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Asmita Kabra

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## Assessing economic impacts of forced land acquisition and displacement: a qualitative rapid research framework

Asmita Kabra

School of Human Ecology, Ambedkar University Delhi, Delhi, India

### ABSTRACT

This paper sets out a qualitative rapid research framework for designing and conducting field-based studies of the livelihood risks and opportunities (LRO) arising from involuntary displacement and resettlement. The 'livelihood risks and opportunities' framework combines insights from the 'impoverishment risks and returns' framework and the 'sustainable livelihoods' approach. This paper discusses the advantages of the LRO framework over other currently used qualitative and rapid research methods, and demonstrates its application through case studies of conservation-induced displacement in India.

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Displacement; impact assessment; India; resettlement

### Introduction

Development-induced displacement and resettlement (DIDR) affects millions of people annually as land in rural and urban areas is increasingly diverted from its traditional uses towards large dams, industry, mining, power projects, roads, urbanization and wildlife conservation, among others (Cernea & Mathur 2008). While the number of people affected by displacement are routinely underestimated (Scudder 2005), it has been estimated that around 3 million people were displaced during 2004–13 by about a thousand projects funded by the World Bank alone (ICIJ 2015). Livelihood outcomes after resettlement have generally been reported as unsatisfactory (Cernea et al. 1996; World Bank 2015; Penz et al. 2011; ICIJ 2015; Smyth et al. 2015).

Given the contentious nature of displacement and resettlement, robust and practical tools are required for assessing short- and long-term impacts of displacement and resettlement, especially impacts on livelihoods. In many countries, such assessments are also a mandatory part of environmental and social impact assessments of development projects, since livelihood reconstruction is a stated policy goal in an increasing number of projects that involve population displacement (Cernea et al. 1996; World Bank 2014; Burdge 2002, 2003; Thomas 2002; Mathur 2011; Scudder & Goodland 2012).

This paper sets out a new qualitative rapid research framework for designing and conducting field-based studies of the livelihood risks and opportunities (LRO) arising from involuntary displacement and resettlement. The 'livelihood risks and opportunities' framework combines insights from the 'impoverishment risks

and returns' framework and the 'sustainable livelihoods' approach. This paper discusses the advantages of the LRO framework over other currently used qualitative and rapid research methods, and demonstrates its application through case studies of conservation-induced displacement in India.

### The IRR framework

The impoverishment risks and reconstruction or IRR framework (Cernea 2000) is the most commonly used framework used in DIDR policy-making and research. The framework identifies eight impoverishment risks – homelessness, landlessness, joblessness, loss of commons, morbidity and mortality, social disarticulation and marginalization – that usually arise in projects that cause population displacement. The IRR framework makes a strong contribution to the case for better planning and improved flow of funds for resettlement in order to mitigate these risks (Cernea 1999; Cernea & Mathur 2008; Wilmson et al. 2011). The IRR framework provides a very useful starting point for rapid assessment of the economic impacts of involuntary displacement. It highlights some common characteristics of resettlement outcomes (classified as eight impoverishment risks), which have been distilled from a large set of case studies. It underscores strongly the need for mitigating these risks and using robust resettlement planning and risk assessment tools for improving livelihood outcomes of displaced and project affected people (Scudder & Goodland 2012).

There are clear advantages in using the method, since it provides a finite checklist of commonly occurring risks

in resettlement, which can be tallied easily against ground realities using primary as well as secondary data. Not surprisingly, the IRR framework has been used extensively in the field of DIDR research by scholars and activists working on displacement due to dams, urban projects, mining, industrial projects and conservation projects, among others (Cernea & McDowell 2000; McDowell 2002; Cernea & Schmidt-Soltau 2006; Hasan 2006; Serageldin 2006; Cernea & Mathur 2008; Dhakal et al. 2011; Mathur 2012; Scudder & Goodland 2012; Modi 2013; Al Atahar 2014; Satiroglu & Choi 2015). The IRR framework has been criticized for being 'techno-managerial' and for not questioning the deeper developmental priorities underlying various population-displacing projects (Dwivedi 2002; Chakrabarti & Dhar 2010). Others have argued that the framework has very strong predictive, diagnostic, problem-solving and research functions within the paradigm of accepting the need for socially just economic growth. Therefore, it continues to be used extensively by government agencies, international financial institutions and academics across a range of countries and sectors for improved resettlement planning, implementation and evaluation (Cernea 2000).

### The livelihoods approach

The livelihoods approach emerged in the late 1980s, matured with the work of Chambers and Conway at the Institute of Development Studies, Sussex (Chambers & Conway 1992), and was subsequently popularised for a while by the UK Department for International Development or DfID (Farrington et al. 1999). This approach defines livelihoods as 'the means of gaining a living, including livelihood capabilities, tangible assets, such as stores and resources, and intangible assets, such as claims and access' (Chambers & Conway 1992; DfID 2000).

While recognizing the importance of structural factors that determine poverty and wealth, the livelihoods approach added a unique actor orientation to the study of rural poverty, by emphasizing the agency of the poor themselves in coping with their situation and making a living in the face of various risks and vulnerabilities (de Haan & Zoomers 2005). The livelihoods approach matured gradually in the 1990s and drew upon the literature on capabilities and entitlements on the one hand and environment and sustainability on the other. It became the preferred approach for project planning and impact assessment by international development agencies funding poverty alleviation projects in the global South. In the process, a wealth of literature was generated on methods, outcomes, limitations and extensions of the livelihoods approach (de Haan & Zoomers 2005; Scoones 2009).

### Combining the IRR and livelihoods frameworks

Variants of the IRR framework have been created by others to suit particular planning, research and advocacy

requirements. In particular, scholars have attempted to combine the IRR framework with the livelihoods framework (Scoones 1998, 2009; Bebbington 1999; de Haan & Zoomers 2005), thereby making it more amenable to the specific study of impacts of displacement on the livelihood of the affected people (Cernea 1995; McDowell 2002; Kabra 2013; Rantala et al. 2013). From the point of view of DIDR research, linkages with the livelihoods approach make eminent sense, since physical and economic displacement have critical impacts on the access, quantity and quality of resources which project affected people use to make a living. An integration of the two approaches can enhance the ability of the IRR framework to capture more comprehensively various types of LRO associated with displacement. It can also allow for a clear distinction to be made between access to livelihood resources (physical, economic, social, natural and financial), and the impact of this access on outcome variables like income, food security and health (including mental health).

A combination of these two frameworks can allow a researcher to list comprehensively the various types of livelihood assets and resources that might be affected by displacement and resettlement across different geographies and contexts. It thereby adds to the predictive and diagnostic powers of the IRR framework by enabling the researcher to relate pre- and post-displacement LRO and to examine how these are mediated by the institutions and processes that govern resettlement (Kabra 2013).

This does not, of course, undermine the need to study the various non-economic impacts of displacement, including its effects on identity, culture, mental health, well-being and marginalization. These are very critical non-economic dimensions of displacement and rehabilitation, which have received relatively less (but growing) attention in the literature on DIDR (Hakim 1996; Chatty & Colchester 2002; McLean & Stræde 2003; Mehta 2009; Price 2009; Cao et al. 2012; Kearns & Mason 2013). The idea behind combining the IRR and livelihoods framework is not to reify the economic aspects of displacement over sociocultural, political or psychological aspects. It aims simply to provide an easy and comprehensive toolkit for studying economic impacts, including those related to non-market-based livelihood activities. Another objective is to provide a framework in which the institutions, processes and legal frameworks governing DIDR can be combined meaningfully to study the economic impacts of displacement.

### The LRO framework

The LRO framework begins from the premise that pre-displacement livelihoods of a household are derived from its access to five types of resources/assets: physical, financial, natural, social and human (McDowell 2002; Schmidt-Soltau 2003; Rantala et al. 2013). Household access to these resources and assets changes after displacement, resulting in new economic risks and opportunities. The

**Table 1.** Livelihood risks and opportunities.

Livelihood risk/opportunity	Indicative list of livelihood assets and resources
Access to physical assets and resources	Individually owned physical assets (houses, barns, agricultural equipment, irrigation wells, means of transport, communications and entertainment); community assets (schools, roads, community fencing, boundary walls, meeting areas, places of worship, other community infrastructure)
Access to financial assets and resources	Cash savings, jewellery, other liquid assets, access to credit
Access to natural resources	Homestead and farm land, land with community use-rights, private and common pastures, livestock, tradable forest produce, water sources, fuel wood, medicinal plants, wild sources of food, wild meat, raw material for producing household items
Access to skills and human resources	Skills and knowledge, good health, motivation, confidence, other factors that affect an individual's ability to work
Access to reciprocal networks and safety nets	Beneficial self-help networks, formal and informal safety nets, community institutions, social norms and rules, social status, trust and goodwill

Source: Developed by the author.

matrix of risks and opportunities is likely to depend on the nature of pre-displacement livelihoods, the types of resource losses involved, the quantum of compensation received and the design and implementation of the resettlement policy and package. Together, these factors will determine who is defined as project affected, what is being compensated for, and how post-displacement livelihoods are conceptualized in law and policy. The formal and informal institutions which oversee the displacement and resettlement processes are critical, since they influence the nature and extent of participation of the displaced people in resettlement. These institutions also determine the extent to which resettlement is based on informed consent, and the spaces available to different sections of the displaced population for negotiation, resistance or adverse integration (McDowell 2002; de Haan & Zoomers 2005; Hanna & Vanclay 2013; Rantala et al. 2013).

Livelihoods approaches provide a good starting point for factoring in these issues into the study of DIDR. They can allow a researcher to map changes in access before and after displacement to different types of livelihood resources and assets – including financial, physical and natural resources as well as social networks and skills. Incorporating this into the IRR framework, the LRO framework argues that involuntary displacement can potentially trigger five corresponding categories of impoverishment risks and opportunities (Table 1). Using this checklist, it can be studied whether these risks eventually result in negative livelihood outcomes or are mitigated adequately through proper compensation, rehabilitation and benefit-sharing.

The LRO framework allows the researcher to capture both risks and opportunities comprehensively, and to assess their impact on overall livelihood outcomes in terms of multidimensional variables. Some common outcome variables used by the livelihoods approaches include income, food security, health impacts, resilience to shocks and ecological sustainability (Bebbington 1999; Scoones 2009). If risks are identified comprehensively and the task of risk mitigation is addressed effectively for a majority of displaced people, this can potentially improve their access to some (though not necessarily all) livelihood assets and generate positive

livelihood outcomes (Cernea & Mathur 2008). The figure below provides a conceptual outline of the LRO framework, derived by combining the broad analytical frames of the livelihoods and IRR approaches (Figure 1).

### **Capturing diversity of livelihood outcomes: wealth ranking and asset status tracking**

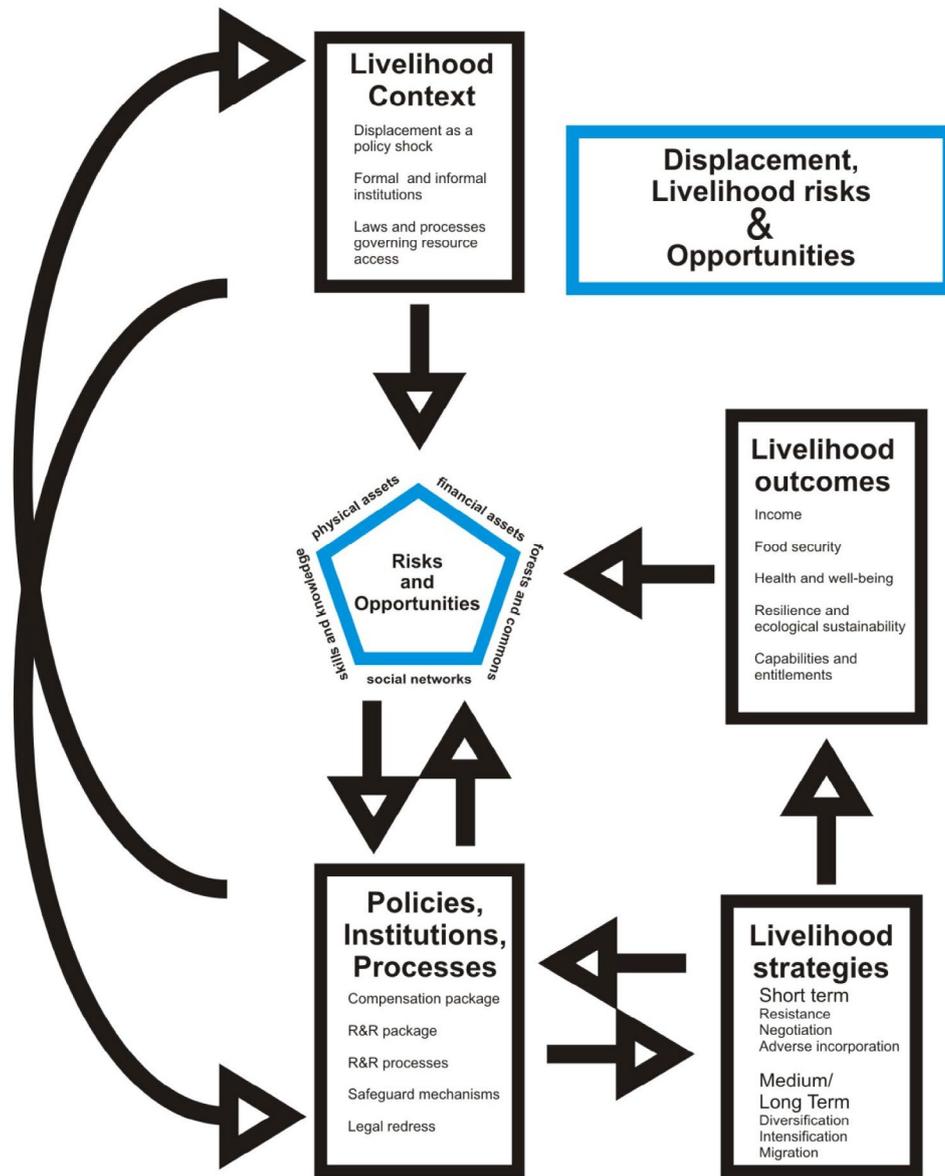
One of the understudied aspects in DIDR research is the differentiated distribution of risks and opportunities within the population affected by land acquisition (de Haan & Zoomers 2005; Zoomers 2010; Kabra 2013; Rantala et al. 2013). The LRO framework can be combined with simple participatory research methods like wealth ranking and livelihood asset status tracking to capture differential impacts across different categories of displaced persons, and to account for trade-offs generated through changed access to different livelihood resources. This can help in a better understanding of the varied trajectories of post-displacement livelihoods for different groups of resettlers, and to understand the processes of economic differentiation triggered by displacement and resettlement (Zoomers 2010; Rantala et al. 2013; Kabra & Mahalwal 2014). Examples of these approaches are highlighted in the next section.

### **Using the LRO framework: some useful case studies**

In this section, I illustrate the use of the LRO framework through case studies of the economic impact of displacement on local livelihoods using some variants of the IRR and livelihoods frameworks. The studies relate to conservation-induced displacement at two locations in India, and use variants of the broad LRO framework to assess livelihood impacts on the displaced households.

In one study, the LRO framework was combined with the Livelihood Assets Status Tracking (LAST) method (Bond et al. 2003).

LAST is a simple and rapid method which assesses impact of a project intervention on local livelihoods at the household level using changing asset base as proxy for impact. Its main advantage is that it is based on local



**Figure 1.** The LRO framework: a conceptual representation.  
Source: Developed by the author; graphic design: Shankar Chandra.

perceptions, and can convert qualitative judgments on well-being to quantitative analytical data. (Kabra 2013)

The key to this method is to use participatory techniques to design a series of qualitative 'word pictures' depicting the type and quality of the assets/resources in the specific location where the study is being conducted. Each word picture is associated with a rank or score on a 100-point scale. The respondents are then asked to choose the word picture that describes best their asset status before and after displacement. Since each word picture is associated with a numeric score, the qualitative data can also be converted into quantitative data for the purpose of creating an overall score, or an index of risks and opportunities. The advantage of the method is its ability to generate high-resolution data on quantity, quality and access to various livelihood resources. The disadvantage is that unless the data are converted into a common monetary denominator (like income or poverty

ratios), it does not lend itself to easy comparison with other contexts across space and time.

Table 2 depicts a series of site-appropriate LAST word pictures that were used by the author in a case study to identify LRO arising from changing access to natural resources. This method can be particularly useful for studies of conservation-induced displacement, where access to environmental resources and assets is usually the single most important livelihood risk for displaced households (Brockington & Igoe 2006; Cernea & Schmidt-Soltau 2006; West et al. 2006; Angelsen et al. 2014).

Similar word pictures were created by the author for all five categories of impoverishment risks. The respondent households were divided into three wealth categories using a wealth ranking exercise, and a comparison of asset status for pre- and post-displacement livelihoods was carried out for each wealth category (Kabra 2006, 2009, 2013). Detailed documentation of the resettlement

**Table 2.** Sample scoring sheet – livelihood asset status tracking for natural resources.

	Poor			Average			Good				Very good			
	0	5	10	25	30	35	50	55	60	70	75	80	85	95
Land (quantity and quality)	Little or no land; usually encroached landholdings; less than half year's food grain from own land; poor quality of soil, undulating land and heavy erosion; no source of irrigation; land mortgaged for loans; usually lease out land to others			Small landholdings (possibly encroached), with no irrigation and some patches of poor quality; get 7–10 months of food grain from own land; sloping land that is prone to soil erosion; usually lease in some land from others			Average landholdings, legal title deeds, have irrigation source; obtain adequate food grain to last entire year; grow some vegetables and cash crops; use good quality seeds; good quality, fertile soil; do not lease in or lease out land normally				Large legal holdings of irrigated land; possibly also have some encroached land; produce surplus food grain as well as cash crops, fruit and vegetables; use good quality (often hybrid) seeds and fertilizers; lease out land to others, or lease in land to cultivate using hired labour			
Livestock	Own one or two livestock; free grazing in forest instead of stall feeding; low and seasonal milk yield			Own some livestock with small but regular milk yield through the year; supplement stall feeding with free grazing; have some poultry occasionally for own use			Own good number of livestock; usually stall feed the animals; good milk yield all year round; regularly raise poultry for own use				Own good number of high-yielding livestock; stall feeding of animals using feed grown on own farm; adequate production of milk and surplus is converted to ghee or butter			
Fuel wood	Depend on forest for fuel wood; collection almost daily by head loads, usually by women			Depend on forest for fuel wood; collection less frequently by bullock carts, usually by men			Supplement fuel wood collection from forest with alternative sources like LPG, solar cookers etc.				Depend mostly on LPG, solar and other purchased fuel			
Traded natural resources	Depend regularly on forest produce collection to supplement income; high dependence on wild fruit, roots and berries in diet; hunt frequently for meat			Depend sometimes on forest produce collection (usually some high-value items); occasionally collect wild fruit, berries etc. for food; occasional hunting for food			Almost no forest produce collection for sale or for diet; purchase wild meat from others occasionally				No collection of forest produce for income; sometimes purchase forest produce from others as middlemen; no collection of wild fruit etc. for diet; may purchase wild meat from others occasionally; hunt for pleasure			
Resources for household use	Heavy dependence on timber, grasses, thatching material, other forest produce for making items for use in the homestead or for sale (baskets, cots, mats, brooms, ropes, etc.)			Moderate dependence on raw material from the forest for use in the homestead; also purchase some raw materials or finished items from the market or from others in the village			Low dependence on forest-based raw materials for making items of domestic use; usually buy durable items (baskets, containers, brooms, furniture etc.) from the market or from others in the village				Virtually no dependence on forest produce for raw material; usually buy all homestead items from the market			

Source: Developed by the author.

process and the compensation and resettlement package paid to displaced households was carried out using rapid surveys and in-depth interviews. These were then compared to the existing legal and policy requirements governing land acquisition for conservation-induced displacement in India at that point of time. This institutional analysis was then linked with the LAST findings about livelihood assets, risks and opportunities across different wealth categories to derive the impact of resettlement on livelihoods.

The LRO framework can be used to create pre- and post-displacement asset-holding profiles of the affected households. These are a useful addition to the IRR framework or to income-based impact assessment of displacement. Changing asset profiles capture the expenditure side of changes in people's livelihoods and can help to complicate the simplistic narratives of livelihood gains or losses. Displacement often means greater integration of resettled households into market-based activities, and this generates a very different risk-opportunity profile compared to their previous natural resource-dependent livelihoods.

For instance, in a case study of conservation-induced displacement in an Adivasi<sup>1</sup> community in central India (Kabra 2006), it was found that before displacement,

most households possessed basic physical assets like a house and livestock shelter without permanent roofing, simple agricultural implements like a plough and a bullock cart, and minimal means of entertainment like a transistor radio. A very small and more affluent minority (usually from non-Adivasi households) reported access to more expensive assets including irrigation well, tractor, pump set, harrow, mechanized plough, cultivator, thresher, TV set and other minor assets like wrist watch, bicycle and motorcycle. Community assets included temples and places of cultural significance in the vicinity of the village. There was no electricity in the villages inside the sanctuary, and access to the villages was by means of unpaved roads that were not navigable by vehicles during monsoons. Public infrastructure like transport facilities, a public hospital and functioning government schools were absent. After resettlement, physical asset-holdings were found to be far more varied, depending on timing and quantum of compensation received, nature of the replaced asset, location of the village and ability of the household to obtain access to government grants and loans.

Ownership of radio sets, bullock carts, bicycles and wristwatches declined, while that of tractors, mechanized ploughs and mechanized cultivators remained

unchanged. Access to an irrigation well, diesel pump set and manual plough increased, as did access to drinking water, schools and hospitals (both public and private) improved after displacement. However, quality of all public services was very poor. The most significant improvement in community assets occurred in electricity, roads and communication facilities. Thus, within the risk/opportunity category of 'access to physical capital', the changes were diverse and involved trade-offs that are difficult to collapse into a single index.

Resettlement to a non-forested locale devalued hitherto vital life skills like hunting, tracking and foraging, and local ecological knowledge. Instead, new life skills were required for successful entry into commercial, input-intensive, irrigated agriculture, petty enterprises and formal jobs. Old kinship and other networks were of little use at the relocation site to negotiate with the host community as well as with agents of the state and the market. Better networked households were able to deploy social capital successfully to earn from non-farm sources like petty trade, money lending, hiring out of equipment and assets, and remittances from members employed in government jobs and private jobs outside the region. Households with poor social networks suffered livelihood setbacks which many of them have not been able to recover from, leading to emergence of sharp social and economic differentiation in the post-relocation period (Kabra 2009; Kabra & Mahalwal 2014). In terms of financial assets too, similar results were found, and displacement resulted in disruption in creditworthiness and reduced access to credit from formal as well as informal sources. Reduced creditworthiness raised household vulnerability due to higher dependence on wage labour, seasonal migration and sharecropping (Kabra 2006, 2009).

## Discussion

In this paper, I set out the broad contours of the LRO framework, which combines the IRR framework with the livelihoods approach. I provided a quick guide to case studies from the global south which used the LRO or similar frameworks in different contexts, as a quick reference guide to aspiring scholars of DIDR. I also listed a few participatory rural appraisal techniques like asset status tracking and wealth ranking, which might be useful for researchers interested in carrying out a rapid study of DIDR with limited time and resources.

The LRO framework captures the complexity of changes far more effectively than simple metrics like per capita income. It can help to demonstrate the vital linkages between different categories of livelihood risks, which can compound the vulnerability of some households and magnify the negative impact of displacement on their livelihood outcomes. It also brings out more clearly how economic risks related to loss of livelihood resources and assets are linked to risks of food insecurity,

marginalization and social disarticulation, which the IRR model foregrounds.

The use of the LRO framework can create a set of DIDR studies which can (a) talk more meaningfully to existing work on rural livelihoods in the global South, and (b) create a useful set of empirical studies that can be combined meaningfully spatially and temporally for the purpose of aggregation and comparison. The framework can be used across diverse scales and geographies (rural, urban and peri-urban) and for various drivers of displacement (development-induced, conservation-induced and conflict-induced). It can be adapted for analysing physical and economic displacement and for assessing impacts on resettlers and host communities. It allows for a comprehensive inventory of diverse types of assets and livelihoods lost due to displacement, while enabling researchers to explore the linkages between proximate loss of assets, intervening institutions and policy processes, and the resultant changes in livelihood outcomes like food security, income and vulnerability. It can help the researcher to identify the risks as well as opportunities inherent in the process of displacement and loss of access to livelihood resources, and also to highlight the role of state institutions and processes as well as the affected people's own coping strategies for livelihood reconstruction.

While the LRO framework provides important methodological advantages for both rapid and intensive appraisal of the livelihood impacts of involuntary displacement, it should be used subject to some caveats. Firstly, the listing of risks must not be mechanical, and due attention must be paid to issues of rights, tenure and access. Very often, these map awkwardly upon each other and result in variations between the planned and actual outcomes. It is important to recognize and acknowledge ambiguities in the very definitions of rights, tenure and access, which are the product of interplay between multiple forces historically and across space (de Haan & Zoomers 2005). The ways in which these multiple definitions are deployed by different actors in legitimating their own case over those of other contenders for the same resources needs careful study.

Second, the LRO framework provides a tool for listing changes in access to livelihood resources, but does not have the power to predict, a priori, which social actors will gain or lose, both immediately post-resettlement and in the long run. Displacement is only one among many events and factors that determine livelihood outcomes and trajectories for any given community, and a complex and multi-scalar set of socio-ecological and political processes govern agrarian change (Hammar & Rodgers 2008; Zoomers 2010; Borras et al. 2011; Fairbairn et al. 2014). The LRO framework can at best help to provide a more accurate 'snapshot' of livelihood risks, opportunities and outcomes of forced land acquisition and dispossession at a moment in time.

Third, the LRO does not provide a method for aggregating the livelihood outcomes generated by the interplay of various risks and opportunities. Aggregation of impacts is a major methodological challenge, especially in cases when a post-displacement gains and losses accrue to different actors, and are mediated by structural factors like caste, class, ethnicity and gender, as well as site-specific, ecological and historical/conjunctural factors. In fact, it may not be desirable to come up with any single measure of well-being, and a comprehensive understanding of post-resettlement livelihood outcomes will perhaps be better served by use of multiple measures that reflect the complex and dynamic realities of different individuals and groups.

## Note

1. The Adivasi refer to Scheduled Tribes listed under Section 342 of the Constitution of India.

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