



Design and Assessment of
water-energy-food-environment
Mega-Systems

Dam-Induced Displacement and Resettlement: A Literature Review

Michelle Hay¹, Jamie Skinner² and Andrew Norton³

¹ Independent consultant, shel.hay@gmail.com

² International Institute for Environment and Development, Jamie.skinner@iied.org

³ International Institute for Environment and Development, Andrew.norton@iied.org

FutureDAMS

Working Paper 004

September 2019

ISBN: 978-1-913093-04-4

Cite this paper as: Hay, M., Skinner, J., and Norton, A. (2019) Dam-Induced Displacement and Resettlement: A Literature Review. FutureDAMS Working Paper 004. Manchester: The University of Manchester.

www.futuredams.org

Abstract

Large dams built for hydropower, irrigation, water storage and/or flood control have led to the involuntary displacement of millions of people over the last century. Governments and international donors alike have developed policies and approaches to respect human rights, provide adequate compensation and restore livelihoods.

Social scientists and anthropologists have published many papers over the last 50 years that have measured local outcomes both through snapshot and long-term studies. This review analyses, using a chronological approach, the evolution of the published evidence and the degree to which the scientific literature can demonstrate changing policy, practice and outcomes in this field. It does not review the grey literature of the multilateral, international or national agencies that may have published non-peer-reviewed documents in this field.

The paper presents the main theoretical frameworks proposed by researchers over the years and identifies gaps in the current literature while considering any potential inherent biases. It reflects on issues linked to indigeneity, gender, benefit-sharing, homogeneity of affected communities, participatory approaches, land compensation, and the complex metrics for measuring livelihood change over time. It notes that there is little analysis in the published literature of legal frameworks or institutions and their efficiency in delivering good resettlement outcomes, nor in-depth discussion of the costs and benefits of livelihood restoration.

Keywords

Involuntary resettlement, dams, hydropower, dam resettlement, social impacts, indigenous people, World Bank, benefit-sharing, compensation

Acknowledgements

The authors would like to thank the reviewers, Prof David Hulme, Dr Jed Stevenson and Dr Christopher Schulz, for their constructive comments on the draft document that considerably improved the content of the final paper.

FutureDAMS is funded by the Global Challenges Research Fund (GCRF).

Contents

<i>Contents</i>	3
<i>Executive summary</i>	4
1 Introduction	7
2 1950s to 1990s: anthropological approaches and emergence of World Bank resettlement policies	9
2.1 Cross-cutting theme 1: women and gender.....	15
2.2 Cross-cutting theme 2: indigeneity	19
2.3 Cross-cutting theme 3: land and land rights	22
3 2000 onwards: policy proposals – participation, compensation critiques, benefit-sharing, livelihood enhancement	23
4 New analytic frameworks	30
5 Reflections on the literature.....	36
5.1 Assessment of outcomes	36
<i>Geographic distribution of research</i>	36
<i>Measuring/assessing livelihood changes over livelihood time</i>	36
<i>Power relations and participation</i>	37
<i>Benefit-sharing and/or land as equity</i>	38
<i>Resettlement costs and equitable development</i>	38
<i>Experimentation and innovation can be important</i>	38
<i>Land rights and customary vs modern legal systems: calculation of compensation</i>	39
<i>Institutions and governance</i>	40
5.2 Learning from experience: research influencing practice and evidence of uptake	40

Executive summary

Our literature review indicates that we are still collectively a long way off being able to devise effective approaches to resettlement that can achieve good outcomes. Contemporary recommendations for better resettlement policies are strikingly similar to those made decades ago, raising questions about learning from experience; whether research is influencing practice; and the attitudes and approaches of donors and decision makers.

Developments in the literature over time

In the 1980s, the World Bank was a major funder of large dams and its specialised social development staff (often anthropologists) spent extensive time in the field, wrote up their findings freely, and helped to frame the agenda for resettlement policy for the next 30 years. The 1990s saw the development of a more normative approach to inform policy, bridging the gap between descriptive ethnography and the policy or project-orientation of the World Bank. However, by taking a rigid prescriptive approach, the literature failed to develop our understanding of the importance of contextual factors in affecting the possibilities and outcomes of resettlement policy. The literature abounds with broad guidelines and recommendations on the need to improve resettlement outcomes. However, it provides little in the way of precise guidance based on country-level legal specificities and local context on how to achieve that in practice, or how and when to measure whether it has been achieved or not.

The mid-1990s to 2000s also saw a focus on the vulnerability of different groups, in particular women, 'indigenous groups' or 'tribals' in their struggle against dam developers. By focusing on vulnerable groups, poor outcomes are often understood in terms of the social and physical characteristics of affected people, or as top-down discrimination of certain groups of people based on ethnic or gender identity by politically more powerful groups, taking attention away from the other multiple factors affecting resettlement outcomes. Putting 'women' and 'indigenous people' into discrete categories also fails to consider social differentiation within these groups and the broader society in which they live. There has also been a tendency to romanticise the *status quo ante* for 'vulnerable groups', blaming the negative effects of resettlement on social disarticulation amongst other things. The focus then becomes how to 'protect' vulnerable groups from change, rather than how to reset the gender relations, or social structures and hierarchies that made certain people vulnerable in the first place. While the dam-induced displacement and resettlement (DIDR) literature is fairly advanced in terms of its understanding of gender relations, the literature has not fully interrogated the concept of indigeneity. An example of the impact of this failure is that broad assumptions have been made regarding the strong attachment of 'indigenous peoples' and women to land and farming, helping to support the policy of land-for-land compensation. Less attention has been paid to understanding the legal, social and political frameworks around land tenure, which affect who has rights to the land, the nature of those rights, and the implications for livelihoods.

Despite these shortcomings, the literature as a whole is fundamentally concerned with how to deal with the uneven distribution of costs and benefits of dams, so that those being resettled do not bear the brunt of the costs. A major contribution has been to insist that the social, cultural and non-monetary economic costs of resettlement are counted. There is a

consensus that conventional cost–benefit analyses on which project planning and compensation calculations are based are not adequate. This literature includes important general findings and recommendations, although there remain significant gaps.

Reflections on the literature:

- It is difficult to identify appropriate metrics to measure well-being, and well-being can change over long time periods. It takes time for a new lifestyle to fully embed, people within communities respond differently, and it may be only in the second generation after resettlement that some people are able to take advantage of new opportunities. Resettlement ought to be considered a multi-decadal process, not a ‘three to five-year plan’, and the one-size-fits-all approach favoured by governments may not be appropriate considering the impact of social differentiation on outcomes.
- Participation is seen as a panacea to improve livelihood outcomes, yet it is rarely undertaken on a level playing field. Proper participation or negotiation with displacees remains a desirable objective but there are few case studies showing what difference this makes in practice and it remains something of an act of faith that such ‘democratic’ processes necessarily deliver better outcomes – although it may prevent disruptive conflict between affected communities and dam developers. Recent literature suggests that power relations between dam developers and communities may be shifting due to the influence of global NGOs and local politics.
- The concept of ‘benefit-sharing’ has developed over time. It can be used specifically to refer to financial tools to increase the share in benefits for resettlers. This can include treating displacees’ submerged land as equity, paying rental for the land required by the dam, or allocating electricity revenue to resettlers, amongst other innovations. In these cases the ‘benefit’ is available throughout the lifetime of the project, which resonates with the longstanding recommendation that long-term support for resettlers would be beneficial.
- The costs of delivering ‘good’ resettlement remains a gap in the available literature. The authors of resettlement impact studies tend to make assessment with a ‘socio-cultural’ lens, while economic assessments tend to be undifferentiated as to impacted groups. Bringing the two approaches together would help to better define the benefits and costs to different beneficiaries impacted by a hydropower project.
- Taken as a whole, the literature shows that the impacts of resettlement within a community are not homogeneous. There will be differential impacts and different possible development trajectories for each family, according to their situation. Displacees may not aspire to remain as rural farmers, yet land-for-land compensation policies often assume that they would. Instead of a one-size-fits-all approach, displaced people could be given a choice as to what kind of resettlement package they want, including a broader range of options than is presently on offer. The increasing pressures on ever-scarcer land and fragile rural livelihoods may justify a more innovative approach to compensation.

- The literature agrees that the first step in successful resettlement is to properly compensate for lost assets. However, identifying asset ownership depends on the legal regime for housing and land and is often determined by national legislation and subject to due legal process. While many publications argue that compensation has been inadequate, there is little analysis of the underlying rationale, or assessment of the true cost of land, or for example lost fruit trees, particularly where there is no clear market value for such assets. In many countries, customary land rights predominate, including individual, family and/or community-level use rights. The often blunt nature of modern law makes it hard to achieve the granularity necessary to properly compensate customary rights when these are being lost through resettlement. In addition, the exact nature of individual rights under customary tenure systems is not always clearly defined in legislation and/or is contested. The literature does not sufficiently disaggregate such complexities in understanding and articulating the factors affecting resettlement.
- The institutional architecture and roles of different agencies responsible for dam development and resettlement has received little attention in the literature, yet there are legitimate questions around, for example, who is ultimately responsible for ensuring a good development outcome for resettled people, and does this change through time? This question is increasingly relevant in the light of discussions around benefit-sharing, which might provide support for communities through the lifetime of the project and require institutions to support communities over many decades.

Learning from unsatisfactory resettlement outcomes is a challenge for governments and donors alike. The intellectual space available for exchange between practitioners and researchers on how to do resettlement better has shrunk in recent years as institutions such as the World Bank become more defensive in their approach to dams. Where space for exchange has opened is between anthropologists and others to inform a range of NGOs and civil society groups, building their influence on how local communities and others respond to dam projects. In the past few years especially, new analytic frameworks with a general focus on social impacts have been developed which address some of the conceptual flaws and gaps that weakened earlier frameworks, models and approaches. However, it remains unclear to what extent practitioners and consultants can or will make use of these new frameworks and understandings.

Introduction

The aim of this paper is to provide an overview of the literature on dams and resettlement, to help distil key lessons for social and political analysis of dam projects and to inform the Global Challenges Research Fund funded FutureDAMS project.¹

Large dams have had significant impacts on local communities, both those directly flooded by the reservoir, and those affected downstream due to changing river flows. While the physical attributes of large dams around the world (location, size, functions etc) are well documented by the International Commission on Large Dams, the same cannot be said for the number of people displaced worldwide. In 2000, the World Commission on Dams estimated that the number of people displaced directly by large dams between 1950 and 2000 could range from 40–80 million people (World Commissions on Dams, 2000). The magnitude of forced displacement has accelerated since then. Current estimates are that for the decade 2011–2020, the number of people displaced through infrastructure projects (including hydropower) exceeds 20 million a year, or 200 million over the decade (Cernea and Maldonado, 2018, pp 4–5). While this figure includes forced displacement due to projects other than dams, investment in dam-building has increased in recent years, and the numbers of expected displacees with it.

Large dams² affect communities in different ways. The most significant impacts come from the flooding of the reservoir area, often covering many square kilometres. This permanent and irreversible impact affects the communities that live, farm, or otherwise depend on the land and resources in that area. Communities downstream that depend on river flow may also be affected by dams even if this does not involve displacement. In this paper, we refer interchangeably to resettlers and displacees while recognising that these communities form part of a broader grouping called ‘project-affected people’ which includes all those impacted by a project, but not necessarily all of these are involuntarily displaced.

Other infrastructure projects that affect land (eg, mines, roads or urban development) as well as broader events that cause people to move (conflicts or extreme weather events such as droughts, floods or hurricanes etc) are other reasons for involuntary population displacement. The review is restricted to the way the literature addresses displacement by large dam projects, while recognising that there may also be lessons to be learned from other sectors that are not directly addressed here.

The association of dams with extensive involuntary resettlement has led to a significant literature on the subject and as the World Commission on Dams pointed out:

The overall magnitude, extent and complexity of these adverse social impacts for the displaced and for those dependent on the riverine ecosystem – both upstream and downstream from a dam – are of such significance as to merit detailed consideration in any assessment of the rationale for dam construction. Further, it is apparent that these impacts are – even today – often not acknowledged or considered in the planning

¹ See <http://www.futuredams.org>

² A dam with a height of 15 metres or greater from lowest foundation to crest or a dam between 5 metres and 15 metres impounding more than 3 million cubic metres (International Commission on Large Dams).

process and may remain unrecognised during project operations. Where measures are put in place to mitigate impacts on affected people they typically fail to address adequately the problems caused by the decision to build a large dam (World Commission on Dams, 2000, p 98).

The development and financing landscape in which large dams are being designed and built is also changing. For much of the second half of the 20th century, the multilateral banks were the main source of dam financing for heavily indebted countries with weak private sector investment frameworks. The rationale underpinning such investment was a broad post-war infrastructure and poverty alleviation framework that drove international aid financing for many decades. In the 21st century, China emerged as a significant additional source of financing for large infrastructure in less-developed countries (Hensengerth, 2011; Siciliano et al, 2016), without the same level of social and environmental safeguards as the existing multilateral and bilateral donors (Skinner and Haas, 2014). In many instances, western bilateral donors have withdrawn from large dam projects over the same period. Where they do engage, they remain only minor financiers due to the reputational risks linked to the potential negative social and environmental impacts of large dam projects. Some limited bilateral financing from countries like Brazil, India and Turkey has not fully filled this gap.

With the climate change agenda assuming increasing significance over the last ten years, strategies to limit GHG emissions and meet the Paris 1.5 degree target require use of clean technologies and this, accompanied by Chinese interest, has seen a resurgence of hydropower development. Hydropower, which often emits less than one-tenth the emissions of coal or gas alternatives per kilowatt-hour generated, is increasingly seen as a low emissions technology with rapid ramping capacity that can meet energy needs within a grid supplied by intermittent renewables. An estimated 3,700 dams are planned or under construction worldwide with many designed for hydropower (Zarfl et al, 2015). The political motivation for large dam development has therefore increasingly become linked to energy and climate policy, rather than a strictly poverty alleviation or national development agenda. The resurgence in the construction of large dams that has been observed over the last ten years or so has also accelerated impacts on displaced communities that have been increasingly documented in the scientific literature. Significant displacement due to hydropower construction is likely to continue to occur in the future.

The review began with a number of key questions: how did the literature on resettlement evolve historically?, what can the scientific literature tell us about how to 'do dams better' and is there evidence of this working? Where are the significant gaps? What frameworks exist and which ones might be most helpful for the FutureDAMS project and for practitioners working on dam projects involving resettlement worldwide?

The methodology for this paper was to search for literature on JSTOR and Google Scholar, using various combinations of keywords and phrases (see annexure). We also used bibliographies on the topic compiled by others: a systematic review of the literature on the social impact of dams, written by Kirchherr et al, and a bibliography on development-induced displacement and resettlement by Terminski (Kirchherr et al, 2016; Terminski, 2013). The resulting list of literature was then narrowed to articles and books dealing with the social

impacts of dam-induced resettlement and policies to mitigate those, or which seemed to be making important contributions in related literature that it was worth bringing into the list.

This is a vast body of literature covering an interdisciplinary field. In the course of compiling the review, around 274 articles, books, book chapters, reports, papers and theses were assessed. A spreadsheet was used to note common themes emerging in the literature. Some themes, such as gender and indigeneity, warranted deeper discussion and the authors drew on a wider literature to do this. These additional publications are included in the bibliography at the end of this review, but did not form part of the body of dam-induced displacement and resettlement (DIDR) literature analysed in terms of geographic distribution of studies etc.

A review of this type raises several issues: firstly, reviews are inherently subjective. The authors chose to explore certain themes based on their own perspectives and research interests. In particular, we consider that local 'cultures' should not be imagined as static, something to protect from the modern world and preserve. Secondly, the review is also cautious of adopting highly prescriptive approaches because they tend towards 'one-size-fits-all' policies based on broad assumptions about how certain groups of people ought to behave. They lack attention to local specificities, historical trends and trajectories which may inform the future actions of policy 'beneficiaries', and downplay the agency of individuals who may not behave in the ways that model-builders expect them to.

Lastly, there is the issue of representativity. Do the cases outlined in the literature, and accepted for scientific publication, genuinely reflect the reality on the ground? Well-researched field studies necessarily remain anecdotal and context specific and may have been selected for their ability to showcase certain kinds of impact. Ethnographic researchers may also feel the need to 'tell affected people's stories' to the wider world and therefore the literature may be skewed towards examples of human stories of negative outcomes.

Thus, while the review seeks to articulate and highlight what has been learned about 'doing dams better', it also includes a more critical analysis of some developments in the literature than others. The review has been structured roughly chronologically, in order to follow key developments in the literature. However, particular attention is focused on two main phases: pre-1990 and post-1990, which coincides with the development of a more normative approach to inform policy, and an overwhelming focus on the vulnerability of 'indigenous' groups and 'tribals' in their struggle against dam developers. Here, and in a few other places, diversions are made to address important cross-cutting themes or topics, such as evolving attitudes to indigenous peoples, to women and gender, and to land and land rights as they emerge in the chronology of the literature.

In the second section of this report we draw out our reflections on the literature, looking at key lessons and notable gaps.

1950s to 1990s: anthropological approaches and emergence of World Bank resettlement policies

The literature on dam-induced displacement and resettlement originates from anthropological and sociological studies of communities displaced by dams in the US, Canada, Ghana and Zambia from the 1950s and 1960s. These studies focused on the

economic and, particularly, the social and cultural impacts of resettlement on local populations (Si, 1993). These impacts tended to be negative, but at the time there were no policy frameworks to deal with the effects of dam-induced displacement on communities, and the World Bank tended to leave resettlement up to the host country (Partridge, 1989, p 377). Before the 1980s, the aim of resettlement efforts was simply to ensure people were 'no worse off' than before. In 1973, Takes wrote an article criticising this approach, arguing:

People who, for the benefit of the many, are compelled to leave a reservoir area are not merely losing their land and other immovable properties; they are being deprived of their means of living as well. Therefore it is the responsibility of the project authorities to ensure that the displaced people are not only provided with suitable compensation for their losses but also assisted in every possible way to obtain a new livelihood elsewhere... Summarizing, one might say that from a moral point of view the rehabilitation measures should comprise three components: (1) compensation for the loss of property, (2) provision of adequate new means of living, and (3) participation in the benefits brought about by the dam project (Takes, 1973, pp 720–721).

Takes' article makes proposals for livelihood restoration for farmers, but he also points out that the needs of 'landless laborers, sharecroppers, artisans, and people with other occupations also have to be taken into account. Further there is always a possibility that some of the people may prefer to switch to other professions'. He suggests that the 'authorities in charge of the rehabilitation should, as far as possible, take individual wishes into account and facilitate these changes when and where it is possible' (Takes, 1973, pp 721–722). In some senses, this early article by Takes contains many of the elements of 'doing dams better' that we have today: adequate compensation, livelihoods (with a focus on adaptation and taking into account individual wishes), and benefit-sharing, although at the time these were new concepts and there was little detail on how these things could be achieved.

Anthropologists and sociologists continued to document the negative effects of displacement and resettlement. They became increasingly important in conducting Social Impact Assessments (SIAs) intended to help in the planning process. These SIAs, which tend to focus on a single project within a relatively limited timeframe, are an important stream in the literature (Égré and Senécal, 2003; UNEP (2007) , pp 47–66).

Faced with the evidence of failed projects, the World Bank began to take responsibility for aspects of resettlement planning, developing policy guidelines in 1980. Their position was that 'all resettlement programmes must be development programmes which re-establish social and economic productivity' (Partridge, 1989, p 77). Resettled people's livelihoods would be restored, and, if possible, improved. World Bank policy at this time included the collection of baseline data, a greater degree of participation of people being resettled to discuss the policy framework, their entitlements, the benefits they would achieve, and grievance procedures. In all, a great deal more pre-project planning was intended to be undertaken.

A further development in the literature took place in 1982 when Colson and Scudder developed an influential model to explain the way that populations respond to the resettlement process over a period of time (Colson and Scudder, 1982). This framework was

developed further by Scudder (2005) and called the 'Four-Stage Framework'. It assumes that the process of resettlement is highly stressful, but that people adapt to their new situation over time. Four stages are identified in the process of resettlement, which include planning and recruitment, adjustment and coping, community formation and economic development, and handing over and incorporation. Many communities do not reach the final stages where positive outcomes are experienced. As Partridge put it, an 'implication of the model is that some resettlement operations have worked better than others, and that we can improve performance by understanding the social processes entailed in resettlement' (Partridge, 1989, p 377).

But Partridge identified a problem. The World Bank's response corresponded with Colson and Scudder's model, rather than the specific local context of the countries in which they were operating. And Partridge felt that the processual model was too general, because 'the form, content and meaning of responses within that structure seems to me to vary from society to society, culture to culture'. He raised the point that external factors may affect people's response to resettlement.

For example, risk-aversion is a logical response to the stress of transition. Yet it might be that in the past this is a direct product of poor resettlement planning, the contempt with which officials view affected people, and persistent racism on the part of dominant ethnic groups... [Could an argument] be made that transition is characterized by conscious experimentation, searching, innovation and learning about the new environment when resettlement is well planned, when participation is fostered, and where displaced people are not considered inferior? (Partridge, 1989, p 382).

Partridge also criticised the Colson and Scudder model for imagining that the 'pre-dam' societies were 'open systems' in which people cope with stresses, that during the resettlement phase they look inward and become closed systems (conservative and risk-averse) and then, if resettlement is successful, they become open systems again and engage with the world. This does not reflect the reality:

...few populations threatened with resettlement are part of open societies. In much of Asia and Latin America feudal conditions persist; elsewhere pronounced social strata reflect differential political power, wealth, education and so forth. Indeed, most communities in the developing world are characterized by dramatically stable unequal wealth distribution, wildly lopsided political power structures, and grossly inequivalent access to health care and educational resources. Such communities, far from being open-ended coping systems, are directly controlled by elites at local, provincial, and state levels. Forced resettlement tends to remove the elite of socioeconomically stratified human communities. Families with greater wealth and education usually prefer to resettle themselves, rather than endure government administration of their lives. In Asia and Latin America, as much as fifty per cent of the population threatened with involuntary resettlement elect to strike out on their own, rather than depend upon government sponsored resettlement schemes. Those who remain are a residual, disproportionately poor, segment of the community — deprived not only of their meagre resources, but also of traditional sources of credit, employment and political protection. It also means that genuine opportunities for upward mobility come into existence which never existed previously, as if the lid were taken off a boiling pot (Partridge, 1989, p 383).

In other words, there is a diversity of responses to resettlement: some positive, some negative, some mixed, because the starting point for resettlement was complex, not least because sites where dams are planned often suffer from years, or decades, of 'planning blight' – a lack of investment in areas that are known to be at risk of future displacement. Some people were vulnerable and poor within the 'pre-dam' societies, and some were wealthy. This affected their response to resettlement, but for everyone, there was both loss and opportunity.

Understanding social difference and the many contextual factors that affect resettlement outcomes for individuals was a major contribution of anthropologists to DIDR research, but some social scientists began to move in a different direction. A 1993 volume, *Anthropological Approaches to Resettlement*, shows anthropologists and other social scientists at a crossroads (Cernea and Guggenheim, 1993). The volume was the outcome of a 1988 conference in which the World Bank sought to discuss a draft technical paper on its involuntary resettlement policy. This was 'the first time that an international agency encouraged a dialogue with the professional social science community over a major development policy' (Cernea and Guggenheim, 1993, p 5). The volume contained varied contributions, most of them dealing with issues of social complexity in the resettlement experience. The policy section contained pieces such as Serra's which looked at the linkages between 'different levels of policy-making and different actors', with a focus, often missing in research, on the efforts made by the power sector to improve their approach to resettlement, and the challenges they faced (Serra, 1993). The theory section included a piece by de Wet suggesting that the particular spatial changes resettlers experienced needed to be taken into account in Colson and Scudder's model, because this helped to explain the diverse responses to the stress of resettlement (de Wet, 1993). The section on practice includes pieces such as Guggenheim's discussion on participation, which looks amongst other things at the 'problem that social stratification poses to participatory approaches' (Guggenheim, 1993, p 217). He made the point that:

Resettlement researchers have much to contribute by focusing on the middle ground between theories and policies about resettlement on the one hand, and ground level effects on the other. All too often, the gap between the good intentions written into laws and guidelines is not bridged by the organizations and methodologies needed to carry them out. Resettlement practitioners have by and large been, for good reason, so concerned with getting basic principles adopted that there is little experience in dealing with the nuts and bolts problems that are thrown up once agencies agree that they need new ideas (Guggenheim, 1993, pp 226–227).

One could say that these papers related to understanding the policy implementation gap: understanding the context in which important actors attempt to implement policy, assessing the methodologies used in policy implementation, and understanding the importance of local context in how resettlers respond to outcomes. In the same volume, Cernea took a completely different approach, and arguably his was the most influential in shaping the future of DIDR research and its impact on policy. Cernea was frustrated with the disappointing results of social scientists' engagement with development organisations. Rather than trying to understand the policy implementation gap, he suggested, in a critique of the SIA and Environmental Impact Assessment (EIA) approach, that what was needed were new

policies. Social scientists, with their understanding of resettlement, needed to develop these, rather than focus on the specifics of individual cases.

Cernea and a team of researchers fully bridged the gap between detailed, descriptive ethnography and the policy or project-orientation of the World Bank (Cernea and World Bank, 1985). After writing a review of bank-funded dam projects (in which he found generally poor outcomes for the displaced and resettled), in 1997 Cernea developed a framework that could be the 'moral compass' or roadmap for policymakers and planners that he felt was missing (Cernea, 1997). He suggested that Colson and Scudder's model had limited use for planners because it applied only to successful resettlement, whereas historically, 'the majority of involuntary resettlement programmes have been unsuccessful' (Cernea, 2000, p 3661). The processual model did not help in understanding what went wrong, or predict what could go wrong, in resettlement. Recognising the dire outcomes of displacement and resettlement for communities, Cernea made this a focus of a framework for those planning dams, implementing projects, and monitoring the outcomes. The resultant Impoverishment Risk and Reconstruction Framework (IRRF) focused on the potentially impoverishing effects of resettlement on communities. Cernea's framework encouraged a like-for-like approach to mitigating the negative impact of dams. If land was lost, land should be returned, if livelihoods lost, livelihoods restored. Importantly, Cernea linked the provision of land with the restoration of livelihoods, a connection which has influenced, to the present day, the 'land-for-land' emphasis of policy guidelines (Cernea, 1997).

The controversy around large dams which had prompted anthropologists to turn to policy-oriented research prompted others to question the need for dams, or the performance of contemporary resettlement policies, from a human rights perspective. The Sardar Sarovar project in India, which the World Bank had been involved in, was a focal point for these scholars who wrote highly critical papers detailing the devastating effects of the dam and the inhumane way in which the displaced population was treated (Cullet, 2001; Dietrich, 2002; Garikipati, 2002; Kala, 2001; Modi, 2004; Sangvai, 2001; Whitehead, 2000, 2002, 2003). Many of these contributions were published in the *Economic and Political Weekly*, an India-based social-science journal which often, but not only, publishes left-leaning, radical pieces and critical articles on dams and resettlement, besides many other topics.

This was the context in which Dwivedi identified a divide in the literature between the radical-movementist approach which views displacement as a sign of failed development (Parasuraman, 1999) and the reformist-managerial approach, which views displacement as an unfortunate but inevitable outcome of some development projects (Cernea, 1999; Cernea and McDowell, 2000; Picciotto et al, 2001). The critique of 'reformist-managerial' or pragmatic approaches is that they fail to view forced displacement as a human rights violation; they hold a modernist assumption that current development paradigms involving displacement are a given, or are preferable to other paths to development; and they fail to examine and question the power relations and imbalances at different levels that have an impact on procedural, distributional and restorative justice for resettlers. In this vein, the Colson and Scudder model was criticised for assuming a linear path towards a particular type of 'progress'. Cernea's Impoverishment, Risk and Reconstruction model is considered too prescriptive. In general, the 'reformist-managerial' approach is criticised for being too optimistic about the role of policy, seeing failures as a sign of poor policy, and imagining that

better policies, planning and project design will resolve all issues (see de Wet, 2001; Dwivedi, 2002; Pearse-Smith, 2014; Perera, 2011).

The World Commission on Dams, which was established in the context of disputed projects, protest movements, and increasingly vocal critiques of dams, is considered by Dwivedi to be an attempt to bridge the two positions, but in doing so itself became controversial (Dubash et al, 2002; Dwivedi, 2002, p 729). The WCD was critical of past dam planning processes, and while some welcomed the findings as an important contribution to a debate (Iyer, 2001; Parasuraman and Sengupta, 2001; Sengupta, 2001), others saw it as being biased, 'anti-dam' or otherwise lacking legitimacy due to a lack of transparency and limited participation (eg, Navalawala, 2001).

However, while some might identify a 'pro-dam' and 'anti-dam' division in the literature (Tortajada et al, 2012), there is considerable overlap between the two positions. While there is a genuine anti-dam stream advocating alternatives to hydropower (eg, Editorial, 2012; Pearse-Smith, 2014; Reddy, 2008) and a pro-dam stream concerned with finding ways to do dams better, there are many more who argue for better policies from a human rights perspective, and while some urge governments to seriously consider the alternatives to large dams, they do not rule out hydropower (see for example Agnihotri, 2008, 2016; World Commission on Dams, 2000).

While Dwivedi (2002) warns us against imagining that the two streams have fundamentally the same concerns (because they have fundamentally different approaches to development), one could argue differently. Both streams are fundamentally concerned with how to deal with the uneven distribution of costs and benefits of dams, so that those being resettled do not bear the brunt of costs. A major contribution of the literature as a whole has been to insist that the social, cultural and non-monetary economic costs of dam displacement are not externalised, that they are counted. The conventional cost-benefit analyses which weigh up overall benefits with overall costs have been roundly critiqued – not only do they often fail to include all costs, thereby externalising many costs to displacees and resettlers, but as used in development project planning they do not fully account for distributional justice – that some people will bear most of the costs, while others will gain most of the benefits (Cernea, 1997; Takes, 1973). This issue is at the heart of several frameworks that have been developed in more recent years, and which we will return to later (Brown et al, 2009; Siciliano et al, 2018).

One direction that the literature has taken in exploring the issue of distributional justice is to consider who is worst-affected by dams (Modi, 2004; Van der Ploeg and Vanclay, 2017). In attempting to explore and define the negative social effects of resettlement, both streams identify groups most 'vulnerable' to resettlement. The earlier anthropological literature for example described the negative effects of resettlement on women (Colson, 1971); and in the 1990s gender in development studies was being explored more broadly (Indra, 1998; Jackson and Pearson, 1998; Kabeer, 1994). Drawing on this literature, Mehta and Srinivasan submitted a paper to the World Commission on Dams to provide a gender perspective on large dams (Mehta and Srinivasan, 2000). One of the findings, since corroborated by many scholars, is that women's experiences of resettlement tend to be more negative than men's (Asthana, 2012; Bisht, 2009; Mehta, 2009; Tan, 2008; Thukral, 1996).

According to the WCD, the vulnerable include 'rural dwellers, subsistence farmers, indigenous peoples, ethnic minorities and women' (World Commission on Dams, 2000, p 124). Children, the elderly, the disabled and the landless are also identified as being vulnerable (Downing and Garcia-Downing, 2009, p 229). The definition of vulnerable groups is so well-entrenched in both streams it could be seen as conventional wisdom, or part of the normative framework that Cernea wished for, and has been included in handbooks and policy guidelines (IFC, 2002, p xi; Mathur, 2006; Van der Ploeg and Vanclay, 2017; World Bank, 2001, 2018; World Commission on Dams, 2000). Proposals to protect vulnerable groups include greater participation, free, prior and informed consent (FPIC) (World Commission on Dams, 2000), greater representation of women in community structures involved in the planning process (World Bank, 2018, p 4), and preference given to land-based resettlement for indigenous groups (World Bank, 2001). Concern about indigenous peoples exists more broadly and underpins the United Nations Declaration on the Rights of Indigenous Peoples, adopted in 2007 after decades of debate, which aims to protect the land rights of indigenous groups, and encourages the promotion and protection of indigenous cultures. However, there are potential problems with these categories and labels, which are important to highlight. The literature on DIDR has addressed some of these issues, but not all.

Cross-cutting theme 1: women and gender

There is a consensus that there is a gendered dimension to the negative effects of resettlement, and this has been explored in depth in the literature. Scholars have found that women are often excluded from participating in the planning process; their rights to fields, family property and common property resources may not be recognised or factored into compensation (Asthana, 2012; Perera, 2011; Thukral, 1996). In other cases independent, unmarried women may only get access to land and other resources in the resettlement process through a man, or after a certain age (Bisht, 2009, p 313). Losing access to common property resources diminishes women's ability to make a non-monetary economic contribution to the household (Asthana, 2012, p 99; Kusakabe et al, 2015; Lin, 2006; Srinivasan, 2001, p 4113; Thukral, 1996, p 1501). Alternatively, common resources may be further away in the resettlement area, with more time spent on the task of gathering wood, etc (Kusakabe et al, 2015). Women struggle to access the same work opportunities as men, because women are not always as mobile as men, or available training programmes are not targeted appropriately to address women's needs (Jehom, 2013; Tan, 2008; Tan et al, 2005). Tan (2008) found that, after resettlement, women migrants in China struggled to find employment in the non-agricultural sector or to engage in new agricultural practices.

Furthermore, resettlement leads to social problems for the whole resettled population, and men's loss of self-esteem and frustration can 'manifest itself in increased violence against the women and children' (Thukral, 1996, p 1502). A number of studies have found that once in the resettlement area, women are exposed to physical violence, bad marriages and a deterioration of status (Asthana, 2012; Mehta and Srinivasan, 2000). Without access to common resources, with no new jobs, and afraid of leaving the house alone due to crime and violence, women in resettlement areas of Tehri Dam (India) were less able to contribute to the household and spent their time alone in small houses rather than working outdoors

and meeting other women. This contributes to anxiety and poor mental health (Asthana, 2012; Bisht, 2009). With their loss of social networks, women became dependent on male members of the household to accompany them outside the house. Being 'protected' leads to lack of mobility (Asthana, 2012). Thus, in general, women experienced adverse economic and social impacts resulting in disempowerment and marginalisation.

Bisht argues that it is important to recognise the hardships women face in displacement and resettlement so that material improvements are not seen as a 'boon', camouflaging 'the realities of marginalisation and disempowerment' (Bisht, 2009, p 314). However, there is a danger of seeing these problems rooted in women's 'vulnerability', without examining gender relations. According to Manchanda, official policies and interventions can 'infantilise' and neutralise women by treating them as passive victims (Manchanda, 2004). Sally Baden and Anne Marie Goetz note that:

Bureaucratic requirements for information tend to strip away the political content of information on women's interests and reduce it to a set of needs or gaps amenable to administrative decisions about the allocation of resources. This distillation of information about women's experiences is unable to accommodate or validate issues of gender and power. Women are separated out as the central problem and isolated from the context of social and gender relations (Baden and Goetz, 1997, p 7).

As Mehta has noted, the inclusion of gender in some of the more general literature has an 'add-on' quality, rather than serious analysis (Mehta, 2009, p xxix).

Focusing on the negative elements of displacement for women, without a thorough examination of gender relations in the community, allows for an implicit sense that conditions for women were better in the pre-dam society. For example, in their discussion of the effects of displacement on the socio-cultural and psychological realm, Downing and Garcia-Downing suggest that prior to displacement 'the needs of the vulnerable – women, children, the elderly, the landless, the disabled – are met by social institutions and intra-personal reciprocities that sustain them with critical life-sustaining resources' (Downing and Garcia-Downing, 2009, p 229). After displacement, they write, 'the vulnerable are likely to lose access to an often overburdened social safety net' (Downing and Garcia-Downing, 2009, p 231). But this raises the question of what made them vulnerable in the first place, if they do not have disabilities or age-related vulnerability that prevent them from being fully capable of looking after themselves. This notion of vulnerability places the blame for poor adaptation on physical characteristics or identities, which are loaded with assumptions, and not on the unbalanced power relations which make people vulnerable.

Nevertheless, despite these few examples, there is a rich stream of literature examining the relationship between gender relations and how women experience resettlement. Colson pointed out that the changes women experience as a result of resettlement are due to 'a re-ordering of gender relations across a wide spectrum' but that this re-ordering 'emerges from previous assumptions about gender and the gendered experiences of those involved' (Colson, 1999, p 26). While it is critically important to examine gender relations within the pre-dam society, Mehta and Srinivasan point out that the dam itself, and the way it is built, also has a part to play in aggravating existing inequalities and tends to 'increase rather than close gender gaps'. This is because 'technology is not gender-neutral or apolitical.

Technological interventions such as large dams interact with the existing socio-cultural system to produce new forms of social organisation which entail both opportunities and constraints for women and men' (Mehta and Srinivasan, 2000, pp 2–3). Srinivasan also makes the point that 'large dams can result in the creation of new institutions. These institutions can either replicate or exacerbate existing gender inequalities or seek to move beyond them in the creation of greater spaces whereby women and men can participate in equal measure' (Srinivasan, 2001, p 4113).

To give just a few examples of these processes at work, in her paper on the Tehri Dam project, Asthana discusses how processes of calculating costs and benefits of large dams tend to emerge from a male bias in which men's contribution to a monetary economy is valued, but women's non-monetary contribution and unpaid labour is not. Women suffer 'due to their role in the domestic sphere and a de-monetised economy' (Asthana, 2012, p 98). The loss of a non-monetary livelihood was compounded by a different culture in the host community that the resettlers moved to (Asthana, 2012; Bisht, 2009). In the *parda*, or *purdah* system, women are secluded from men, confined to the home and it is not socially acceptable for them to work outdoors (Bisht, 2009, p 312). This links to Srinivasan's point about the creation of new institutions. In the case of the women from Tehri Dam, making the choice to acculturate to new social norms and institutions could undermine their independence.

The 'vulnerability' perspective also raises the danger of ignoring women's agency. Mehta argues that:

[It is important to analyse...] how women can overcome both discriminatory practices and victimization to be recognized as agents of social change. In the process they undergo self-transformation and also challenge and resist social and gender injustice. Thus, displacement and resettlement need to be seen as processes that re-order social and gender relations. In some contexts, positive transformation can take place. But this is largely due to the agency of women and men and not through planned resettlement processes (Mehta, 2009, p xxix).

There is also a tendency in both the 'general' literature as well as in some of the more detailed literature on gender to view dams as inherently negative for women. For example in his overview piece, Mathur (2011) devotes a few paragraphs to cataloguing what women lose in the resettlement process, and what opportunities they are denied, focusing only on the negative: to sum up, he writes 'In the new environment, women get virtually nothing in return for what they leave behind' (Mathur, 2011, pp 45–46). The World Commission for Dams, to which Mehta and Srinivasan contributed their report on gender, was criticised for taking an overly negative, one-sided view of dams and their social impact (see Dingwerth, 2005; Dubash, 2009; Navalawala, 2001 for these debates). In her 2009 edited volume, Mehta combines a gender analysis with a broad criticism of large dams, and argues that 'development' that caused displacement needed to be rethought (Mehta, 2009). These perspectives do not reflect other studies of gender or women's experiences in dam-induced displacement and resettlement which we discuss below. There does not seem to be a one-size-fits-all rule or trend with regard to resettlement and displacement across case studies.

For example, in the foreword to Mehta's 2009 edited volume it is stated that women never choose cash compensation over the option of land. However, looking at resettlement in

China, Heming et al (2001) found that rural migrants expressed a preference for resettlement in urban areas, and that:

Fewer women are willing to stay in rural areas compared with migrant males. A survey of migrant women in four counties by the Women's Federation of Wanxian indicates that migrant women hold high expectations for the improvement of economic conditions, and their living surroundings (Heming et al, 2001, p 207).

While it is also the case that their hopes are sometimes dashed, this should not be taken as a sign that women were happy with the situation before, or long to return to the land. A 1995 article by Weist (citing a 1983 study by Fahim) found that although women suffered from certain ill effects of resettlement which related to the disruption of the household and domestic space:

The move eventually proved positive for women. They actively participated in political elections and had greater access to education and health services. Although their freedom of movement became more restricted because their husbands feared for their safety in the new ethnically mixed communities, women made alterations in the houses, kept livestock and cultivated gardens in their courtyards (Fahim, 1983, pp 102–103, as cited in Weist, 1995, p 168).

In Lao PDR, Kusakabe found that 'women are not always at a disadvantage'. As the case in Nam Daeng showed, social norms that encourage women's mobility and entrepreneurship make it possible for women to have greater control over their mobility and improve their motility for their own benefit' (Kusakabe et al, 2015, p 1102). In Indonesia and the Philippines, women were found to be far more successful at building social networks than men, which are critical in building social capital (Quetulio-Navarra et al, 2017). Indeed, before much research had been done on gender and resettlement, some hypothesised that women would in fact cope with resettlement better than men (Partridge, 1989, p 383).

A longer-term view of resettlement may also reveal different outcomes. For example, women recently resettled due to the Tehri Dam project in India were beginning to explore ways of establishing social networks, accessing local resources and otherwise adapting in a more positive way to their new environment, but the study was concluded before these adaptations took place (Bisht, 2009, p 313). Srinivasan (2001) notes that 'women from displaced communities have acquired greater mobility through economic activity and access to markets as in the case of the Kariba Dam in Zimbabwe... The second generation of displaced Gwembe Tonga women in the case of the Kariba Dam were in a position to take advantage of proximity to the market whereas the first generation were unable to do so'. Srinivasan suggests however that this has more to do with women's agency rather than resettlement policy, as 'the dam policy did deprive women of land to begin with' (Srinivasan, 2001, p 4112).

This is clearly an area where understanding intersectionality and local context becomes very important. There are not many studies looking at intersectionality, or at least attempting to seriously differentiate between women and assess their different experiences. Srinivasan (2001) emphasises heterogeneity amongst women, and the importance of interactions between gender, class, caste and other factors/identities, as well as agency. According to Thukral:

It is difficult... to make any definite statement as to whether the changes brought about in women's lives due to displacement have been for the better or for the worse. A lot of it has been dependent on individual experiences, their social and economic backgrounds and their own perceptions. While some women have experienced loss of status, some others, especially in cases of urbanisation and industrialisation, have experienced greater freedom having moved away from their traditional village community (Thukral, 1996, p 1502).

Adewale and Ikeola differentiated between women in their attempt to understand coping strategies of women resettlers. They found that older women and women who had reached higher levels of formal education employed more coping strategies than younger or less educated women (Adewale and Ikeola, 2005). The marital status of women resettlers had little impact on coping strategies. Jehom (2013) also found that education improved outcomes.

Cross-cutting theme 2: indigeneity

The issue of indigeneity and how it is used is not interrogated in the same way as gender in the DIDR literature. Scholars writing about resettlement, particularly in the early 2000s, used poetry, passionate quotations and prose to evoke people's connection with the doomed river (Colchester, 2000, p iv; Kala, 2001). 'Tribals' and indigenous people were described as having a spiritual and emotional connection to the land, to nature and place, that renders them more vulnerable to resettlement (Windsor and McVey, 2005). Even in fairly dry post-hoc evaluations, resettlers might be described as 'son of the land... connected and linked to the land' (Ahsan and Ahmad, 2016). Whitehead compares 21st-century displaced people with rural communities of 18th-century England, and implies that indigenous communities are pre-capitalist, isolated from the modern world (Whitehead, 2003, pp 4225–4226). Vanclay sums up the conventional wisdom that 'the strong attachment of indigenous and tribal peoples to land and territory makes land especially important to them, and therefore they are particularly at risk of poor outcomes when they are involuntarily resettled' (Vanclay, 2017, p 7).

Cernea's framework, with its assumption of tightly knit communities and the inevitably impoverishing effect of 'social disarticulation', arguably romanticises displacees and their life before 'development':

Forced displacement tears apart the existing social fabric: it disperses and fragments communities, dismantles patterns of social organization and interpersonal ties; kinship groups become scattered as well. Life-sustaining informal networks of reciprocal help, local voluntary associations, and self-organized mutual service arrangements are dismantled. The destabilization of community life is apt to generate a typical state of anomie, crisis-laden insecurity, and loss of sense of cultural identity, tending to transform displacement zones into what have been termed as "anomic regions" or "anomie-ridden areas" (Atteslander, 1995a, b). The unraveling of spatially-based patterns of self-organization, interaction and reciprocity is a net loss of valuable "social capital," that compounds the loss of natural and man-made capital. The social capital lost through social disarticulation remains unperceived and uncompensated by planners, and this real loss will reverberate long and detrimentally during subsequent periods. "The people may

physically persist, but the community that was – is no more” (Downing, 1996a), because its spatial, temporal, and cultural determinants are gone (Cernea, 1997, p 1575).

While the negative effects of social disarticulation occur for any community being resettled (regardless of whether it is ‘indigenous’ or not), the way the concept is described lends itself to being interpreted in a way that romanticises tribal identity. For example, a post-hoc evaluation using Cernea’s IRR framework described ‘social disarticulation’ as ‘losing their heritage and culture’ (Ahsan and Ahmad, 2016). The paper briefly described efforts to maintain young people’s ‘social bondage to their tribe’ and ended sadly, saying that the community was working to ‘uphold their culture and heritage’ (Ahsan and Ahmad, 2016, pp 50–51). Yet overall, the evaluation described a ‘success story’ about villagers getting university education, jobs, and an improved standard of living with better health, education, water supply, sanitation facilities, community halls and other infrastructure. Social disarticulation did not seem to be having a directly ‘impoverishing’ effect; rather, the breakdown of a tribal identity and insular culture was interpreted as negative in and of itself.

The use of the labels ‘indigenous’ and ‘tribal’ in the literature and in policy guidelines is surprising given the longstanding unease that many academics have with them and their reification (Chandler and Reid, 2018; Kuper, 2003; Mamdani, 2013; Ranger, 1983). In our opinion, usage of these terms is problematic, given that they carry heavy conceptual baggage and are highly context specific. In Latin America, the history of settlement and cohabitation is very different to direct colonial rule in Africa and its consequences for the subsequent political economy at independence. They have been used in imaginings of colonised people as primitive, picturesque, ‘noble savages’ requiring protection from the modern world: an idea used to justify colonial rule and segregationist policies in the past, and to support nativism in the present (Kuper, 2003; Mamdani, 2013; Ranger, 1983). Chandler and Reid argue that the concept of indigeneity still carries baggage, in this case the idea that indigenous people are resilient in the face of perpetual hardship. Except that now, rather than inviting intervention from outside powers as it did in the past, the victimhood of those excluded from ‘modern’ society is valorised:

Discourses on indigeneity produce the image of a subject that perseveres through adapting itself to the natural exigencies of its existence. This is a subject whose life lacks the force “to act in the sense of making anything like a definitive event occur in the world,” but that nevertheless persists through its embodied and performative capacities for resilience: enduring and coping under extreme duress. Under traditional colonial and modernist discourses, this view of indigenous peoples as resilient, this timeless or circular situation of stasis, would have been starkly counterposed to western or Eurocentric notions of progress or development. As such, it would have been an invitation to intervene, to colonize, develop or civilize. Today, in contrast, the ability to merely survive is seen as a lesson in resilience and ecological sustainability that western subjects need to take on board in their attempts to survive in the new conditions of the Anthropocene (Chandler and Reid, 2018, pp 263–264).

Thus, the concept of ‘indigeneity’ still allows for excluding, othering, infantilising and romanticising, while neglecting the real social, political and economic problems that create the conditions in which some people need to practise resilience.

Countering arguments against the use of the term, Chatty and Colchester point out that self-identification was an important feature of the 'checklist' used to determine whether a group can be called indigenous or not (Chatty and Colchester, 2002, p 14). They cite Li who notes:

My argument is that a group's self-identification as tribal or indigenous people is not natural or inevitable, but neither is it simply invented, adopted or imposed. It is, rather, a positioning which draws upon historically sedimented practices, landscapes and repertoires of meaning and emerges through particular patterns of engagement and struggle (Li, 2000, p 151).

People self-identify or identify collectively as indigenous 'in order to secure control of their lands and natural resources, to renegotiate their political relations with nation-states and to overcome discrimination and marginalization' (Chatty and Colchester, 2002, p 14). In this formulation, indigeneity is a tool that can be used by marginalised groups against the powerful. However, it can also be used by some marginalised groups against other marginalised groups. Kuper likens the discourse around indigeneity to extreme right-wing anti-immigrant sentiment in Europe, because it is based on the assumption that 'descendants of the original inhabitants of a country should have privileged rights, perhaps even exclusive rights, to its resources' (Kuper, 2003, p 390). At the same time, discourse around indigeneity obscures the causes of marginalisation. Kuper makes the point that:

Policies based on false analysis distract attention from real local issues. They are unlikely to promote the common good, and they will certainly create new problems. Wherever special land and hunting rights have been extended to so-called indigenous peoples, local ethnic frictions have been exacerbated. These grants also foster appeals to uncomfortably racist criteria for favouring or excluding individuals or communities. New identities are fabricated and spokespeople identified who are bound to be unrepresentative and may be effectively the creation of political parties and NGOs. These spokespeople demand recognition for alternative ways of understanding the world, but ironically enough they do so in the idiom of Western culture theory. Since the representations of identity are so far from the realities on the ground and since the relative wealth of the NGOs and the locals is so disparate, these movements are unlikely to be democratic (Kuper, 2003, p 395).

In fact, the DIDR literature contains many examples which suggest to the reader that 'pre-dam' populations are not the socially cohesive, supportive groups one might assume through reading Cernea and Downing and Garcia-Downing. Partridge is quoted near the beginning of this paper: he wrote that communities in developing countries tend to be characterised by 'unequal wealth distribution, wildly lopsided political power structures, and grossly inequivalent access to health care and educational resources' (Partridge, 1989, p 383). Guggenheim describes social stratification and what he calls the 'perils of participation':

While Zimapan's eight-member Comite, for example, clearly represents the communities more than the previous administration did, it is notable that it includes no women, no illiterates, one elder, and only two landless members. Thus far, there have been few complaints that the Comite uses its power to become the new community elite, but the potential for this to happen is clearly present (Guggenheim, 1993, p 218).

For further examples of social inequities in pre-dam societies, also see the lengthy discussion on gender relations, above. Just as an understanding of intersectionality and

agency is essential in an analysis of gender relations, so is social differentiation, stratification and individual agency essential in understanding populations affected by dam displacement and resettlement. Instead, in their use of the concept of indigeneity, scholars have applied a label to an entire group, made assumptions about that group (indigenous people have spiritual connections to the land, exist in closely knit communities that care for each other etc) and made policy recommendations based on those assumptions (eg, being resettled as a group, being given land compensation).

Cross-cutting theme 3: land and land rights

There is a vast field of literature looking at land tenure – including contested notions of rights, complicated customary practices and relationships on the ground, the lack of adequate modern legal frameworks, and the link between economic development and land tenure. While many papers on DIDR make reference to land tenure issues linked to loss of land to infrastructure and reservoir flooding, there is no dedicated stream of studies examining land tenure in depth as it relates explicitly to dam projects. Certainly, in this sample of around 300 papers, 'land' was mentioned in the title of 13 papers: most of these had to do with land acquisition (Asher and Atmavilas, 2011; Guha, 2011; Kurniati et al, 2013; Levien, 2011; Mittal et al, 2014; Tagliarino, 2018; Ty et al, 2013), three on land-based resettlement (Brooke Wilmsen, 2018; Dhagamwar, 2011; Lassailly-Jacob, 2000;), one related to a land dispute and resettlement (but not dam-related resettlement; Aberle, 1993), one related to land rights in India (not to dams, though it would have been cited in at least one paper dealing with dams [Dietrich, 2002]), and one on land grabbing (Borras and Franco, 2013). While some titles have undoubtedly been missed, this is still a surprisingly small number of articles focusing on land, considering the size of the sample of DIDR literature drawn on here.

Looking in depth at land issues can be revealing. An article by Borras and Franco on the practice of 'land grabbing' highlights similar analytical shortcomings in the literature to those identified here:

Characterising both [sides of the debate] in our view is a shared, largely implicit assumption of the homogeneous nature of affected local communities: that the 'local communities' affected (or potentially affected) by these land deals exist in homogeneous spaces, and that at stake for the people who inhabit these spaces are very similar (if not identical) interests, identities and aspirations for the future (Borras and Franco, 2013, p 1724).

However, based on their research findings they argue that:

If there is one thing that the spectre of land grabbing has shown... is that local communities are socially differentiated and consequently the impact on and within communities will likewise be differentiated, leading in turn to an array of diverse responses. It is not just that different people will be affected differently. Rather, what adds further complexity to the whole thing is that different people will perceive and interpret the experience differently, based on a whole range of variable and relative economic, political, social and cultural factors, conditions and calculations that are often not well understood and in any case would require much deeper inquiry than is often given. In short, the individual and collective political reactions of people and peoples affected by land deals cannot be taken for granted (Borras and Franco, 2013, p 1724).

Contrary to expectation, they find that:

...many of those who face expulsion do not necessarily respond with the kind of resistance often expected of them. Indeed, much evidence shows that the nature of and responses to big land deals can (and do) vary across and within 'local communities' (Borras and Franco, 2013, p 1723).

This leads to a final issue relating to how communities affected by DIDR are understood, and that is the topic of participation and protest. Since community participation is one of the early and most important policy guidelines for DIDR, we will now return to the chronological narrative.

2000 onwards: policy proposals – participation, compensation critiques, benefit-sharing, livelihood enhancement

Calls for participation of resettled communities in decision-making have been made since the very early days of DIDR research, but only found a formal expression in policy around 2000. An early study of dam-induced resettlement in Ghana, Tema Manhean, by Amarteifio et al (1966) showed that there was a lack of consultation with the local population due to be displaced, and this resulted in resistance and a lot of 'administrative bother' (Amarteifio et al, 1966). The 'lesson' learned from the study was that consultation from the early stages of the project and taking into account 'pride and possessions' might have saved a lot of time and money. Based on substantial empirical evidence, Cernea argued that successful reconstruction cannot rely on a top-down, paternalistic approach, but rather should be an 'all actors' strategy, involving the participation of displacees, NGOs and other organisations, host populations, and other stakeholders. Cernea cited examples showing the positive effect of displacees' participation. For example, displacees in Indonesia took the initiative of saving fertile top-soil, and the best outcomes in housing occurred when displacees supplemented what they received in compensation with their own resources (eg, labour, cash) (Cernea, 1997, p 1581). Nakayama showed how a lack of communication caused anxiety amongst displacees and created an environment ripe for rumours and corruption, as fraudsters were able to spread false information, tricking people into parting with money or property (Nakayama, 1998, p 222). In a 50 dam survey which used statistical analysis to show trends in dam resettlement project outcomes, Scudder found that:

Among variables analyzed in the 50 dam survey, a combination of project authority staff capacity, funding and political will, implementation of adequate opportunities, and resettler participation helped explain every one of the more successful cases (Scudder, 2005, p 27).

The IIED found 'the best settlements for local people' with regard to benefit-sharing 'resulting from their ability to mobilise and organise themselves and to negotiate through their representation on relevant decision-making bodies' (Skinner et al, 2014, p 6). In fact, so important is participation that Wilmsen and Wang argue that 'the voluntary-involuntary' dichotomy is a false one. It is not volition that leads to better outcomes, but people-centred practices that are embedded in policy, planning, and implementation' of a particular resettlement programme (Wilmsen and Wang, 2015, p 612).

A lack of participation can result in resistance and protest. There has been a striking shift in the literature from protest and resistance being described in fairly hopeless terms, to being given the credit for resettlement successes. In 2000 Dietrich noted that 'The struggle against [the Sardar Sarovar Project] has revealed again and again the total failure of the governments involved to face the ground realities and to acknowledge the true extent of devastation' (Dietrich, 2000, p 3380). Kala recognised a shift occurring in a 2001 article which looked at the globalisation of protest movements:

Local conflicts between citizens, governments, and transnational institutions and corporations have begun to globalise as a result of the increased uniformity of policies and international agreements among governments to implement global sets of rules. This has resulted in the perception of common interests amongst resistance formations to challenge these rules (Kala, 2001, p 2000).

The costs of protest are significant. Protests lead to delays or damage to infrastructure, which increases the financial costs of the project. Kirchherr et al (2018) show how projects which are delayed hang like the 'sword of Damocles' over potential resettlers. Such projects have blighting effects on investment and development that can be as destructive for local groups as those experienced during actual dam displacement and resettlement. Protests are also often violent, with protestors using increasingly radical means to resist, and being suppressed, arrested and even killed by law enforcers – made worse by the fact that dam development often occurs in authoritarian states or states with questionable human rights records (Del Bene et al, 2018).

Linked to the rise of protest movements is reduced tolerance of human rights abuses committed by companies and governments. As Van Ploeg and Vanclay note, 'involvement in human rights violations and abuse now constitutes a business risk for companies' (Van der Ploeg and Vanclay, 2017, p 4). These risks have encouraged dam developers to include local groups in decision making and planning, focus attention on human rights guidelines, and improve standards for resettlement (Dwivedi, 1998, 1999; Égré and Sénécal, 2003; Kirchherr, 2018; Kirchherr et al, 2017; Mathur, 2006; Vanclay, 2017; Yeophantong, 2014).

Such have been the changes that, Beazley argues, viewing displacees as vulnerable or 'powerless' does not necessarily reflect their position today (Beazley, 2009). Through a case study of resettlement in India, Beazley argued that the received wisdom that displacees were 'powerless' needed to be interrogated. Structural changes had resulted in a shift of power towards resettlers. As a result:

The village's pre-relocation phase was characterized by a genuine local openness to displacement; a socially-aware displacement authority; lively NGO and press presence; and a relatively assertive and astute village community. This facilitated constructive dialogue, culminating in meaningful concessions and a perceptible power structure shift (Beazley, 2009, p 219).

But, as suggested in the previous section, participation of 'the community' is not straightforward, finding a representative body may not be easy, and chosen representatives may not necessarily reflect the views of everyone.

Following from the concern with ensuring a fair distribution of costs and benefits in dam projects, another major development in the literature has been around the critique of

compensation policies. In fact, the critique of compensation measures could be said to be at the heart of DIDR research, because it relates to distributional justice and the question preoccupying much of the literature: will displacees and resettlers bear an unfair burden of the costs of dams while not reaping the benefits? Cash-for-land compensation was the form of compensation most frequently used, but it was felt to be inadequate (Cernea, 1997).

Cash compensation is seen as problematic for many reasons (Cernea, 2003). It may not be used wisely by resettlers unaccustomed to managing large amounts of money (Partridge, 1989; Pokharel, 1995), and while cash can be used for the start-up of businesses, entrepreneurial ventures often fail (Pokharel, 1995, pp 141–143) and resettlers may not find jobs in urban areas, ending up as part of the ‘army of urban unemployed’ (Heming et al, 2001, p 207). Cash compensation is often inadequate to purchase land or to restore former livelihoods and quality of assets (Meikle and Youxuan, 2000, p 225; Nakayama, 1998). This is particularly so because land prices in neighbouring areas tend to rise due to increased demand, inward migration, as well as speculation (Bazin et al, 2011; Padel and Das, 2011). Corruption can strip resettlers of the cash they get, as they may be expected to pay bribes and ‘fees’ to corrupt middlemen or officials – or compensation is simply never paid (Mathur, 2011, pp 40–41; Nakayama, 1998, p 223; Padel and Das, 2011). Swayed by Cernea’s compunctions about cash compensation and the Impoverishment Risks and Reconstruction Framework, which recommended like-for-like compensation, the World Bank and IFC Performance Standards began requiring ‘land-for-land’ compensation wherever possible.

However, it is questionable to what extent the supposed ill effects of landlessness may be a result of other problems as well. For example, the impoverishing effects of landlessness were elaborated in a study by Nayak (2010), who looked at the effects of landlessness on the Kisan in Orissa (India) and made the argument that land-for-land compensation was necessary to avoid impoverishment. However, the case study used is arguably inappropriate for making such a claim. Historical cases of resettlement in Orissa were notoriously bad at almost every level. Not only did resettlers not get land, neither did they receive cash compensation or the promised jobs, and there was widespread corruption. The example highlights a particularly bad case of resettlement; however, it is impossible in this case to isolate the effects of landlessness itself.

Nevertheless, some have found that communities about to be resettled prefer land to cash (Delang and Toro, 2011). And in a longitudinal study of displacement caused by the Three Gorges Dam in China, Wilmsen found that land was important for families to rebuild their lives, even if in the long term they stopped farming and got rid of their land. Land was important particularly in the early stages as a security net, and to allow resettlers to respond to new opportunities gradually, rather than being forced suddenly into low-wage urban employment or welfare systems (Wilmsen, 2018). Over time, some families rented land out or transferred it, benefitting financially from their land; others consolidated landholdings and built up bigger more profitable farms. The important point was that there was flexibility in what people could do with the land (even though land transactions tended to be informal). Wilmsen’s study shows that land compensation is not simply about pushing people into farming, but that it gives people a more solid base from which to make their next move, if that is what they want.

The IRR framework had linked the provision of land to the restoration of livelihoods, and this is a key argument in favour of land-for-land compensation. However, a recent shift towards livelihood enhancement has involved a critique of land-for-land compensation. Vanclay (2017) argues that pushing for an 'ideal' of land-for-land compensation hides the very real issue of land shortage. For land-for-land compensation to be effective, land of an equivalent or superior quality needs to be found, and it also needs to be in close proximity to the area from which people will be displaced. But to achieve this in the context of increasing land shortage and competition over land is extremely difficult (Vanclay, 2017). The IRR framework had linked the provision of land to the restoration of livelihoods, and this is a key argument in favour of land-for-land compensation. However, in the context of land shortage, the livelihood strategies often practised by indigenous people, such as transhumance, fishing, swidden agriculture etc, may not be sustainable and may already be insecure (Dhagamwar, 2011; Vanclay, 2017). Because of concerns that land-for-land might trap people into poverty, discussion around resettlement practice 'has increasingly turned towards livelihood enhancement and assisting people to adapt their lives and livelihoods to suit new circumstances' (Vanclay, 2017, p 6).

While Vanclay suggests this is a fairly new direction in the literature, this sentiment has been there for a long time. Takes' 1973 article makes proposals for livelihood restoration for farmers, as well as 'landless laborers, sharecroppers, artisans, and people with other occupations', while noting the possibility that some may prefer to switch to other professions. (Takes, 1973, pp 721–722).

A number of studies had already raised doubts about one-size-fits-all land-for-land policies related to DIDR. Some resettlers do not need land for livelihoods. Nakayama (1998) for example showed that while financial compensation was not enough to restore the former livelihoods of half of the resettlers affected by the Saguling Dam in Indonesia, with just under a third unable to buy land, the alternative plan for transmigration to neighbouring islands was unpopular amongst resettlers and cash compensation allowed them to choose to stay in nearby villages in the area (Nakayama, 1998, p 224). Heming et al (2001) found that rural migrants in China expressed a preference for relocation to urban areas 'because of the greater benefits, higher social status, job security and varied lives there' (Heming et al, 2001, p 207). Garikipati looked at resettlers' preferences with regard to a number of compensation options given to them. Thirty four percent accepted the option of cash-only compensation (Garikipati, 2011, p 203). While this figure seems low in comparison to options involving land compensation, Garikipati notes that this was a surprisingly high figure, given the common assumption that 'all' resettlers would prefer land compensation. Fujikura and Nakayama (2015) looked at a number of examples of dam-related resettlement across six Asian countries (Fujikura and Nakayama, 2015). They found that some resettlers who wanted to become urban dwellers and received cash compensation gave up farming and experienced economic benefits. An important factor in their success was their desire to educate their children (Fujikura and Nakayama, 2015, Chapter 6). Koenig argues that policy emphasis on land-based asset replacement represents a rural bias, and not enough attention is paid to restoring or reconstructing urban livelihoods (Koenig, 2018, p 81). In terms of livelihoods, income diversification has been found to increase resettlers' income and satisfaction in case studies from Vietnam, Lao PDR and Indonesia (Fujikura and Nakayama, 2015, Chapter 4).

At a more theoretical level, Asif (2000) points out that many displaced people preferred not to go to resettlement sites, preferring the freedom of cities even though development outcomes may be worse for them (Asif, 2000). Using Foucault he suggests that people are uncomfortable with the exercise of power over them by others. They do not like the gaze of authority, and the feeling that they will be monitored and controlled. This is significant, because if people are not given a choice and reject what is offered to them, they do not benefit from the efforts of practitioners, and the funds made available for their resettlement. Takesada (2009) points out that in much of the literature on dams and resettlement, 'resettlers are regarded only as passive agents in the context of resettlement' (Takesada, 2009, p 421). He argues that practitioners should take into account resettlers' personal choice, and 'far-sightedness' in thinking about the next generation.

Nevertheless, concerns about adequate compensation remain, and the 'compensation critique' has only grown (Cernea, 1999; Cernea, 2003; Cernea and Mathur, 2008; Price, 2009). One of the most notable contributions of the DIDR literature is the idea that neither monetary nor land-based compensation is enough, considering the many costs or externalities born by displacees and resettlers. To give just one example of how detailed the lists of externalities can be, in a recent article Shaojun (2018) highlighted that methods used to determine appropriate compensation do not take into account factors like the land's potential income and long-term value, or the long-term social security it provides for farmers and their families. Nor do displacees receive compensation for the economic loss to the area caused by investments and business being put on hold, cost of displacees' time spent on participation processes, damages and losses in the reservoir area caused after the completion of the project, and social capital loss which is born by resettlers (Shaojun, 2018, pp 51–53).

Benefit-sharing is often described as a remedy for the unfair distribution of costs and benefits too frequently seen in dam projects. 'Project benefits' in this case refers to the diverse benefits that dams bring (eg, access to irrigation, electricity, jobs). That resettlers should share in project benefits is a simple idea that underlies the earliest calls for resettlement with development (initially described as 'rehabilitation') (Takes, 1973). The idea emerged when scholars were still lobbying for the World Bank and country governments to understand the need for fairness, to recognise the rights or entitlements of displacees, and that ensuring that displacees were simply 'no worse off' was not adequate. The idea could be summed up by Partridge's use of Dr Martin Luther King's memorable quote: 'Don't give in charity what belongs to people in justice' (Partridge, 1989, p 374). From the mid-1980s, Cernea introduced the idea of 'benefit-sharing' to the World Bank's resettlement policy: all involuntary resettlement should be conceived and executed as development programmes, with resettlers provided with sufficient investment resources and opportunities to share in project benefits (Van Wicklin, 1999, p 235; World Bank, 1990).

However, Cernea noted:

Despite this raising of the bar through several policy stages from 1980 until 2000, there has been no re-examination of the economics expected to underpin advances in policy. Nor has there been corresponding change in the financial instruments allocated to support the higher policy goal — i.e., the partial shift in emphasis from restoration toward improvement... The array of financial means mobilised to implement the more

demanding policy objectives has remained the same. An insufficiently financed mandate was created (Cernea, 2003).

Thus, the concept of 'benefit-sharing' was developed further to describe methods of financing the costs of a comprehensive resettlement programme. These proposals were developed as awareness of the multiple negative impacts of resettlement grew, and proposals for how to mitigate these impacts became increasingly advanced. At the same time, scholars recognised that a key problem in resettlement programmes was the underestimation of the costs involved (Fernandes, 2000; Van Wicklin, 1999). The use of financial tools for benefit-sharing was first discussed by Van Wicklin (1999) in a volume which sought an alliance between the disciplines of anthropology, sociology and economics to address the social aspects of resettlement. The contributors to the volume 'argue for an organic synergy and mutual reinforcement between economic and social knowledge in resettlement work. Bringing in the tools of economics to complement the sociological and technical analysis of resettlement processes is essential not only for explaining their anatomy better, but also for guiding decision making and investments' (Cernea, 1999, p 2). After reviewing examples from World Bank hydropower projects around the world, he concluded:

All too often the difference between satisfactory and unsatisfactory resettlement performance was the failure to share benefits... Most significant are the cases where project authorities adopted benefit sharing after initial resettler resistance to the project. As benefit sharing yielded tangible benefits to resettlers (and project authorities) and increased their incomes and living standards, resettlers gained an interest in the project. An adversarial relationship was transformed into one of mutual benefits. Managers of these resettlement operations became effective champions of a more enlightened approach to resettlement planning and implementation (Van Wicklin, 1999, p 251).

Using the fairly 'mechanistic' IRR framework which proposes 'like-for-like' mitigation measures, Fernandes looked at benefit-sharing as a way to mitigate the impoverishing, and psychologically devastating, effect of marginalisation – which he describes in some detail (Fernandes, 2000). While Fernandes, Van Wicklin III and the WCD all mentioned financial mechanisms to support benefit-sharing (such as a percentage share of electricity revenues), they also included non-monetary 'benefits', such as jobs in construction, access to housing, access to irrigation, skills training and better local services (Fernandes, 2000; Van Wicklin, 1999; World Commission on Dams, 2000). There was no sharp distinction between the different forms of benefit-sharing, although the 'monetary' types were normally written into legislative frameworks and national policy (UNEP, 2007, p 80; Van Wicklin, 1999, p 237).

Van Wicklin raised the idea of displaced and project-affected-persons as shareholders, an idea further discussed by Cernea, who refined arguments for benefit-sharing (Cernea, 2003, 2008). Cernea pointed out that investment in development was necessary to help resettlers 'catch up' on the development trajectory they had been on before resettlement had set them back. Compensation alone did not allow for this 'catch up' because it occurred early on in the phases of resettlement. Furthermore, he pointed out:

Those who give their lands to the new project are in fact "investors of equity" in those new projects. As investors they are entitled to a share of the benefits. Upfront investments are nothing more than an advance on those benefits (Cernea, 2003).

Cernea used the phrase 'resettlement with development' to describe longer-term efforts, including investment and benefit-sharing, to improve outcomes for resettlers. The 2007 UNEP compendium on Dams and Development put together real-world examples of benefit-sharing, amongst other methods for doing dams 'better'. The document distinguished between monetary and non-monetary forms of benefit-sharing. Colombia, Brazil, Nepal, China, Canada, Norway and Lesotho were used as examples of countries with legislation to facilitate benefit-sharing, which included transfers of part of the revenues from hydropower projects to municipalities or regional entities (Colombia, Brazil, Nepal, China); Norwegian legislation included 'a variety of mechanisms: revenue sharing, equity-sharing, development funds, property taxes and preferential electricity rates'; and Colombia and Lesotho had development funds, although in Lesotho these were not managed well, showing the importance of 'sound institutional procedures' to manage funds (UNEP, 2007, p 80). The UNEP compendium also provided examples of partnerships between electricity producers and local communities, finding that:

Establishing partnership agreements between developers and local communities is probably the most innovative form of monetary benefit sharing. For the developer, a partnership provides an assurance of the local acceptance of the project, thereby reducing the level of risk and the cost of lengthy feasibility studies and authorization processes. For the local communities, it is recognition of their entitlement to a share of the economic rent generated by the dam and of their rights to have a say in the management of local water resources (UNEP, 2007, p 87).

However, the report found that examples of benefit-sharing were still rare. In a 2008 edited volume in which Cernea and Mathur asked 'can compensation prevent impoverishment?' they criticised continuing reliance on compensation alone in DIDR, and called for 'practical, on-the-ground reform and change' (Cernea and Mathur, 2008, p 10). The volume provided more empirical evidence of the shortcomings of existing compensation policies and focused on examples of monetary benefit-sharing. Égré et al (2008) provided a practical and pragmatic guide to monetary benefit-sharing, discussing ethical issues, elaborating on the different benefit-sharing mechanisms, how to evaluate the different types of benefit-sharing, 'practicalities and processes in implementing benefit-sharing' and assessing the likelihood of, and then negotiating, an agreement (Égré et al, 2008). A chapter by Nakayama and Furuyashiki (2008) described the innovative practice of renting land from displacees rather than expropriating it, thereby giving displacees an ongoing source of income (Nakayama and Furuyashiki, 2008). With the arguments in support of benefit-sharing well established, further advocacy literature emerged, Cernea (2008) in particular providing the arguments for, and examples of, benefit-sharing, as well as countering possible arguments against benefit-sharing. Country and region-specific studies emerged, such as Skinner et al (2009) looking at the potential for benefit-sharing in West Africa, providing an in-depth assessment of past experience of DIDR in West Africa, and looking at how to advance benefit-sharing in consideration of the attitudes of different stakeholders (Skinner et al, 2009).

In this sense, 'benefit-sharing' was increasingly proposed as a pragmatic solution to the problem of how to finance increasingly detailed and costly resettlement programmes. Benefit-sharing involves the use of innovative financial tools that can provide a source of additional financing for development projects, or an additional source of ongoing, long-term

financial compensation paid directly to resettlers (over and above the fair compensation for property etc).

In the 2010s, the question began to turn to why benefit-sharing mechanisms were not being implemented. In a policy advocacy piece, Cernea (2008) responded to the 'excuse' that resources were not available by pointing out that there were innovative ways of raising finances for better resettlement projects. He considered the interplay between popular opposition to dam projects, people's ability to mobilise, and the increasing recognition by governments and the private sector of the need for benefit-sharing (Cernea, 2008, pp 107, 117–118). What was lacking was not financial resources, but political will, and the political power of displacees. By 2014 there were enough examples of benefit-sharing around the world for a comparative analysis, which the IIED conducted (Skinner et al, 2014). There was significant variation in the types of projects in operation and the outcomes of those projects. Like Cernea, IIED found that the ability of the local population to mobilise was important (Skinner et al, 2014). Without being able to directly influence the use of funds, there was a risk that funds, if paid into government budgets, could be used for general expenditure, or otherwise not benefit local communities. At the heart of the issue was 'the extent to which 'redistribution' to project-affected populations was intended' (Skinner et al, 2014, p 61). They provided a list of questions to consider when designing benefit-sharing processes.

In 2018, Xia et al (2018) developed a quantitative benefit-sharing model to measure the distribution of project benefits amongst key stakeholders, including government, hydropower generation enterprises, reservoir migrants, and power grid enterprises. The model can be used to test the effects of making adjustments to compensation packages and benefit-sharing mechanisms to see if they will result in a fairer distribution of benefits for resettlers (which they refer to as 'reservoir migrants').

New analytic frameworks

In recent years, the most notable development in the literature has been the introduction of new frameworks. A number of frameworks have been developed over the years that specifically focus on dams – those developed by Scudder and by Cernea have been discussed already. In 2009, Brown et al developed the Integrative Dam Assessment Modelling tool (IDAM) to assist decision makers 'to evaluate alternatives and to articulate priorities associated with a dam project, making the decision process about dams more informed and more transparent' (Brown et al, 2009, p S303). However, while the framework contains a fairly comprehensive list of factors to consider in assessing dams, the framework did not catch on because it was found to be confusing (Kirchherr and Charles, 2016, p 105). Similarly, the Sustainable Livelihoods Approach has been criticised for its use of 'complex and alienating language' (Kirchherr and Charles, 2016, pp 103–105; Smyth and Vanclay, 2017, p 69). Smyth and Vanclay pointed out that existing frameworks are of limited use in Social Impact Assessments and in facilitating stakeholder participation in planning and decision making because they cannot be operationalised, are too complicated, use jargon, or are too negative. With regard to Cernea's framework, for example, they point out:

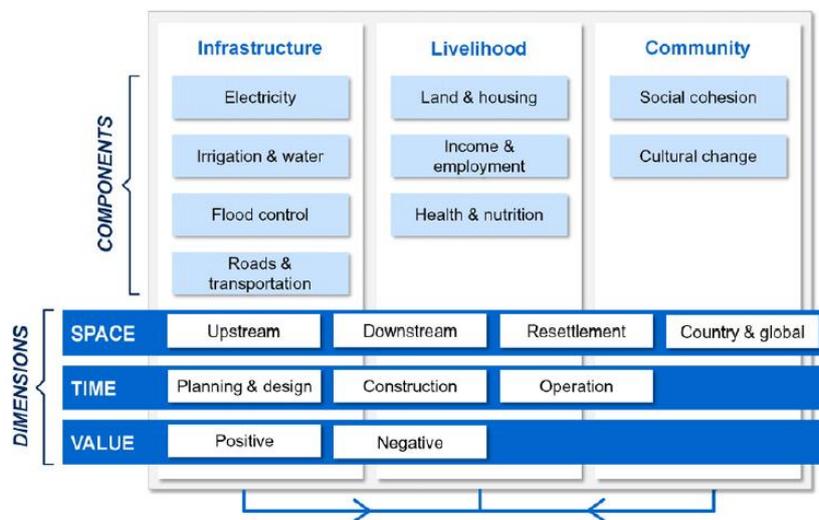
It is difficult for projects to use the IRR framework with impacted communities because it presents a highly negative picture of the impacts and thus the project at the same time

as the company is trying to convince project stakeholders to accept the project (Smyth and Vanclay, 2017, p 67).

Kirchherr and Charles argued that the problem with the lack of a comprehensive framework on the social impact of dams is that scholars end up using a variety of different frameworks or none at all, which results in inconsistency, makes it difficult to compare research and may have slowed theoretical advances. Ultimately, ‘knowledge on the social impact of dams cannot accumulate’ (Kirchherr and Charles, 2016, p 107). They also criticised the IRR and Four-Stage Framework as well as other frameworks for having a limited spatial and temporal perspective on the social impact of dams, for having a one-sided view of social impacts, for containing an incomprehensive list of social impacts and a limited acknowledgement of causal impact loops – ie how different effects relate to and impact upon each other (Kirchherr and Charles, 2016, pp 103–105). Building on previous frameworks, and addressing their limitations, Kirchherr and Charles developed the Matrix Framework (Figure 1). The Matrix Framework identifies and retains the most valuable contributions of previous frameworks. It includes three major components for study (infrastructure, community and livelihood), which are broken down further:

- Infrastructure: electricity, irrigation and water, flood control, roads and transportation.
- Livelihood: land and housing, income and employment, health and nutrition
- Community: social cohesion, cultural change

Figure 1: The Matrix Framework



Kirchherr and Charles, 2016, p 105

A major innovation of the Matrix Framework was to include different dimensions: space, time and value (positive or negative). The ‘time’ dimension is particularly important in assessing resettlement outcomes. The lack of a temporal dimension could skew understandings of social impacts, particularly as Colson and Scudder (1982) had suggested that it was only in the later stages of resettlement (with the final stage occurring with the next generation) that positive outcomes emerged. It can take years or even decades to reach these stages. Wilmsen and van Hulst (2017) have also recently made an argument for the importance and usefulness of longitudinal studies. They suggest that ‘by monitoring the same

households over time, intricate information about livelihood resources, adaptive strategies and outcomes can be gained' (Wilmsen and Van Hulten, 2017, p 103). In their own study of resettlement outcomes of the Three Gorges Project, they found that while early research 'reported mainly negative outcomes for resettled households', 'the picture had changed dramatically by 2011, at least for this study population, with significant increases observed in average incomes and a range of other livelihood indicators' (Wilmsen and Van Hulten, 2017, p 103).

While few studies are likely to look at all dimensions and components of the social impact of dams, the Matrix Framework allows researchers and practitioners to pick the dimensions and components they want to study, while not losing sight of the bigger picture. Keeping these other dimensions and components in mind should allow researchers to reflect on the limitations of their own study. As Kirchherr and Charles note, 'All too often scholars judge a dam project overall when only having studied a very few dimensions and components of the project' (Kirchherr and Charles, 2016, p 106). Their hope is that the Matrix Framework can be used in scholarly research as well as SIAs.

The Matrix Framework has been used in a 'meta-synthesis' of the literature on the social impact of dams (Kirchherr et al, 2016). Kirchherr et al found that there were certain biases in the literature, that few scholars used frameworks, and so there were areas of repetition and significant gaps. According to them:

The typical article on the social impact of dams was published in the past 10 years and investigates the resettlement implications of a single extremely large dam in Asia via a qualitative approach 5 – 10 years after project completion and concludes that these impacts are largely negative. The authors of such a typical article focus mostly on livelihood impacts (Kirchherr et al, 2016, p 24).

Upstream and downstream social impacts were largely ignored, Africa was overrepresented in the literature (with more studies than would be expected considering that most large dams in the world are in Asia) and Europe and the Americas under-represented. The literature is overwhelmingly focused on China and India, although this reflects the geographical distribution of large dams in the world (Kirchherr et al, 2016). The Sardar Sarovar on the Narmada River in India, and Three Gorges in China, are two of the most studied dams in terms of social impacts. Extremely large dams were overrepresented. The planning phase as well as the longer-term effects were understudied, and there is a dearth of longitudinal studies. Considering that the literature suggests that the positive effects of dams tend to emerge in the long term, the lack of longitudinal studies is significant. The perspectives of foreign governments, development banks and dam developers are understudied. These gaps 'may lead to skewed overall assessments regarding the viability of a dam project' (Kirchherr et al, 2016, p 24).

However, the Matrix Framework does not consider broader societal hierarchies, political structures, gender relations, religion and other factors which might impact on the dam project, or which planners may need to consider. In this regard, there has been significant development of other frameworks in the last few years. Smyth and Vanclay's Social Framework (Figure 2) builds on the Matrix Framework, using its different dimensions of space, time and value (Smyth and Vanclay, 2017). However, they changed the components,

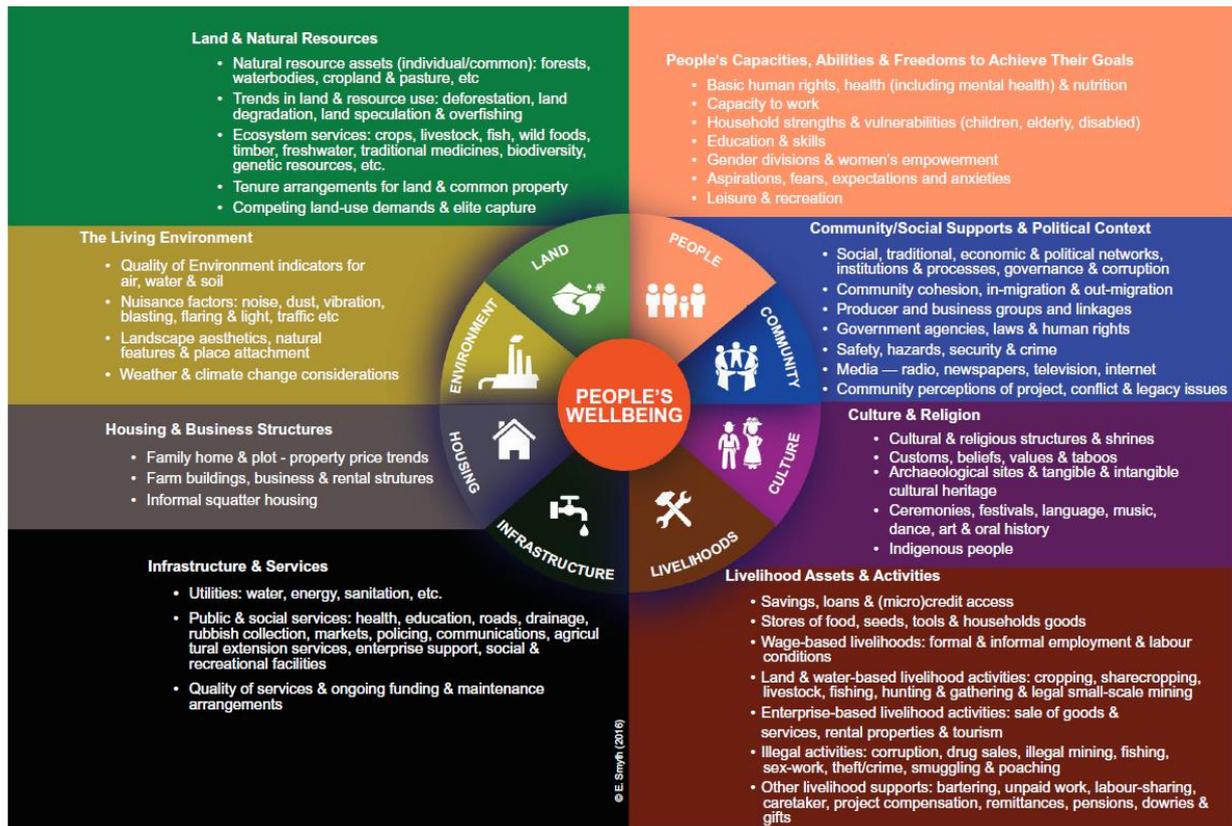
shifting its focus from generalised project impacts to the individual resettler as the primary unit of analysis 'in recognition of the fact that there is considerable inequality within households and communities' (Smyth and Vanclay, 2017, p 73). The shift to focusing on the individual is a major contribution of this framework and goes a long way to addressing some of the problems of DIDR research mentioned previously – that is, making assumptions about groups of 'vulnerable people', or failing to understand the complexity of communities. They incorporate a human rights based approach to resettlement (Smyth and Vanclay, 2017, p 70), and make well-being the focus of analysis. The extent to which dam development agencies can implement such frameworks and address individual needs in projects displacing thousands of people may, however, be a stumbling block to its effective application in the field.

According to this framework, people's well-being relates to eight components:

- People's Capacities, Abilities, and Freedom to Achieve Their Goals
- Community/Social Supports & Political Context
- Culture and Religion
- Livelihood Assets & Activities
- Infrastructure & Services
- Housing & Business Structures
- The Living Environment
- Land & Natural Resources

Their 'Social Framework' is designed specifically to be used in SIA , community participation and scholarly research. It is framed in terms of broader policy principles and goals, such as advocating a human rights approach, and aspiring to the Millennium and Sustainable Development Goals. Like the Matrix Framework, an advantage of the Social Framework is that it is written in simple language and includes clear categories which are easy for people to understand.

Figure 2: The Social Framework for Projects



Smyth and Vanclay, 2017, p 74

Smyth and Vanclay's model has other advantages. It is rooted in a deep understanding of the practice of resettlement, and the issues involved, gained from years of experience as a practitioner. It is both comprehensive, and straightforward. The Social Framework not only looks at potential impacts but helps guide a better understanding of the context in which the project is to take place. An important advantage of this framework is that it helps to advance practitioners' understanding of the complexity of community. Rather than just view communities as something which has social cohesion and networks which will be lost (such as in the IRR framework), they incorporate the issue of divisions, governance and corruption, which may provide a sounder base for beginning negotiations and engaging with the affected communities.

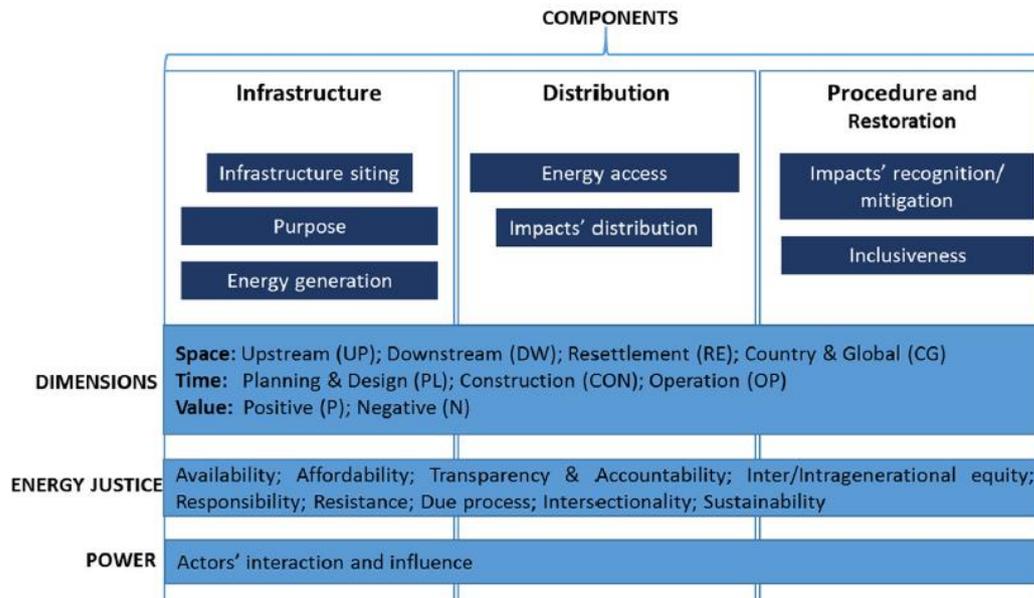
In 2018, Siciliano, Urban, Tan-Mullins and Mohan developed the Energy Justice Framework for Dam Decision-making as shown in Figure 3 (Siciliano et al, 2018). The three major components are replaced with Infrastructure, Distribution, Procedure and Restoration. The sub-components are as follows:

- Infrastructure: infrastructure siting, purpose, energy generation
- Distribution: energy access, impacts' distribution
- Procedure and Restoration: impacts' recognition/mitigation, inclusiveness

The three dimensions remain the same: space, time and value. They extend the Matrix Framework further by adding layers of analysis. The 'components' are analysed based on the energy justice principles of availability, affordability, inter/intragenerational equity,

responsibility, resistance, transparency and accountability, sustainability, due process, and intersectionality. The components are also analysed in terms of power relations – looking at the influence that the different stakeholders have and how they interact with one another.

Figure 3. The Energy Justice Framework for Dam Decision-Making



Siciliano et al, 2018, p 202

The disadvantage of this model is that it is very academic, using complicated concepts which may limit its use as a tool for engaging with affected communities. However, it brings in principles and concepts which are missing in the more pragmatic frameworks. The Energy Justice Framework for Dam Decision-making may also begin to address some of the critiques raised by Dwivedi and others (de Wet, 2001; Dwivedi, 2002; Pearse-Smith, 2014; Perera, 2011) and it appears to begin to bridge the gap between the 'pragmatic' and 'principled' approaches evident in the literature.

Its use of the component of intersectionality is also a significant advance from relying too heavily on poorly differentiated categories such as 'indigenous people', 'the elderly', 'children' and 'women' in understanding the social impact of dams – a serious shortcoming in the dams and resettlement literature. This framework is useful for academics and could address some of the limitations of the dams and resettlement literature and stimulate more theoretical contributions.

These recent frameworks by Kirchher et al, Smyth and Van Clay and Siciliano et al might be useful if used by independent scholars in exploring the feasibility of dams in specific countries and highlighting areas of greater risk. For example, exploring whether national land acquisition laws are likely to protect people with informal or customary tenure, or assessing the likelihood of corruption: both of which are a major cause of disappointing project outcomes.

On this note it is worth reflecting on a major gap in the literature which, arguably, may have developed when the focus of social science contributions to DIDR research shifted in the

1990s to making recommendations for better policies, or, alternatively, to 'taking the side' of displacees, representing their interests and struggles. As a result, the policy implementation gap has been relatively neglected, although there are a few exceptions (Padel and Das, 2011; Rew et al, 2000). While implementation issues are addressed in many post-hoc evaluations, few papers make the policy implementation gap the focus of their research.

Reflections on the literature

The publications reviewed in this report can only ever be a subsample of the resettlement outcomes observed around the world. They constitute a self-selected sample that reflects the geographic or scientific interests of the researchers who studied them, as well as being framed in ways that make them acceptable for publication. This review has not looked at the wealth of information contained in consultant and staff reports commissioned by the major multilateral funders of dams (eg, World Bank, regional development banks).

The overwhelming majority of the publications present and analyse bad or inadequate outcomes for resettled people and analyse in depth the cultural, livelihood and gender-related impacts of resettlement due to large hydropower projects. Some publications propose new and better impact management strategies, or analytic frameworks that may help practitioners to frame and manage the likely impacts. The general sense from the literature is that we are still collectively a long way off being able to devise a fool-proof approach to resettlement that can guarantee good outcomes. If such a process exists, it is not written up in the literature reviewed.

Assessment of outcomes

Geographic distribution of research

In the sample of 274 publications or theses reviewed here, 132 (48%) were focused on Asia, 64 (23%) were global studies (using case studies or significant examples from at least two continents), 35 (13%) on Africa, 8 (3%) on South America, 3 (1%) on North America and 2 (>1%) on the Middle East. About 29 (10.5%) had no specific geography, being a more theoretical or analytical presentation of a model or framework, or reflection on the literature or state of DIDR. Of those on Asia, 50 (38%) were focused on India, 35 (27%) on China, and 8 (6%) on Vietnam, with most of the remaining studies using case studies from a number of different Asian countries. Geographical distribution of research in our sample was roughly similar to that of a previous review paper by Kirchherr et al (2016), despite our more narrow focus on resettlement outcomes, as opposed to Kirchherr et al's (2016) broader focus on social impacts of dams in general.

Measuring/assessing livelihood changes over livelihood time

Measuring well-being and how this changes over time is not an easy process. Assessing the change in well-being associated with an involuntary resettlement event that causes trauma and disruption is even harder. The literature reviewed above demonstrates the challenge of identifying appropriate metrics (revenues, social capital, natural capital, access to services, resettler satisfaction etc) and shows how measures of well-being can change over long time periods (10–20 years). Further, it stresses the time needed for a new lifestyle to fully embed, the differential responses of community members, and raises the possibility that it is only in

the second generation after resettlement that some people may be able to take full advantage of new opportunities. This means that resettlement needs to be considered as a multi-decadal process and not the 'three to five-year plan' that most programmes involve. Researchers agree that people respond differently to resettlement impacts and opportunities, yet government legal systems (see below) tend to approach the issue with a one-size-fits-all approach to compensation and resettlement benefits.

This raises questions about the duration of central support to resettlement and livelihood restoration, which should preferably occur over tens of years. This links to benefit-sharing, which is seen as a way of ensuring longer-term support (see below) as well as the metrics of measurement. How and when should a determination be made of whether people are better off or not? How would an assessment after five years differ from one after ten years, and how can those outcomes be attributed specifically to resettlement and not, for example to broader local or national socioeconomic changes that affect all communities (such as the weakening or strengthening of national governance)?

The examples in the literature show the inherent challenge of comparing objective and subjective measures: assessing well-being with measurable indicators (eg, food security, livelihood assets or income) and then comparing this to whether people feel better off on more intangible measures (social roles, insecurity, different housing, different neighbours, integration with host communities, nature of work etc.). It is a significant assessment challenge to definitively be able to declare a community 'better off' or 'worse off' at any point in time. As the time since resettlement lengthens, it is also increasingly difficult to attribute outcomes specifically to the features of the resettlement process as livelihoods become increasingly influenced by contextual socioeconomic factors.

Power relations and participation

The reality of many large dam projects is that they involve small, dispersed, often rural communities with a lack of formal education, the technocratic and political might of centralised government and the economic power of large dam-building companies. The literature recounts many examples of how, despite different degrees of 'participation', the outcomes rarely coincide with affected peoples' understandings of the promises made.

While participation is often presented as a panacea to improve livelihood outcomes, it is rarely undertaken on a level playing field. Communities lack agency, are unaware of the available options, and are constrained by the format of the exchanges (eg, with foreign consultants, communicating on paper, or in languages they do not fully understand). Most projects seem to treat communities more at the 'information' end of the information-consultation-participation-negotiation spectrum of stakeholder engagement. Proper participation or negotiation remains a desirable objective but there are few case studies showing what difference this makes in practice and it remains an act of faith that such 'democratic' processes necessarily deliver better outcomes – although it may prevent disruptive conflict between affected communities and dam developers. Recent literature suggests that power relations between dam developers and communities may be shifting due to the influence of global NGOs and local politics.

Benefit-sharing and/or land as equity

The approach of sharing the benefits of a large dam project with the affected people has been discussed since the 1970s, but ‘benefit-sharing’ has been recommended as a mechanism to promote better outcomes only since around 1990, further consolidated by recommendations of the World Commission on Dams (2000).

This involved a number of shifts – from ‘compensation’ to ‘development’, from short-term planning (physical relocation) to long-term sharing of project benefits and development opportunities. These benefits might include access to irrigated land, or electricity supply or a share of finance from the sales of electricity to the grid. However, the idea of benefit-sharing has, confusingly, often been used to describe any and all ‘benefits’ arising from projects, including access to improved services (eg, health, schools), jobs in construction and improved mobility through new access roads built as part of the project. Improving livelihoods over decades requires new financial tools, for example, paying displacees a ‘rental’ for their land vs generating revenues for local government, or sharing electricity revenues. Benefit-sharing through the allocation of electricity revenue to local communities would require institutional structures to manage the financial flows and ensuring they serve to finance public goods (governance, transparency) that would be prioritised by the affected community.

In these cases, the ‘benefit’ is available throughout the lifetime of the project, and not just for the duration (three to five years normally) of the social and management plans. This thinking resonates with the discussion of timescales (0), where it is clear that long-term support to resettled communities would be beneficial.

Some authors have also suggested that land flooded by the reservoir could be considered as direct project equity – a contribution of local land-owning communities that would give them a direct and permanent equity stake in a dam project. While this might be feasible in cases where ownership is uncontested, the institutional arrangements which are a weakness of the existing literature (see below) are key.

Resettlement costs and equitable development

Data on the costs of delivering ‘good’ resettlement remain a gap in the available literature. Not only is a guide to project planners needed, but an answer to the question of whether more money invested per capita necessarily gives better outcomes and at what point this delivers diminishing returns due to other contextual factors. The authors of resettlement impact studies tend to assess with a ‘socio-cultural’ lens, while economic assessments (eg Ansar et al, 2014) tend to be undifferentiated as to impacted groups. Bringing the two approaches together would help to better define the benefits and costs to different beneficiaries impacted by a hydropower project. The literature is still short on publications that look at individual dam projects ‘in the round’, taking into consideration all impacts, negative and positive.

Experimentation and innovation can be important

Resettled people often strike out on their own; they may often prefer to avoid being dependent on government and the social disruption caused by relocation can be a trigger for

physical movement and/or upward mobility. In this sense, impacts within a community are not necessarily homogeneous, and there will be differential impacts (Borras and Franco, 2013) and different possible development trajectories for each family, according to their situation.

This suggests that not all displacees aspire to remain as rural farmers. How many of them would prefer to abandon rural activities that they may find burdensome or unproductive? For example, could resettlement policy identify those who wish to 'hang on', 'step up' or 'step out' of farming activity (Dorward et al, 2009)? Diversification (within the farming system, as well as across the family occupations) is a tried and tested strategy for managing rural risk.

Should resettlement policy be more discerning and identify opportunities for early adopters who can innovate and build a new life, in contrast to those who are more likely to require a safety net? Is it right to impose a single one-size-fits-all policy on everyone and if not, what legal system can be envisaged that can provide a 'menu' of opportunity without creating inequality in respect of rights? Displaced people could be given a choice as to what kind of package they want, including a broader range of options than is presently on offer.

The literature contains a long thread of experience on this important topic, without clear conclusions. In many cases, flexible cash compensation that allows mobility and flexibility may be a viable strategy, rather than locking resettled people into potentially marginal rural livelihoods, especially in countries where all the best land is already occupied. While Cernea's influence in promoting 'land-for-land' compensation in World Bank funded projects was probably correct at the time, the increasing pressures on land and rural livelihoods may justify adoption of a less rigid approach. In many cases today, land available to be offered as compensation is likely to be marginal and less fertile. Many contemporary rural households are actively strategising to 'leave' the village and get higher-paying 'modern' jobs in urban areas. Resettlement could let them achieve this aspiration.

Land rights and customary vs modern legal systems: calculation of compensation

The literature agrees that the first step in successful resettlement is to properly compensate for lost assets. While the process does not end there, it is generally considered an essential first step. Identifying asset ownership depends on the legal regime for housing and for land and is often determined by national legislation and subject to due legal process. Many publications argue that compensation has been inadequate, but with little analysis of the underlying rationale, or assessment of the true cost of land, or lost fruit trees, for example. In many countries there is no transparent local market for land or fruit trees so their true value to communities is difficult to ascertain. Government fixed compensation rates for lost assets are often negligible and inadequate, and untested in court. As noted above, analytical attention to these kinds of costs is limited in the literature.

In many countries, customary land rights predominate, including individual, family and/or community-level use rights. Modern legal systems in such countries assume a single asset owner who can receive compensation in the case of loss, undifferentiated by customary rules or by within-household gender considerations (both men and women's assets may be registered under the name of the household head). The underlying causes of inadequate compensation may therefore be challenging to tease out, and the often blunt nature of

modern law makes it difficult to achieve the granularity necessary to properly compensate customary rights when these are being lost through resettlement.

In addition, the exact nature of individual rights under customary tenure systems is not always clearly defined in legislation and/or is contested. A key question is whether customary land rights held by families constitute 'usufruct', leasehold or tenancy, or whether they are stronger and more akin to ownership. Technically, local chiefs may be considered as 'trustees' of communal land and any money accruing from the sale of that land belongs to the community, represented by the chief. However, in practice the chief often takes all the money, and 'community consultation' is inadequate. This practice is sometimes justified on the basis of an argument that a chief is in fact the ultimate owner of land, and not a custodian. Equally contentious, the concept of 'community consultation' raises the question of 'which community?' Should only those whose land will be sold be allowed a say, or should the entire community, consisting perhaps of tens of thousands of people with different interests and different relationships with the local authority, be allowed a say in what happens to lands used by other households?

There are therefore very specific traditional and legal rights to land enshrined in both custom and modern legislation. The literature does not sufficiently disaggregate such complexities in understanding and articulating the factors affecting resettlement.

Institutions and governance

Large dam investments are generally central government led, although often delegated to specialised agencies during the planning and construction phase. The institutional architecture and roles of different agencies has received little attention in the literature, yet there are legitimate questions. For example, who is ultimately responsible for ensuring a good development outcome for resettled people, and does this change through time? Ten years after resettlement, the project teams, and on occasion the agencies themselves, may have been disbanded. Which agency do resettled people turn to and are there any financial resources to provide support after the project has been operating for many years? Which institutional model works best? How do these provide sustainability guarantees? What role is there for local government in supporting a specific subset of their local population – should they have the right to be treated differently? These kinds of questions receive little attention in the literature, but are increasingly relevant in the light of discussions around benefit-sharing (see above) that might provide support for communities through the lifetime of the project and require institutions to function over many decades.

Learning from experience: research influencing practice and evidence of uptake

Learning from unsatisfactory resettlement outcomes is a challenge for governments, donors and financiers. If they were to genuinely reflect research findings, they would be telling communities to be displaced that they are likely to suffer years of trauma (phase 1 of Scudder's [2005] four-stage theory). In practice, they make reassuring promises that livelihoods will be improved in order to create a positive discourse around the project, while much of the evidence suggests that this is unlikely to be achieved. Consultants produce development and investment plans that 'programme' the post-resettlement redevelopment process, often at a cost of millions of dollars. The communication challenges inherent in this

reality make it hard for governments and donors to embrace learning. As has been the case for many years, lessons from rural development are hard to absorb for public sector institutions that are often clunky and lacking in delivery capacity (Hulme, 1989).

In the 1980s, the World Bank was a major funder of large dams and its specialised anthropological staff (social development advisers) spent extensive time in the field, wrote up their findings freely, and helped to frame the agenda for resettlement policy for the next 30 years. Today the situation is different, as the multilateral banks appear more defensive of their achievements and recent official publications on flagship projects (eg the World Bank report, 'Doing a dam better', Porter and Shivakumar, 2011 on the Nam Theun II dam in Laos) are more self-congratulatory than objective independent analysis, which denotes a significant change from past practice. The space available for exchanges between practitioners and researchers on how to do resettlement better has shrunk as this intellectual space has closed. Where space has opened more is between anthropologists and others to inform a range of NGOs and civil society groups, building the increasing influence that NGOs and civil society groups have on how local communities and others respond to dam projects (Oliver-Smith, 2009; Price, 2009).

There is little evidence to suggest that the resettlement frameworks proposed by researchers are being taken up by the consulting companies that are involved in large dam planning and the drafting of Environmental and Social Impact Assessments (ESIA) and their associated management plans. ESIA methods are constraining and vary according to the very specific terms of reference for each contract, few, if any, of which take any account of the frameworks suggested by academics.

In conclusion, Takes (1973) proposals remain startlingly relevant today and constitute an indictment of 45 years of evolving policy and experience and an example of the 'implementation gap' between knowledge and practice. The literature published since abounds with recommendations on the need to improve resettlement conditions but provides little in the way of precise guidance on how to achieve that in practice, or how and when to measure whether it has been achieved or not. In general, projects have been better at providing infrastructure and services (electricity, water, education, health services, access roads, religious buildings etc) than in providing job creation, quality farmland, personal incomes and secure livelihoods. Governments have delivered in sectors (eg social and infrastructure) where increased spend on service delivery can be effective but less so in economic sectors such as market-based jobs and income. Government policies have proved a blunt instrument when faced with the stratification and heterogeneity of communities and households, all with different needs.

In looking forward, the main emphasis in the literature seems to lie in initially allocating proper compensation for lost assets, and then providing long-term support over many decades for resettled communities, through benefit-sharing mechanisms that give resettled people an active stake in the project and offer a safety net for the most vulnerable.

Annexure: Search words and phrases

Dam resettlement

Dam displacement

Social impact of dams

Hydropower resettlement

Hydropower social impact

Resettlement and gender

Dams and gender

Indigenous and dams

Tribals and dams

Indigeneity

Benefit-sharing

Dams

Hydropower

Bibliography

- Aberle, D. (1993). 'The Navajo-Hopi land dispute and Navajo relocation'. In Cernea, M. and Guggenheim, S. (eds), *Anthropological Approaches to Resettlement: Policy, Practice and Theory*. Boulder, CO: Westview Press.
- Adewale, J.G. and Ikeola, R.F. (2005). 'Resettlement coping strategies of women settlers around dams in Nigeria: a case study of Erelu Dam in Oyo, Oyo State, Nigeria'. *Journal of Human Ecology* 17(3), 177–181. <https://doi.org/10.1080/09709274.2005.11905777>
- Agnihotri, A. (2008). 'Resettlement issues in water resources development: an empirical study of the lower Suktel irrigation project, Orissa'. *Social Change* 38(4), 645–660. <https://doi.org/10.1177/004908570803800405>
- Agnihotri, A. (2016). 'Building dams, ignoring consequences: the Lower Suktel Irrigation Project in Orissa'. In Mathur, H. M. (ed), *Assessing the Social Impact of Development Projects*. https://doi.org/10.1007/978-3-319-19117-1_5
- Ahsan, R. and Ahmad, M.H.B.H. (2016). 'Development, displacement and resettlement a challenge for social sustainability: a study on mega development project (Bakun Dam) in Sarawak'. *Journal of Advances in Agricultural & Environmental Engg* 3(1), 47–51.
- Amarteifio, G.W., Butcher, D.A.P. and Whitman, D. (1966). *Tema Manhean: A Study of Resettlement*. Kumasi: Ghana Universities Press for the University of Science and Technology, Kumasi.
- Ansar, A., Flyvbjerg, B., Budzier, A. and Lunn, D. (2014). 'Should we build more large dams? The actual costs of hydropower megaproject development'. *Energy Policy* 69, 43–56. <https://doi.org/10.1016/j.enpol.2013.10.069>
- Asher, M. and Atmavilas, Y. (2011). 'Special economic zones: the new “land” mines'. In Mathur, H. (ed), *Resettling Displaced People: Policy and Practice in India*. New Delhi: Routledge.
- Asif, M. (2000). 'Why displaced persons reject project resettlement colonies'. *Economic and Political Weekly* 35(24) [online resource available at <https://www.epw.in/journal/2000/24/commentary/why-displaced-persons-reject-project-resettlement-colonies.html>]. Accessed 21 June 2018.
- Asthana, V. (2012). 'Forced displacement: a gendered analysis of the Tehri Dam Project'. *Economic and Political Weekly* 47(47/48), 96–102.
- Baden, S. and Goetz, A.M. (1997). 'Who needs [sex] when you can have [gender]? Conflicting discourses on gender at Beijing'. *Feminist Review* 56, 3–25.
- Bazin, F., Skinner, J.R. and Koundouno, J. (2011). *Sharing the Water, Sharing the Benefits: Lessons from Six Large dams in West Africa* [online resource available at <http://pubs.iied.org/pdfs/17510IIED.pdf>]. Accessed 21 June 2018.
- Beazley, K. (2009). 'Interrogating notions of the powerless oustee'. *Development and Change* 40(2), 219–248. <https://doi.org/10.1111/j.1467-7660.2009.01513.x>

- Bisht, T.C. (2009). 'Development-induced displacement and women: the case of the Tehri Dam, India'. *The Asia Pacific Journal of Anthropology* 10(4), 301–317. <https://doi.org/10.1080/14442210903271312>
- Borras, S.M. and Franco, J.C. (2013). 'Global land grabbing and political reactions "from below"'. *Third World Quarterly* 34(9), 1723–1747. <https://doi.org/10.1080/01436597.2013.843845>
- Brown, P.H., Tullos, D., Tilt, B., Magee, D. and Wolf, A.T. (2009). 'Modeling the costs and benefits of dam construction from a multidisciplinary perspective'. *Journal of Environmental Management* 90, S303–S311. <https://doi.org/10.1016/j.jenvman.2008.07.025>
- Cernea, M.M. (1993). 'Anthropological and sociological research for policy development on population resettlement'. In Guggenheim, S. and Cernea, M. (eds), *Anthropological Approaches to Involuntary Resettlement: Policy, Practice and Theory*. Boulder, CO: Westview Press.
- Cernea, M.M. (1997). 'The risks and reconstruction model for resettling displaced populations'. *World Development* 25(10), 1569–1587. [https://doi.org/10.1016/S0305-750X\(97\)00054-5](https://doi.org/10.1016/S0305-750X(97)00054-5)
- Cernea, M.M. (ed). (1999). *The Economics of Involuntary Resettlement: Questions and Challenges*. Washington, DC: World Bank.
- Cernea, M.M. (2000). 'Risks, safeguards and reconstruction: a model for population displacement and resettlement'. *Economic and Political Weekly* 35(41), 3659–3678.
- Cernea, M.M. (2003). 'For a new economics of resettlement: a sociological critique of the compensation principle'. *International Social Science Journal* 55 (175), 37–45.
- Cernea, M.M. (2008). 'Compensation and benefit sharing: why resettlement policies and practices must be reformed'. *Water Science and Engineering* 1(1), 89–120. [https://doi.org/10.1016/S1674-2370\(15\)30021-1](https://doi.org/10.1016/S1674-2370(15)30021-1)
- Cernea, M.M. and Guggenheim, S.E. (eds). (1993). *Anthropological Approaches to Resettlement: Policy, Practice, and Theory*. Boulder, CO: Westview Press.
- Cernea, M.M. and Maldonado, J.K. (2018). *Challenging the Prevailing Paradigm of Displacement and Resettlement Risks, Impoverishment, Legacies, Solutions*. Abingdon, Oxon; New York: Routledge.
- Cernea, M.M. and Mathur, H.M. (eds). (2008). *Can Compensation Prevent Impoverishment? Reforming Resettlement Through Investments and Benefit-sharing*. New Delhi: Oxford University Press.
- Cernea, M.M. and McDowell, C. (eds). (2000). *Risks and Reconstruction: Experiences of Resettlers and Refugees*. Washington, DC: World Bank.
- Cernea, M.M. and World Bank (eds). (1985). *Putting People First: Sociological Variables in Rural Development*. New York: Published for the World Bank by Oxford University Press.

- Chandler, D. and Reid, J. (2018). "Being in being": contesting the ontopolitics of indigeneity'. *The European Legacy* 23(3), 251–268.
<https://doi.org/10.1080/10848770.2017.1420284>
- Chatty, D. and Colchester, M. (2002). *Conservation and Mobile Indigenous Peoples: Displacement, Forced Settlement and Sustainable Development*. Berghahn Books. New York.
- Colchester, M. (2000). *Forest People's Programme: Sharing Power: Dams, Indigenous Peoples and Ethnic Minorities* (No. Thematic Review 1.2) [online resource available at <http://www.forestpeoples.org/sites/fpp/files/publication/2010/08/damsipsethnicminoritiesnov00eng.pdf>]. Accessed 21 June 2018.
- Colson, E. (1971). *The Social Consequences of Resettlement: The Impact of the Kariba Resettlement upon the Gwembe Tonga*. Manchester: Manchester University Press.
- Colson, E. (1999). 'Gendering those uprooted by "development"'. In Indra, D. (series ed), *Theory and Practice: Engendering Forced Migration* (1st ed). <http://www.jstor.org/stable/j.ctt9qct28.8>
- Colson, E. and Scudder, T. (1982). 'From welfare to development: a conceptual framework for the analysis of dislocated people'. In *Involuntary Migration and Resettlement: The Problems and Responses of Dislocated People*. Boulder, CO: Westview Press.
- Cullet, P. (2001). 'Sardar Sarovar judgment and human rights'. *Economic and Political Weekly* 36(18), 1503–1504.
- de Wet, C. (1993). 'A spatial analysis of involuntary community relocation: a South African case study'. In Guggenheim, S. and Cernea, M. (eds), *Anthropological Approaches to Involuntary Resettlement: Policy, Practice and Theory*. Boulder, CO: Westview Press.
- de Wet, C. (2001). 'Economic development and population displacement: can everybody win?' *Economic and Political Weekly* 36(50), 4637–4646.
- Del Bene, D., Scheidel, A. and Temper, L. (2018). 'More dams, more violence? A global analysis on resistances and repression around conflictive dams through co-produced knowledge'. *Sustainability Science* 13(3), 617–633.
- Delang, C.O. and Toro, M. (2011). 'Hydropower-induced displacement and resettlement in the Lao PDR'. *South East Asia Research* 19(3), 567–594.
<https://doi.org/10.5367/sear.2011.0056>
- Dhagamwar, V. (2011). 'From Narmada to Nandigram: the never ending clamour for land as the only route to resettlement'. In Mathur, H. (ed), *Resettling People: Policy and Practice in India*. New Delhi: Routledge.
- Dietrich, G. (2000). 'Dams and people: Adivasi land rights'. *Economic and Political Weekly* 35(38), 3379–3380.
- Dietrich, G. (2002). 'Sardar Sarovar Project: braving the rising waters'. *Economic and Political Weekly*, 37(38), 3878–3880.

- Dingwerth, K. (2005). 'The democratic legitimacy of public-private rule making: what can we learn from the World Commission on Dams?' *Global Governance* 11(1), 65–83.
- Dorward, A., Anderson, S., Bernal, Y.N., Vera, E.S., Rushton, J., Pattison, J. and Paz, R. (2009). 'Hanging in, stepping up and stepping out: livelihood aspirations and strategies of the poor'. *Development in Practice* 19(2), 240–247. <https://doi.org/10.1080/09614520802689535>
- Downing, T.E. and Garcia-Downing, C. (2009). 'Routine and dissonant cultures: a theory about the psycho-socio-cultural disruptions of involuntary displacement and ways to mitigate them without inflicting even more damage'. In Anthony Oliver-Smith, (ed) *Development and Dispossession: The Crisis of Forced Displacement and Resettlement*. Santa Fe, NM: School for Advanced Research Press.
- Dubash, N.K. (2009). 'Global norms through global deliberation? Reflections on the World Commission on Dams'. *Global Governance* 15(2), 219–238.
- Dubash, N.K., Dupar, M., Kothari, S. and Lissu, T. (2002). 'A watershed in global governance? An independent assessment of the World Commission on Dams (executive summary)'. *Politics and the Life Sciences* 21(1), 42–62.
- Dwivedi, R. (1999). 'Displacement, risks and resistance: local perceptions and actions in the Sardar Sarovar'. *Development and Change* 30(1), 43–78. <https://doi.org/10.1111/1467-7660.00107>
- Dwivedi, R. (2002). 'Models and methods in development-induced displacement (review article)'. *Development and Change* 33(4), 709–732.
- Dwivedi, R. (1998). 'Resisting dams and "development": contemporary significance of the campaign against the Narmada projects in India'. *The European Journal of Development Research* 10(2), 135–183. <https://doi.org/10.1080/09578819808426721>
- Editorial. (2012). 'Damned by the dam: the protest by Omkareshwar oustees illustrates development without humanity'. *Economic and Political Weekly* 47(38), 7–8.
- Égré, D., Roquet, V. and Durocher, C. (2008). 'Benefit sharing to supplement compensation in resource extractive activities: the case of dams'. In Cernea, M. and Mathur, H. (eds), *Can Compensation Prevent Impoverishment?* Oxford: Oxford University Press.
- Égré, D. and Senécal, P. (2003). 'Social impact assessments of large dams throughout the world: lessons learned over two decades'. *Impact Assessment and Project Appraisal* 21(3), 215–224. <https://doi.org/10.3152/147154603781766310>
- Fahim, H.M. (1983). *Egyptian Nubians: Resettlement and Years of Coping*. Salt Lake City, UT: University of Utah Press.

- Fernandes, W. (2000). 'From marginalization to sharing the project benefits'. In Cernea, M. and McDowell, C. (eds), *Risks and Reconstruction: Experiences of Resettlers and Refugees*. Washington, DC: World Bank.
- Fujikura, R. and Nakayama, M. (eds). (2015). *Resettlement Policy in Large Development Projects*. London; New York: Routledge.
- Garikipati, S. (2002). 'Resettlement sites of Narmada Valley Project: some revealing insights'. *Economic and Political Weekly* 37(23), 2257–2266.
- Garikipati, S. (2011). 'Misunderstood and misused: re-examining the compensation criterion in resettlement'. In Mathur, H. (ed), *Resettling Displaced People: Policy and Practice in India*. Abingdon: Routledge.
- Guggenheim, S. (1993). 'Peasants, planners and participation: resettlement in Mexico'. In Guggenheim, S. and Cernea, M. (eds), *Anthropological Approaches to Involuntary Resettlement: Policy, Practice and Theory*. Boulder, CO: Westview Press.
- Guha, A. (2011). *Special Economic Zones, Land Acquisition and Civil Society in West Bengal*. New Delhi: Routledge.
- Heming, L., Waley, P. and Rees, P. (2001). 'Reservoir resettlement in China: past experience and the Three Gorges Dam'. *The Geographical Journal* 167(3), 195–212. <https://doi.org/10.1111/1475-4959.00018>
- Hensengerth, O (2011). *The Interactions of Chinese Institutions with Host Governments in Dam Construction: The Bui Dam in Ghana*. Discussion Paper 3/2011. Deutsches Institut für Entwicklungspolitik. ISSN 1860-0441
- Hulme, D. (1989). 'Learning and not learning from experience in rural project planning'. *Public Administration and Development* 9(1), 1–16. <https://doi.org/10.1002/pad.4230090102>
- IFC. (2002). *Handbook for Preparing a Resettlement Action Plan*. International Finance Corporation. Washington.
- Indra, D.M. (ed). (1998). *Engendering Forced Migration: Theory and Practice*. New York: Berghahn Books.
- Iyer, R.R. (2001). 'World Commission on Dams and India: analysis of a relationship'. *Economic and Political Weekly* 36(25), 2275–2281.
- Jackson, C. and Pearson, R. eds (1998). *Feminist Visions of Development: Gender Analysis and Policy* Routledge.London.
- Jehom, W.J. (2013). 'Reconstruction of post-resettlement gender relations: the Kenyah-Badeng of Sungai Asap, Sarawak, Malaysia'. *Asian Journal of Women's Studies* 19(2), 122–147. <https://doi.org/10.1080/12259276.2013.11666151>
- Kabeer, N. (1994). *Reversed Realities: Gender Hierarchies in Development Thought*. London; New York: Verso.
- Kala, P. (2001). 'In the spaces of erasure: globalisation, resistance and Narmada River'. *Economic and Political Weekly* 36(22), 1991–2002.

- Kirchherr, J. (2018). 'Strategies of successful anti-dam movements: evidence from Myanmar and Thailand'. *Society & Natural Resources* 31(2), 166–182.
- Kirchherr, J. and Charles, K.J. (2016). 'The social impacts of dams: a new framework for scholarly analysis'. *Environmental Impact Assessment Review* 60, 99–114.
- Kirchherr, J., Matthews, N., Charles, K.J. and Walton, M.J. (2017). "“Learning it the hard way”: social safeguards norms in Chinese-led dam projects in Myanmar, Laos and Cambodia'. *Energy Policy* 102, 529–539.
- Kirchherr, J., Pohlner, H. and Charles, K.J. (2016). 'Cleaning up the big muddy: a meta-synthesis of the research on the social impact of dams'. *Environmental Impact Assessment Review* 60, 115–125.
- Kirchherr, J., Pomun, T. and Walton, M.J. (2018). 'Mapping the social impacts of ‘Damocles Projects’: the case of Thailand’s (as yet unbuilt) Kaeng Suea Ten Dam'. *Journal of International Development* 30(3), 474–492.
- Koenig, D. (2018) Problems Endure despite Policies: Urban Livelihoods after Forced Displacement. In Cernea, M. and Maldonado, J. (eds.) *Challenging the Prevailing Paradigm of Displacement and Resettlement*, Oxon: Routledge.
- Kuper, A. (2003). 'The return of the native'. *Current Anthropology* 44(3), 389–402. <https://doi.org/10.1086/368120>
- Kurniati, E., Sutanhaji, A.T. and Anggraini, O.A. (2013). 'Land Acquisition and Resettlement Action Plan (LARAP) of dam project using analytical hierarchical process (AHP): a case study in Mujur Dam, Lombok Tengah District-West Nusa Tenggara, Indonesia'. *Procedia Environmental Sciences* 17, 418–423. <https://doi.org/10.1016/j.proenv.2013.02.055>
- Kusakabe, K., Lund, R., Mishra Panda, S., Wang, Y. and Vongphakdy, S. (2015). 'Resettlement in Lao PDR: mobility, resistance and gendered impacts'. *Gender, Place & Culture* 22(8), 1089–1105. <https://doi.org/10.1080/0966369X.2014.939149>
- Lassailly-Jacob, V. (2000). 'Land-based strategies in dam-related resettlement programmes in Africa'. In McDowell, C. (ed), *Understanding Impoverishment: The Consequences of Development-induced Displacement*. New York: Berghahn Books.
- Levien, M. (2011). 'Rationalising dispossession: the land acquisition and resettlement bills'. . *Economic and Political Weekly* Vol. 46, No. 11 (MARCH 12-18, 2011), pp. 66-71i, T.M. (2000). 'Articulating indigenous identity in Indonesia: resource politics and the tribal slot'. *Comparative Studies in Society and History* 42(1), 149–179.
- Lin, C.Y.O. (2006). 'Autonomy re-constituted: social and gendered implications of dam resettlement on the Orang Asli of Peninsular Malaysia'. *Gender, Technology and Development* 10(1), 77–99. <https://doi.org/10.1177/097185240501000105>

- Mamdani, M. (2013). *Define and Rule: Native as Political Identity. The W.E.B. Du Bois Lectures*. Johannesburg: Wits University Press.
- Manchanda, R. (2004). 'Gender conflict and displacement: contesting "infantilisation" of forced migrant women'. *Economic and Political Weekly* 39(37), 4179–4186.
- Mathur, H. (2006). 'Resettling people displaced by development projects: some critical management issues'. *Social Change* 36(1), 36–86.
<https://doi.org/10.1177/004908570603600103>
- Mathur, H. (ed). (2011). *Resettling Displaced People: Policy and Practice in India*. New Delhi: Routledge and Council for Social Development.
- Mehta, L. (2009). *Displaced by Development: Confronting Marginalisation and Gender Injustice*. <https://doi.org/10.4135/9788132100959>
- Mehta, L. and Srinivasan, B. (2000). *Balancing Pains and Gains. A Perspective Paper on Gender and Large Dams* (Thematic Review 1.1 (b)). Cape Town.
- Meikle, S. and Youxuan, Z. (2000). 'Employment for displacees in the socialist market economy in China'. In Cernea, M. and McDowell, C. (eds), *Risks and Reconstruction: Experiences of Refugees and Resettlers*. Washington, DC: World Bank.
- Mittal, R., Reddy, I.U.B. and Mensan Gaba, K. (2014). *Rampur Hydropower Project: Land Acquisition, Resettlement and Community Development Practices* [online resource available at <https://openknowledge.worldbank.org/handle/10986/19978>]. Accessed 21 June 2018.
- Modi, R. (2004). 'Sardar Sarovar oustees: coping with displacement'. *Economic and Political Weekly* 39(11), 1123–1126.
- Nakayama, M. (1998). 'Post-project review of environmental impact assessment for Saguling Dam for involuntary resettlement'. *International Journal of Water Resources Development* 14(2), 217–229.
<https://doi.org/10.1080/07900629849411>
- Nakayama, M. and Furuyashiki, K. (2008). 'From expropriation to land renting: Japan's innovations in compensating resettlers'. In Cernea, M. and Mathur, H. (eds), *Can Compensation Prevent Resettlement?* Oxford: Oxford University Press.
- Navalawala, B.S. (2001). 'World Commission on Dams: biased?' *Economic and Political Weekly* 36(12), 1008–1010.
- Nayak, A. (2010). 'Big dams and protests in India: a study of Hirakud Dam'. *Economic and Political Weekly* 45(2), 69–73.
- Oliver-Smith, A. (ed). (2009). *Development & Dispossession: The Crisis of Forced Displacement and Resettlement* (1st ed). Santa Fe, NM: School for Advanced Research Press.

- Padel, F. and Das, S. (2011). 'Resettlement realities: the gulf between policy and practice'. In Mathur, H. (ed), *Resettling Displaced People: Policy and Practice in India*. New Delhi: Routledge.
- Parasuraman, S. (1999). *The Development Dilemma: Displacement in India*. New York: St. Martin's Press in association with Institute of Social Studies.
- Parasuraman, S. and Sengupta, S. (2001). 'World Commission on Dams: democratic means for sustainable ends'. *Economic and Political Weekly* 36(21), 1881–1891.
- Partridge, W.L. (1989). 'Involuntary resettlement in development projects'. *Journal of Refugee Studies* 2(3), 373–384. <https://doi.org/10.1093/jrs/2.3.373>
- Pearse-Smith, S.W.D. (2014). 'The return of large dams to the development agenda'. *Consilience* 11, 123–131.
- Perera, J. (2011). 'The limitations of current approaches to resettlement'. In Hari Mohan Mathur (ed) *Resettling Displaced People: Policy and Practice in India*. Abingdon: Routledge.
- Picciotto, R., Van Wicklin, W. and Rice, E. (eds). (2001). *Involuntary Resettlement: Comparative Perspectives*. New Brunswick, NJ: Transaction Publishers.
- Pokharel, J. (1995). 'Population displacement and compensation planning in Kulekhani hydroelectric project, Nepal'. In Mathur, H. and Cernea, M. (eds), *Development, Displacement and Resettlement: Focus on Asian Experiences*. New Delhi: Vikas Publishing House.
- Porter, I.C. and Shivakumar, J. (eds). (2011). *Doing a Dam Better: The Lao People's Democratic Republic and the Story of Nam Theun 2*. Washington, DC: World Bank.
- Price, S. (2009). 'Prologue: victims or partners? The social perspective in development-induced displacement and resettlement'. *The Asia Pacific Journal of Anthropology* 10(4), 266–282. <https://doi.org/10.1080/14442210903305821>
- Quetulio-Navarra, M., Znidarsic, A. and Niehof, A. (2017). 'Gender perspective on the social networks of household heads and community leaders after involuntary resettlement'. *Gender, Place & Culture* 24(2), 225–246. <https://doi.org/10.1080/0966369X.2016.1277185>
- Ranger, T. (1983). 'The invention of tradition in colonial Africa'. In Hobsbawm, E. and Ranger T. (eds), *The Invention of Tradition*. Cambridge: Cambridge University Press.
- Reddy, K.R.K. (2008). 'Rehabilitation or re-exclusion?' *The Indian Journal of Political Science* 69(3), 505–518.
- Rew, A., Fisher, E. and Pandey, B. (2000). *Addressing Policy Constraints and Improving Outcomes in Development Induced Displacement and Resettlement Projects*. University of Oxford/Department for International Development working paper.

- Sangvai, S. (2001). 'No full stops for the Narmada: life after the verdict'. *Economic and Political Weekly* 36(49), 4524–4526.
- Scudder, T. (2005). *A Comparative Survey of Dam-induced Resettlement in 50 Cases*. Chapter 3. The Future of Large Dams: Dealing with Social, Environmental, Institutional and Political Costs. Taylor and Francis. London
- Sengupta, N. (2001). 'World Commission on Dams: biased if misread'. *Economic and Political Weekly* 36(19), 1647–1649.
- Serra, M. (1993). 'Resettlement planning in the Brazilian power sector: recent changes in approach'. In Guggenheim, S. and Cernea, M. (eds), *Anthropological Approaches to Involuntary Resettlement: Policy, Practice and Theory*. Boulder, CO: Westview Press.
- Shaojun, C. (2018). 'Cost externalization impoverishes resettlers: findings from hydropower projects'. In Cernea, M. and Maldonado, J. (eds), *Challenging the Prevailing Paradigm of Displacement and Resettlement*. Oxon: Routledge.
- Si, Z. (1993). *A Theoretical Framework for Social Impact Analysis with Special Reference to Population Relocation at the Mactaquac Dam Project on the Saint John River*. (Dalhousie University) [online resource available at <http://dalspace.library.dal.ca/handle/10222/55366>]. Accessed 21 June 2018.
- Siciliano, G., Urban, F., Tan-Mullins, M., Pichdara, L. and Kim, S. (2016). 'The political ecology of Chinese large dams in Cambodia: implications, challenges and lessons learnt from the Kamchay Dam'. *Water* 8(9), 405; doi:10.3390/w8090405
- Siciliano, G., Urban, F., Tan-Mullins, M. and Mohan, G. (2018). 'Large dams, energy justice and the divergence between international, national and local developmental needs and priorities in the global South'. *Energy Research & Social Science* 41, 199–209. <https://doi.org/10.1016/j.erss.2018.03.029>
- Skinner, J. and Haas, L. (2014). *Watered Down? A Review of Social and Environmental Safeguards for Large Dam Projects*. International Institute for Environment and Development. London.
- Skinner, J., Krauss, J. and Newborne, P. (2014). *Redistribution of Revenues from Hydropower Dams: Review of Benefit-sharing Mechanisms and Local Control*. International Institute for Environment and Development. London.
- Skinner, J.R., Niasse, M. and Haas, L. (2009). *Sharing the Benefits of Large Dams in West Africa*. London: International Institute for Environment and Development.
- Smyth, E. and Vanclay, F. (2017). 'The social framework for projects: a conceptual but practical model to assist in assessing, planning and managing the social impacts of projects'. *Impact Assessment and Project Appraisal* 35(1), 65–80. <https://doi.org/10.1080/14615517.2016.1271539>
- Srinivasan, B. (2001). 'Social impacts of large dams: gender, equity and distribution issues'. *Economic and Political Weekly* 36(43), 4108–4114.

- Tagliarino, N. (2018). 'The need for national-level legal protection for populations displaced by expropriation: laws on land acquisition and resettlement in 50 countries'. In Cernea, M. and Maldonado, J. (eds), *Challenging the Prevailing Paradigm of Displacement and Resettlement: Risks, Impoverishment, Legacies, Solutions*. Oxon: Routledge.
- Takes, C.A.P. (1973). 'Resettlement of people from dam reservoir areas'. In Ackermann, W. C., White, G. F., Worthington, E.B. and Ivens, J.L. (eds), *Geophysical Monograph Series*. <https://doi.org/10.1029/GM017p0720>
- Takesada, N. (2009). 'Japanese experience of involuntary resettlement: long-term consequences of resettlement for the construction of the Ikawa Dam'. *International Journal of Water Resources Development* 25(3), 419–430. <https://doi.org/10.1080/07900620902965459>
- Tan, Y. (2008). 'Displacement and resettlement in the Three Gorges Project: issues confronting women migrants'. *Asian and Pacific Migration Journal* 17(1), 1–31. <https://doi.org/10.1177/011719680801700101>
- Tan, Y., Hugo, G. and Potter, L. (2005). 'Rural women, displacement and the Three Gorges Project'. *Development and Change* 36(4), 711–734. <https://doi.org/10.1111/j.0012-155X.2005.00431.x>
- Terminski, B. (2013). 'Development-induced displacement and resettlement: social problem and human rights issue (a bibliography)'. *Genf* [online resource available at <https://www.ssoar.info/ssoar/handle/document/32902>]. Accessed 21 June 2018.
- Thukral, E.G. (1996). 'Development, displacement and rehabilitation: locating gender'. *Economic and Political Weekly* 31(24), 1500–1503.
- Tortajada, C., Altinbilek, D. and Biswas, A.K. (eds). (2012). *Impacts of Large Dams: A Global Assessment* [online resource available at <http://www.springer.com/gb/book/9783642235702>]. Accessed 21 June 2018.
- Ty, P.H., Van Westen, A.C.M. and Zoomers, A. (2013). 'Compensation and resettlement policies after compulsory land acquisition for hydropower development in Vietnam: policy and practice'. *Land* 2(4), 678–704.
- UNEP. (2007). *Dams and Development: Relevant Practices for Improved Decision-making: A Compendium of Relevant Practices for Improved Decision-making on Dams and their Alternatives*. Nairobi: UNEP-DDP Secretariat.
- Van der Ploeg, L. and Vanclay, F. (2017). 'A human rights based approach to project induced displacement and resettlement'. *Impact Assessment and Project Appraisal* 35(1), 34–52. <https://doi.org/10.1080/14615517.2016.1271538>
- Van Wicklin, W. (1999). 'Sharing benefits for improving resettlers' livelihoods'. In Cernea, M. (ed), *The Economics of Involuntary Resettlement: Questions and Challenges*. Washington, DC: World Bank.
- Vanclay, F. (2017). 'Project-induced displacement and resettlement: from impoverishment risks to an opportunity for development?' *Impact Assessment and Project Appraisal* 35(1), 3–21. <https://doi.org/10.1080/14615517.2017.1278671>

- Weist, K.M. (1995). 'Development refugees: Africans, Indians and the Big Dams'. *Journal of Refugee Studies* 8(2), 163–184. <https://doi.org/10.1093/jrs/8.2.163>
- Whitehead, J. (2000). 'Monitoring of Sardar Sarovar resettles: a further critique'. *Economic and Political Weekly* 35(45), 3969–3976.
- Whitehead, J. (2002). 'Repopulating the landscape: space against place in Narmada Valley'. *Economic and Political Weekly* 37(14), 1363–1369.
- Whitehead, J. (2003). 'Space, place and primitive accumulation in Narmada Valley and beyond'. *Economic and Political Weekly* 38(40), 4224–4230.
- Wilmsen, B. (2018). 'Is land-based resettlement still appropriate for rural people in China? A longitudinal study of displacement at the Three Gorges Dam: land-based resettlement in Rural China'. *Development and Change* 49(1), 170–198. <https://doi.org/10.1111/dech.12372>
- Wilmsen, B. and Van Hulten, A. (2017). 'Following resettled people over time: the value of longitudinal data collection for understanding the livelihood impacts of the Three Gorges Dam, China'. *Impact Assessment and Project Appraisal* 35(1), 94–105. <https://doi.org/10.1080/14615517.2016.1271542>
- Wilmsen, B. and Wang, M. (2015). 'Voluntary and involuntary resettlement in China: a false dichotomy?' *Development in Practice* 25(5), 612–627.
- Windsor, J.E. and McVey, J.A. (2005). 'Annihilation of both place and sense of place: the experience of the Cheslatta T'En Canadian First Nation within the context of large-scale environmental projects'. *The Geographical Journal* 171(2), 146–165. <https://doi.org/10.1111/j.1475-4959.2005.00156.x>
- World Bank. (1990). *Operational Direction 4.30. "Involuntary Resettlement"*. World Bank. Washington.
- World Bank. (2001). *Operational Manual OP 4.12 – Involuntary Resettlement*. World Bank. Washington.
- World Bank. (2018). *Relocation and Resettlement*. World Bank. Washington.
- World Commission on Dams (ed). (2000). *Dams and Development: A New Framework for Decision-making*. London: Earthscan.
- Xia, B., Qiang, M., Chen, W., Fan, Q., Jiang, H. and 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. <https://doi.org/10.1016/j.landusepol.2018.02.002>
- Yeophantong, P. (2014). 'China's Lancang Dam cascade and transnational activism in the Mekong region: who's got the power?' *Asian Survey* 54(4), 700–724. <https://doi.org/10.1525/as.2014.54.4.700>
- Zarfl C, Lumsdon, A.E., Berlekam, J., Tydecks, L. and Tockner, K. (2015). 'A global boom in hydropower dam construction'. *Aquatic Sciences* 77(1), 161–170.