compensation matrices, specifications, implementation, governance, and contracts. Configurations of these resettlement instruments varies between economic sector, financing agencies, and the country or province. These interlocking instruments define when a resettlement is completed and what success is. They define such issues as: who is responsible for avoiding and mitigating the resettlement effects? What actions are necessary? And, of greater importance, what actions are options, and what are not. The instruments make financial, managerial, evaluative, and political distinctions that internalize and externalize responsibilities and costs, such as 'direct vs. indirect', non-obligatory 'as appropriate' discretionary actions, or meaningless commitments requiring responsible parties to make 'best efforts.'4 They define eligibility who are and who are not project-affected-people? They also define project boundaries that are often not coterminous with social units on the ground. For the project, these instruments, with their legalistic distinctions, roughly predefine the costs of reintegrating and restarting dismantled economies, basically – Who wins? Who loses? Who decides? What is and is not negotiable? How much? And for how long? (Downing 2002a). In effect, they allocate many of the responsibilities, liabilities, and costs **before** the project breaks ground.

Resettlement plans and agreements define how some of the impacts of the resettlement effects are avoided or mitigated. And, by omission, which are not to be mitigated. Unfortunately, projects are in the habit of narrowing their self-defined obligations shifting administrative and financial responsibilities for mitigating the impacts of the resettlement process to post-resettlement responsible agents (PoRRA). PoRRAs are project specific, but usually include governments, their subdivisions, non-profit and non-government organizations, developers and their sub-contractors, taxpayers, and most important of all - powerless people who are being resettled or their hosts. Rarely do these affected third parties engage in indepth, informed negotiations about the terms of their participation. Consultations highlight the project's general design, value, and physical impacts, but avoid the resettlement effects. Consequently, mitigation is absent or incomplete. PoRRAs are seldom sufficiently informed to estimate the externalized, post-handover impacts on their administrative loads, timing, and budgets.

The scope of the resettlement instruments has gradually broadened from compensation, below replacement, to construction of lost housing and structures, to limited compensation of land to full compensation, to all the above and livelihood restoration, to albeit ill-defined, benefit-sharing (Partridge and Halmo 2021). Despite progress, only a handful of projects attempt to cope with the full spectrum of impacts known to resettlement science. While not idiosyncratic, displacees rights vary widely between resettlement instruments, countries, sectors, agencies, financiers, and projects.

Studies continue to show unsatisfactory outcomes, reflecting the weak architecture of international resettlement instruments. Outcomes measured by the international financers' own instruments are discouraging. The World Bank's (2014) review of its involuntary resettlement portfolio discovered that

Conclusions about restoring livelihoods and incomes were based on information about compensation, training, jobs, or other income restoration measures. These are measures to assist economically displaced persons, not outcome indicators, so there is no direct evidence as to whether livelihoods and incomes were restored." (World Bank 2014)

Scudder's (2005) review of 44 resettlements also showed dismal outcomes: only 5 per cent restored and 7per cent improved their living standards. On the surface, physical things can be moved or replaced or morphed into compensation. Looking closer, these instruments guide nearly limitless decisions and negotiations, the timelines, and the level of project support in a herculean rearrangement of relocated peoples, their material possessions, and mindsets of relocated people to one another and to hosts. Progress and performance are measured by percentage of a planning checklist, not substantive changes in resettler's conditions. Scores of case studies and surveys buttress The World Bank's and Scudder's findings. For example, at the Three Gorges Dam resettlement, Wilmsen's team (2011) discovered that postrelocation declines in farm incomes were corrected by increases in off-farm income from paid work or selfemployment.

Post-relocation phase of resettlement

Before displacement, people inhabit well-defined, spatial, temporal, and social routines, maneuvering, working, and exchanging goods, services, and information within well-defined orders. Displacement shatters this routine architecture, crippling well-defined local economies. Institutions, groups, and individuals are disoriented. Places with treasured social and cultural meaning are gone forever. Downing and Garcia-Downing (2009) have shown that these routines answer peoples' fundamental, 'primary questions', including Who am I? Where are we? What are our responsibilities to others and ourselves? Why do people live and die? Where and when do we negotiate what we need in life?

Early resettlement research focused on longterm post-relocation adaptations or lack thereof (Scudder 1962; Colson 1971, Colson and Scudder 1988, Scudder and Colson 1980, Oliver-Smith 1994). Their case studies found that a few years following relocation, the living standards of the majority of the resettlers can be expected to drop and the living expenses rise. They cope and adjust to their new habitats, neighbors, hosts, and increased government presence. Children's lives, especially educational programs, are disrupted. Symbolic and religious meanings are assigned to the new social landscape and negotiations determine who has access or priorities to what places and when. Initially, the displaced attempt to cope by clinging to former institutions, symbols, and behaviors. They draw on overstressed/overtaxed pre-relocation, social networks. Resettlers become risk adverse as they initially adjust and cope, then begin a multi-generational transition. Coping gradually leads to innovation and experimentation with new opportunities by some individuals and families, wealth, and social stratification increase. Up close, resettlement not only destroys livelihoods and generations of accumulated wealth, it dismantles local economies - the recurring, spatialtemporal-people-institutional-enterprise ments. The dismantled arrangements of people, places, timings, and things cannot be reconstituted to replicate the social arrangements and conditions prior to relocation. What was - is no more.

Field studies confirm the psychological impacts of this process (Colson and Scudder, 1988). Juan Xi's team (Xi et al. 2011) team measured wide-spread, clinical levels of stress in displaced populations in China (Xi and Hwang 2011). Hwang et al. (2010) found that '-forced migration elevates depression not only directly but also indirectly by weakening the psychosocial resources that safeguard migrants' mental well-being.' Zhang found the social conflict risk might be caused by project underestimating the cost of living (Zhang et al. 2018). These patterns are not limited to China, their discovery is a credit to the quality of the scientific investigations.

On-the-ground, to resettlement is social development challenge- with or without assistance. Unless specialized arrangements are made, the post-resettlement burden falls on the resettlers, their hosts and what we

have called the PoRRAs, the de facto government agencies, private enterprises and others who cope with the unresolved resettlement effects. Resettlers try to construct new social and cultural orders, arguably a substantially more complicated task than restoring government and non-governmental social services. Individuals and families must also reconstruct new extra-familial organizations and institutions, including their associated components: assignments of tasks, recruitment of members, provisioning of their financial needs, establishment of procedures, civic duties, voluntary arrangements, and scheduling. Imagine the time and energy people expend, in arranging their personal spaces in pre-displacements routine times. Then imagine them having to do it all over again in a new environment where former networks may be dispersed or replaced by new neighbors. In one of the few resettlement studies by an observer embedded within a community before, during and after resettlement, Aronsson (2002) offers an ethnographic view of these internal processes. She confirms that this process involves innumerable negotiations of the spatial, temporal, and social relations necessary to carry out daily lives, including local economic activity.

Transitioning from mitigation to development

After relocation, resettlers face many immediate challenges in adoption and integration with local society in neighborhoods, jobs, livelihoods, social networking, public services accessing, community joining in daily life. With or without clear arrangements, unresolved resettlement effects stand on the post-relocation doorstep. The context shifts. The context is crowded by a constellation of localized personal, familiar, community, enterprises, and governmental transitions - of all sizes and shapes. Relocation gives way to adjustments. Hyper-generalized project management categories, like 'PAPs' or 'eligibility matrices', give way to personal, familiar, and organizational specifics. Project time surrenders to local time. Trying to blend in, resettlers discover their marginality - as they are viewed by others as a group. Financial certainties may just give way. Absent clear arrangements, PorrAs are also likely to feel blindsided, with unmet resettlement legacy issues also at their doorsteps. Uncertainty creates agency staffing, training, scheduling, and budgeting challenges. Further back is the risk that localized, unanticipated dissatisfactions fester into wide-ranging resettlement or the project that induced it.

What external support will facilitate, if not accelerate, a successful transition?⁵ The general approach is clear. Management shifts from directing to facilitating, with success judged by likelihood of sustainable social arrangements that improve well-being, including local

economic stability and growth. The highest priority is to strengthen the future capacity and resiliency of those resettled both individually and collectively, and to take account of the impacts and benefits of host communities. This task, in turn, requires improving their capacity to negotiate, navigate and finance these necessary social perils and redefine their environment. Adapting and developing tools to work in a specific context demands considerable organizational, research and programmatic ingenuity.

And when does this phase end? For the PoRRAs, it gradually ends as resettlers become indistinguishable from other clients. Resettlers have many gradual endings: in business, new partners; in education, graduations; in families, new in-laws; in sociability, new local networking. If all goes well, most will once more discover that routine life answers many of their primary questions. As support continues, hopefully, mitigation gives way to development.

Leadership in post-relocation support

Resettlement improves by stepping beyond the focus on mitigating project-induced impoverishment risks and generic benefit-sharing. Post-relocation support (PReS) demands a more sophisticated process for resettlement planning/appraisal and mitigation that takes place earlier and extends later into the project cycle.

Breakthroughs in PReS have been uneven, appearing in legislative, policy and on-the-ground institutional and financial work in the hydropower sector in selected countries such as China by resettlement with development policies and post-relocation fund (Shi et al. 2021) and in Ghana by trust fund (Koranteng and Shi 2018). Innovations are appearing in the transport sector, e.g. involving toll roads/bridges in Bangladesh (Zaman et al. 2016; Zaman and Khatun 2017; Zaman 2019; Zaman et al. 2021) and India (Zaman et al. 2021) and in private-sector investments in mining (Owen et al. 2020, 2021; Wang et al. 2020). International financial intermediaries (IFI) have not yet mandated post-relocation support for relocated peoples into their resettlement policies and planning tools such as in resettlement action plans (World Bank 1990, 2002, 2018; Koch-Weser and Guggenheim 2021). The International Finance Corporation has long experimented with the use of benefit-sharing arrangements since the early 1990s. Their work extended beyond financial, rent capturing and disbursal to scores of arrangements crafted to local context, specifically by use of multi-purpose development foundations supported by hydropower rents.

The Chinese hydropower sector and a few other places have taken a different approach, crafting resettlement instruments and science-based methodologies to support a gradual, post-relocation transition. With three decades of learning experience, some of the Chinese tools might be adapted to other projects, countries, sectors, and contexts; others may not.

Incrementally, China has experimented with different policies/legislative programs and methodologies to achieve these broader, resettlement objectives. Chief among these has been the need for post-relocation support (PReS). It began in 1986 by developing the policies and raising funds from electricity revenue and income from water supply to address the remaining reservoir resettlement problems (Ministry of Water Resources (MWR) of Peoples Republic of China 1992). The PReS policy was legally issued in 1991 (Shi and Chen et al. 2001). This change primarily grew out of a concern for resolving the impoverishment problems caused by the hydropower projects during the 1950s to 1980s and a desire to share the benefits with the affected people and communities. In 2006, China began its second phase of PReS following a selfcritique of shortcomings of its initial attempts and led to legislative and policy reforms in 2006 with new regulations for addressing post- relocation support in water conservancy and hydropower sectors (State Council of PRC, 2006a, 2006b), including legacy issues (Shi and Zhen 2008; Yan et al. 2017, 2018; Shi 2018; Shi et al. 2021). In the reservoir sector, PReS is paid by an additional tariff on nationally distributed electricity. The standard cost budgeted is 600-yuan RMB per person annually for 20 years following relocation.

Outcomes are context specific. Shi and Hu (1995) discovered that resettlements induced by Chinese hydropower reservoir development initially caused impoverishment (1950s-1980s). Building on lessons learned with improved, early post-relocation support the resettlement transitioned through what he identified as five phases: moving, static revival, dynamic revival, development, and improvement. Effective, important improvements were measured in the standard of living and production index (SPI).

The physical construction and physical relocation of those in the way are normally completed before the resettlement is completed. Recognizing that the resettlement component will extend beyond project construction, post-relocation support is becoming an obligatory technical component of resettlement planning, appraisal, and implementations. This Special Issue offers a broader, widely applicable and innovative approaches than the amorphous notion of 'benefit-sharing'.

Post-relocation toolkits

Meaningful, effective near-ground level resettlement planning and operations require a comprehensive toolkit for surveying, assessing, planning, budgeting,

financing, implementing, managing, monitoring and evaluating PoRRAs, resettlers and hosts. In practice, PReS is integral to comprehensive resettlement planning, financing, and management. It is, above all transitional involving adjustments, arrangements, policies, legalization, standardization, monitoring and compliance evaluation. It involves agreements - memorandums of understanding between institutions responsibility for arrangements, including targetcontingency based budgeting. Completion - sustainability - occurs with the successful transition into the normal routines.

Benefit-sharing has long been proposed as a postrelocation support tool. The idea is that some on-going revenues from the project that induced the resettlement is somehow shared with project-affected-people. These benefits are in addition to those gained by the general population. A consensus supports benefit-sharing (Zhu and Shi 1995; Shi 1996; Shi et al. 2007, 2012, 2018; WCD 2000; Cernea 2007, 2008a, 2016; Cernea and Maldonado 2018; Kong and Shi et al. 2007; Egre et al. 2007; Shang and Shi 2012; Scheumann et al. 2014; Koranteng and Shi 2018; Xia et al. 2018; Price et al. 2020; Wang et al. 2020). It has long been an option in the private sector. IFC initiated its first private-sector benefit-sharing in the early 1990s in the Chilean Pangue Hydropower project whose strengths and weakness were subject to extensive evaluation (Downing 1996). Key questions have moved beyond securing a financial source (Cernea 2008b). Benefit-sharing turns out to be a generalized term for hundreds of different arrangements.

This issue offers additional, powerful innovative tools. There are and will be many more.

Measuring success

China's hydropower standards in resettlement management and livelihood includes relocation support and early compensation subsidy as policy principles. Resettled people and communities receive fair compensation for assets, landbased livelihoods and/or restoration of income in post-relocation period through training and employment in local industries and governmentsupported enterprises. The resettled community benefits from improved public facilities such as water supply, electricity, roads, irrigation, drainage, green areas, schools, market, culture center and public property. The intention is for resettlers and host communities to share an enhanced quality of life and living environment (Shi and Zhen, 2008).

Chen, Vanclay and Yu (2021) identify long term support for resettlers and their host communities as one of the six factors that have contributed to the Chinese post-relocation success. The others are a critical commitment to revisions of policy, redressing past legacy issues, an integrated and inclusive

approach to resettlers and host people, subsidy from electricity production, and public participation in resettlement planning. In 2006, a review led to a significant shift in policy from expropriation to resettlement with development (RwD), particularly in the hydropower sector. Their analysis is consistent with research and experience that - with appropriate institutional arrangements, interlocking policy instruments and adequate financing, and time - people displaced by development projects can regain and re-establish socially and economically viable communities.

These outcomes are encouraging for others who are willing to critically assess and improve their resettlement instruments. Improvements begin with a willingness to step beyond initial concerns with avoiding resettlement-induced impoverishment and generic notions of benefit-sharing to a science and critical experience-based approach. Some elements of the Chinese PReS approach are applicable in other countries. Others not. That is for others to discern and adapt to their own, unique context.

In-context planning and appraisals: risk perception

Wang et al (2021) discuss variations in risk perception to resettlement preferences and options in mininginduced displacement. They discovered that reluctance to relocate was higher among the elderly, those with stronger social networks, the less educated, and those in agriculture. Knowledge of the social and economic diversity among resettlers strongly improves targeting of post-relocation resettlers and hosts needs for assistance beyond compensation. These findings suggest that PoRRAs might evaluate tailoring outreach programs for elderly, less educated, former agriculturalists.

Social Stability Risk Assessment (SSRA)

Shengping Peng et. al (2021) shows the applicability of the Chinese policy of social stability risks assessment (SSRA) to a large hydropower project. Her team discovered seven major social stability risks during the project cycle including both pre-relocation and postrelocation phase. The SSRA can be a management tool to predict and plan to minimize social stability risks in project preparation and in the post-relocation phase. The SSRA is context-specific, based on fieldwork, interviews, questionnaires and focus on stakeholders' meetings. PAPs and hosts offer valuable feedback in initial post-relocation policies and planned activities to responsible resettlement team before decision making. This will help the government and developer to optimize the resettlement options to increase social acceptance as well as avoid the social stability risks.



Differentiating project affected people – skill set assessment

Junzhuo Xu's case study (2021) shows the projectaffected-people (PAPs) with generic skill sets are more satisfied after relocation, primarily because they can more quickly find new work and re-establish livelihoods. Those with only agricultural skills find it more difficult to re-establish their livelihood and are often dissatisfied. The pre-relocation skills of affected labor are therefore a key factor for post-relocation satisfaction and livelihood restoration. Junzhuo Xu's work buttresses the importance of pre-relocation skills training and employment capacity building. The paper is important to help those affected to improve their abilities, so that they are enabled to experience the benefits from projects. The paper found skills training provided by local government can help particularly those who only know farming to develop generic skills, and their perceived level of shared benefits may increase as a result.

Transforming non-market assets into post-relocation support: land securitization

If post-relocation support is tied to pre-relocation economic arrangements, a method is needed to align what are often very different values. The need becomes acute when arrangements, such as land-for-land or job creation prove difficult or unfeasible. Guoging Shi and Kai Shang (2021) offer an innovative solution in resettlement economics and policy. They differentiate between compensation and benefit-sharing and propose a new system of PReS through a Land Securitization Mechanism (LSM). The acquired farmland's value is calculated/ viewed as capital investment into the hydropower project and then, as these land rights of rural reservoir resettlers are transformed into beneficiary certificates. The PAPs can receive the long-term annual income instead of lost livelihoods from the hydropower company limited by shares since hydropower project operation. According to Shi's Natural Resources Transformation Pattern theory (Shi 1996), through land resources valuation to asset, then assets capitalization, then capital securitization approach (Shang and Shi 2012), rural resettlers can put their land as a capital investment in hydropower development project and to be shareholders of long-term investment with the system design of bonds and stocks. The model avoids the livelihoods and financial risks of the resettlers both in construction and operation period. This institutional innovation may changed the traditional model in which resettlers' land is compensated at market prices but faces the impoverishment risk and sustainable livelihoods. The LSM model created a new model to

engage the resettlers integrated in a long-term and sustainable benefit sharing system. This mechanism is also likely to decrease host-resettlement conflicts and resistance to the project. This innovation offers a triple advantage: it may be used to minimize livelihood restoration risks, increase the social stability, and enhance long-term benefit-sharing well beyond the formal end of a development project.

Retrofitting

Even today, displaced people in many countries struggle in the wake of development-induced impoverishment without proper and adequate post-relocation support. The contribution by Koenig (2021) explores the potential for retrofitting benefit-sharing, a generic form of post-relocation support, to a hydropower project in Western Mali. Retrofitting might be viewed as an entire toolbox. Her valuable observations and longitudinal interviews (from 1980-2016/18) reveal what we feel might be an 'adaptive learning pattern' in resettlement science. Resettlers gain capacity to address the key issue of post-relocation support, a useful factor that can be programmed into resettlement planning and operations. Until retrofitted with post-relocation support, internationally funded development projects that leave resettlementinduced poverty their wakes are failures.

A beginning

The likelihood of successful resettlement improves by increased attention to post-relocation support. Success requires overcoming or minimizing the resettlement effects, some externalized in the initial resettlement planning. Resettlement is rarely if ever complete at compensation and the handing over of replacement infrastructure. Livelihood programs may jumpstart, but do not re-articulate a dismantled, local economy and restore well-being. Resettlement is a long term, physical and socio-economic process. Without a welldeveloped, post-relocation support component, responsibility for shortcomings shifts to various levels of government, enterprises, hosts and - most of all - to those most powerless: the resettlers.

Notes

1. This paper and the special issue publication work was supported by the International Network on Displacement and Resettlement (INDR www.displace ment.net) and the Hohai University Resettlement Science and Management Program Development Fund (No. 41824203). It benefits from their creative collaboration with National Research Centre for Resettlement at Hohai University and a host of other



- institutions (e.g. China Three Gorges Corporation, China Society for Hydropower Engineering, China Three Gorges University). Together they convened an assembly of over 300 resettlement specialists from some 20 different countries over four days from Aug 31st to 3 September 2019 to examine benefit-sharing designs and outcomes. The authors are very appreciative for the editorial assistance of Dr. David Halmo.
- 2. A more restricted definition of the resettlement effect was used in the The Asian Development Bank Involuntary Resettlement Policy (1998, 2003). The resettlement effect has differential impacts, being stronger among subgroups, such as indigenous peoples, the elderly and women - have been found to be more susceptible.
- 3. While not legally enforceable, in financial accounting liability is defined as the future sacrifices of economic benefits that the entity is obliged to make to other entities because of past transactions or other past events, the settlement of which may result in the transfer or use of assets, provision of services or other yielding of economic benefits in the future. In practice, resettlement instruments avoid specific mention of 'liabilities'. Nonetheless, international financial accounting standards recognize equitable obligation, a duty based on ethical or moral considerations, and constructive obligation, an obligation that is implied by a set of circumstances in a particular situation, as opposed to a contractual based obligation according to the International Financial Reporting Standards Foundation's International Accounting Standard 37 (www.ifrs.org).
- 4. Such quasi-legalistic either/or distinctions appear science based. They are not. Resettlement studies and on-the-ground polices, and management would be better served to stochastically measure degrees of relationships rather than forcing square pegs into round holes.
- 5. Project evaluations that focus on project, staff, and policy-compliance, and less on the actual on-theground performance would not answer this question. A comprehensive review, consistent with resettlement science knowledge would not just look at economic performance indicators but track the reconstitution of dismantled economy.

ORCID

Guoqing Shi (b) http://orcid.org/0000-0002-5060-3630

References

- ADB (Asian Development Bank). 1998. Handbook on Involuntary resettlement: a guide to good practice. Manila: Asian Development Bank.
- Aronsson I-L. 2002. Negotiating involuntary resettlement: a study of local bargaining during the construction of Zimapan dam. Uppsala: Uppsala University. Department of Cultural Anthropology and Ethnology.
- Cernea MM. 1995. Understanding and preventing impoverishment from displacement: reflections on the state of knowledge. J Refug Stud. 8(3):245-264. doi:10.1093/jrs/ 8.3.245.
- Cernea MM. 1997. The risks and reconstruction model for resettling displaced populations. World Dev. (10):1569-1589. doi:10.2307/4409836.

- Cernea MM. 2000. Risks, safeguards, and reconstruction: a model for population displacement and resettlement. In: Cernea MM, McDowell C, editors. Risks and reconstruction. experiences of resettlers and refugees. Washington (D.C): The World Bank.pp 11-55. http://elibrary.worldbank.org/ doi/pdf/10.1596/0-8213-4444-7
- Cernea MM. 2007. Financing for development: benefit-sharing mechanisms in population resettlement. Econ Political Weekly. 42(12):1033–1046. doi:10.2307/4419387.
- Cernea MM. 2008a. Compensation and investment in resettlement: theory, practice, pitfalls, and needed policy reform. In: Cernea, Mathur, editors. Can compensation prevent impoverishment? New Delhi: Oxford University Press. pp15-98.
- Cernea MM. 2008b. Compensation and benefit sharing: why resettlement policies and practices must be reformed. Water Sci Eng. 1(1):89-120. doi:10.3882/ j_issn.1674-2370.2008.01.009ISSN1674-2370.
- Cernea MM. 2016. State legislation facing involuntary resettlement: comparing the thinking in China and India on development-displacement. In: Padovani F, editor. Development-induced displacement in India and China. Lanham: Lexington Books; p. 7-51.
- Cernea MM, Maldonado JK. 2018. Challenging the prevailing paradigm of displacement and resettlement: risks, impoverishment, legacies, solutions. Abington (NY): Routledge; p. 45-56.
- Chen X, Frank Vanclay, Yu J. 2021. Evaluating Chinese policy on post-resettlement support for dam-induced displacement and resettlement. Impact Assess Project Appraisal. DOI:10.1080/14615517.2020.1771051
- Colson E. 1971. The social consequences of resettlement: the impact of the Kariba resettlement upon the Gwembe Tonga. New York: Humanities Press, Inc.
- Colson E., Scudder T. 1988. For prayer and profit: the ritual, economic, and social importance of beer in Gwembe District, Zambia 1950-1982. Stanford University Press.
- De Wet C. 2009. Why do things so often go wrong in resettlement projects. In: Pankhurst M, Pguet F, editors. Moving people in Ethiopia: development, displacement and the state. Woodbridge; p. 35-48.
- Downing TE 1996. Participatory interim evaluation of the Pehuen foundation. International Finance Corporation (2067). formerly confidential Access at http://teddown ing.com/wp-content/uploads/2019/04/Downing-Peheunreport-English.pdf
- Downing TE. 2002a. Creating Poverty: the flawed economic logic of the World Bank's revised involuntary resettlement policy. Forced Migr Rev. 12(1):13-14.
- Downing TE. 2002b. Avoid new poverty: mining-induced displacement and resettlement. London: International Institute for Environment and Development.
- Downing TE, Garcia-Downing CG. 2009. Routine and dissonant culture: a theory about the psycho-socio-cultural disruptions of involuntary displacement and ways to mitigate them without inflicting even more damage. In: Oliver-Smith A, editor. In Development and dispossession: the anthropology of displacement and resettlement, 225-253. Santa Fe: School for Advanced Research Press. Available from: https://www. researchgate.net/publication/303213123.
- Egre D, Roquet V, Durocher C. 2007. Monetary benefit sharing from dams: a few examples of financial partnerships with indigenous communities in Québec (Canada). Int J River Basin Manage. 5(3):235-244. doi:10.1080/ 15715124.2007.9635323.
- Gu M, Chen S, Xun H et al. 2000. Exploration, planning and management of the remaining problems of reservoir resettlement (in Chinese). Nanjing: Hohai University Press.



- Huang H, Shi G. 2000. Causes and Cope in the remaining problems of reservoir resettlement. Water Econ. 2000 (3), pp 50-55.
- Hwang SS, Guo X, Xi J. 2010. Project-induced migration and depression: a panel analysis. Soc Sci Med. 70(10):17-65-1772. DOI: 10.1016/j.socsimed.2010.02.005. Journal homepage: www.elsevier.com/locate/socsccimed
- Koch-Weser M, Guggenheim S. eds. 2021. Social development in the World Bank: essays in honor of Michael M. Cernea. Gewerbestrasse: Springer. doi:10.1007/978-3-030-57426.
- Koenig Dolores. 2021. Advantages and obstacles to retrofitting benefit: sharing after development-induced displacement and resettlement. Impact Assess Project Appraisal. doi:10.1080/14615517.2020.1807292
- Kong L, Shi G, Qiao X, Zeng X. 2007. Hydropower resettlement mechanism based on the benefit sharing perspective. Water Conservancy Hydropower Technol. 38(9):62-64.
- Koranteng R, Shi G. 2018. Aalyzing the relevance of VRA resettlement trust fund as a benefit sharing mechanism. J Sustainable Dev. 11(4):99. doi:10.5539/jsd.v11n4p99.
- Mathur HM. 1998. The impoverishment risk model and its use as a planning tool. In: Mathur HM, Marden D, editors. Development projects and impoverishment risk: resettling project-affected people in India. New Delhi: Oxford University Press. p.1-55.
- Ministry of Water Resources (MWR) of Peoples Republic of China. 1992. The General Office of the State Council forwarded the notice of the Ministry of Water Resources and Power on promptly dealing with the report on reservoir resettlement (Notice (1986) No.56). In: Reservoir resettlement handbook. Beijing: Xinhua Press; p. 755-758.
- Oliver-Smith A. 1994. Resistance to resettlement: the formation and evolution of movements. Greenwich CT editor. Research in social movements, conflicts and change. JAI Press.
- Ota AB. 1996. Countering the impoverishment risk: the case of the Rengali dam project involuntary displacement in the dam projects. New Delhi: Prachi Prakashan.
- Owen JR, Kemp D, Lèbre É, Harris JD, Svobodova K . 2021. A global vulnerability analysis of displacement caused by resource development projects. Extr Ind Soc. 8(2). doi:10.1016/j.exis.2021.01.012.
- Owen JR, Zhang R, Solar AA. 2020. On the economics of project-induced displacement: a critique of the externality principle in resource development projects. J Clean Prod. 276:123247. doi:10.1016/j.jclepro.2020.123247.
- Partridge W, Halmo D. 2021. Resettling displaced communities: applying the international standard for involuntary resettlement, Lanham: Lexington Books.
- Peng S, Shi G, Zhang R. 2021. Social stability risk assessment: status, trends and prospects —a case of land acquisition and resettlement in thehydropower sector. Impact Assess Project Appraisal. doi:10.1080/14615517.2019.1706386.
- Price S, Van Wicklin III WA, Koenig D, Owen J, Wet CD, Kabra A. 2020. Risk and value in benefit-sharing with displaced people: looking back 40 years, anticipating the future. Soc Change. 50(3):447–465. doi:10.1177/0049085720953409.
- Rew AW, Fisher E, Pandey B. 2000. Addressing policy constrains and improving outcomes in development-induced displacement and resettlement projects. refugee studies centre. Oxford: University of Oxford.
- Scheumann W, Dombrowsky I, Hensengerth O. 2014. Dams on shared rivers: the concept of benefit sharing. In: The global water system in the anthropocene. Cham: Springer; p. 105-123.
- Scudder T. 1962. The ecology of the Gwembe Tonga. New York: Humanities Press, Inc.

- Scudder T, Colson E. 1980. Secondary education and the formation of an elite: the impact of education on Gwembe District, Zambia. New York: Academic Press.
- Scudder T. 2005. The future of large dams: dealing with social, environmental, institutional and political costs. London: Earthscan.
- Shang K, Shi G. 2012. Land asset securitization resettlement model for rural resettlars induced by hydropower development project (in Chinese). ISBN 978-7-5097-3555-8. China: Social Science Academic Press; 34-205.
- Shi G. 1996. Reservoir resettlement system planning theory and application (in Chinese). Nanjing: Hohai University Press; pp. 181-187. ISBN 7-5630-0802-0.
- Shi G, Zhou J, Yu Q. 2012. Resettlement in China. In: Tortajada C, Altinbilek D, Biswas AK, editors. Impacts of large dams: a global assessment. Berlin: Springer; p. 219-241. doi:10.1007/978-3-642-23571-9_10
- Shi G. 2018. Comparing China's and the World Bank's resettlement policies over time: the ascent of the 'resettlement with development' paradigm. In: Cernea MM, Maldonado JK, editors. Challenging the prevailing paradigm of displacement and resettlement: risks, impoverishment, legacies, solutions. Abinaton (NY): Routledge: p. 45-56. doi:10.3390/su11072142
- Shi G, Yu F, Wang C. 2021. Social assessment and resettlement policies and practice in China: contributions by Michael M Cernea to development in China. In: Koch-Weser M, Guggenheim S, editors. Social development in the World Bank. Gewerbestrasse: Springer; p. 329-346. doi:10.1007/978-3-030-57426-0_19e
- Shi G, Chen S, Xing H, Xun H. 2001. China Resettlement Policy and Practice (in Chinese). Yinchuan: Ningxia People Press.
- Shi G, Hu W. 1995. Comprehensive evaluation and monitoring of displaced persons standard of living and production. Proceedings of international senior seminar on resettlement and rehabilitation. Nanjing: University Press. p. 248-254. NRCR (eds.).
- Shi G, Shang K. 2021. Land asset securitization: an innovative approach to distinguish between benefit-sharing and compensation in hydropower development. Impact Assess Project Appraisal. 1–12. doi:10.1080/14615517.2020.1798722
- Shi G, Zhen R. 2008. Promote on social harmony hydropower development. China Water Resour. 2008(6):22-24.
- State Council of PRC. 2006a. The regulation on land acquisition and resettlement compensation in large and medium-scale hydraulic and hydropower projects. Decree No. 471.
- State Council of PRC. 2006b. Suggestions on the improvement of post-resettlement support to the large and medium-scale reservoirs' resettlers. https://doi.org/10.1080/ 14615517.2019.1684082
- Wang H, Owen JR, Shi G. 2020. Land for equity? A benefit distribution model for mining induced displacement and resettlement. Bus Strat Env. 2020:1-12. doi:10.1002/ bse.2585
- Wang H, Shi G, Zhang R, Xu J & Shangguan Z. 2021. Risk perceptions and mining-induced displacement and resettlement: a case study from Anhui Province, China. Impact Assess Project Appraisal. doi: 10.1080/14615517.2019.1684082
- WCD (World Commission on Dams). 2000. Dams and development: a new framework for decision-making. London: Earthscan.
- Wilmsen B, Webber M, Duan Y. 2011. Involuntary rural resettlement: resources, strategies, and outcomes at the three Gorges Dam, China. The Journal of Environment & Development. 20 (4):355-380. doi:10.1177/1070496511426478.
- World Bank. 1990. Involuntary resettlement. OD 4.30. http:// www.worldbank.org/



- World Bank. 2002. Involuntary resettlement, OP/BP 4.12. http://www.worldbank.org/
- World Bank. 2014. Involuntary resettlement portfolio review. Phase II. Washington: The World Bank.
- World Bank. 2018. Environment and social framework. http:// www.worldbank.org/
- Xi J, Hwang SS. 2011. Relocation stress, coping, and sense of control among resettlers resulting from China's three Gorges Dam Project. Social Indic Res.104(December 2011): 507-522.
- Xia B, Qiang M, Chen W, Fan Q, Jiang H, An N. 2018. A benefit-sharing model for hydropower projects based on stakeholder input-output analysis: a case study of the Xiluodu Project in China. Land Use Policy. 73:341–352. doi:10.1016/j.landusepol.2018.02.002.
- Xu J, Shi G, Li B, Fischer TB, Zhang R, Yan D, Jiang J, Yang Q, & Sun Z. 2021. Skills' sets and shared benefits: Perceptions of resettled people from the Yangtze-Huai River Diversion Project in China. Impact Assess Project Appraisal. doi:10.1080/14615517.2020.1848242.
- Yan D, Shi G, Hu Z, Wang H. 2017. Resettlement for the Danjiangkou dam heightening project in China: planning, implementation and effects. Int J Water Resour Dev. 33 (4):609-627. doi:10.1080/07900627.2016.1216829.
- Yan D, Wang M, Wang H, Shi G. 2018. Policy and implementation of land-based resettlement in China (1949-2014). Int J Water Resour Dev. 34(3):453-471. doi:10.1080/ 07900627.2017.1417824.

- Zaman M. 2019. Resettlement in the Jamuna multipurpose bridge project: innovation and good practices. In: Zaman M, Khatun H, editors. Development induced displacement and resettlement in Bangladesh. New York: Nova Publishers (Second and Expanded Edition).p.3-18.
- Zaman M, Gonnetilleke S. 2016. Incorporating social impact dimensions in project planning: examples from Bangladesh, Nepal, Pakistan and Sri Lanka. In: Assessing the social impact of development projects. Cham: Springer; p. 171-193.
- Zaman M, Khatun H. 2017. Development induced displacement and resettlement in Bangladesh: case studies and practices. New York: Nova Science Publishers; p. 1–224.
- Zaman M, Nair R, Shi G, eds. 2021. Resettlement in Asian countries: legislation, administration and struggles for rights. New York: Routledge/Taylor & Francis.
- Zhang R, Owen JR, Kemp D, Shi G. 2021. An applied framework for assessing the relative deprivation of dam-affected communities. Sustainable Dev. 1-15. doi:10.1002/sd.2237
- Zhang R, Shi G, Wang Y, Zhao S, Ahmad S, Zhang X, Deng Q. 2018. Social impact assessment of investment activities in the China-Pakistan economic corridor. Impact Assess Project Appraisal. 36(4):331–347. doi:10.1080/14615517.2018.1465227.
- Zhu W, Shi G. 1995. A discussion on the benefit-sharing mechanisms and methods for resettlement system. Water Conservancy Econ (In Chinese). 12(1):58-61.