

INDUSTRY DISCUSSION PAPER

Livelihoods, Food Security and Mining-Induced Displacement and Resettlement

MINING RESETTLEMENT .ORG

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Displacement

Physical displacement occurs when there is loss of residence or assets resulting from project-related land acquisition and/or land use that require affected persons to move to another location. Economic displacement occurs where there is a loss of assets or access to assets that leads to loss of income sources or other means of a livelihood as a result of project-related land acquisition or land use.

Entitlements

The range of measures, including compensation, income restoration, transfer assistance, income substitution, training, benefits and other actions accorded to those affected by displacement, depending on the nature of their losses, to restore their economic and social base.

Food Security

The state that exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life. Food security is critically fundamental to the wider livelihood considerations as people may experience food insecurity to preserve other assets or meet other objectives of their livelihoods. Food insecurity is primarily a problem of inter-related system failures that impact on the various dimensions of access to essential and nutritious foods, not simply one of production failures.

Food Systems

As a minimum, a food system includes the set of activities involved in producing food, processing and packaging food, distributing, retailing and consuming food. This includes the interactions between the bio-geophysical and human environments which determine how these activities are carried out. These activities then give rise to a set of outcomes, including food security, as well as associated environmental (e.g. ecosystem services), social (e.g. wealth, health status), economic (e.g. capital stocks) and ethical (e.g. equity and fairness) outcomes.[1]

Host population

People living in or around the destination sites that physically displaced persons will be resettled to.

Land acquisition

All methods of obtaining land for project purposes, which may include outright purchase, expropriation of property and acquisition of access rights, such as easements or rights of way. Involuntary land acquisition refers to the compulsory acquiring, or involuntary taking of land by government for public purpose where the land owner(s) must surrender their land involuntarily but retain the right to negotiate and appeal the amount of compensation proposed or terms on which the involuntary acquisition will take place. This includes land or assets for which the owner enjoys uncontested or other rights, including customary.

[1] Ingram, J 2011, 'A food systems approach to researching food security and its interactions with global environmental change', *Food Security,* vol. 3, no. 4, pp. 417–431; Ericksen, PJ 2008, 'Conceptualizing food systems for global environmental change research', *Global Environmental Change*, vol. 18, no. 1, pp. 234–245.

Land tenure	The system of rights and institutions that govern access to and use of land, and is often described in terms of `bundles of rights' to do certain things with land or other property. These rights derive from statutory and customary laws, as well as from institutions such as marriage, those of power and control, and through inheritance.
Livelihoods	Comprises the capabilities, assets and activities required for a means of living.[2] A livelihood is sustainable when it can cope with and recover from stresses and shocks and can maintain or enhance capabilities and assets both at that time and in the future, while at the same time not undermining the natural resource base. A livelihood system is the total combination of activities undertaken by a household or community to ensure a living. Participation in community-level socio-cultural and political activities is part of the livelihood system. The livelihood system also includes the total pattern of labour allocation of household members between crops, livestock, off-farm work, non-farm business and reproductive and community tasks.
Poverty	Traditionally, the concept of poverty has carried the notion of material deprivation. It is a multifaceted concept, which includes social, economic, and political elements and may be either absolute or relative. Absolute poverty is the lack of basic means of survival.[3] However, defining what the basic means of survival includes involves arbitrary standards because the issue of survival is immediately related to the quality of survival. Relative poverty takes into consideration individual social and economic status compared to the rest of society.
Relocation	The process through which physically displaced households are assisted to move from their place of origin to an alternative place of residence. Households may receive compensation for loss of assets or may be provided with replacement land or housing structures at the destination site.
Resettlement	The comprehensive process of planning, displacement, relocation, livelihood restoration and support for social integration. Involuntary resettlement occurs without the informed consent of the displaced persons or if they give their consent without having the power to refuse resettlement. Resettlement to pave way for mining is seen as involuntary because the process is mandatory.
Risk	The likelihood of occurrence of (external) shocks and stresses plus their potential severity, whereas vulnerability is commonly defined as the degree of exposure to risk (hazard, shock) and uncertainty.

[2] Scoones, I 1998, *Sustainable rural livelihoods: a framework for analysis*, IDS Working Paper 72, Institute of Development Studies, Brighton.
[3] MacPherson, S & Silburn, R 1998, 'The meaning and measurement of poverty', in *Poverty: A persistent global reality*, Routledge, London, UK, pp. 1-19.

Vulnerability	A state or condition of exposure to contingencies and stress, and the capacity of coping with the hazard or shock. The word encapsulates the notion that the extent to which people suffer from shocks or calamities depends on both their likelihood of being exposed to them, as well as their capacity to withstand them.

Introduction

Mining-induced displacement and resettlement (MIDR) is inherently complex, involving multiple social, spatial and political changes, with long-lasting impacts on people and projects. While there is no inherent reason to assume that resettlement should be a negative process, the nature, dynamics and coping strategies of communities impacted by MIDR are still not clearly understood, and there is a shortage of information to examine the capacity of the industry, or impacted communities, to meet the challenges of a context defined by MIDR. This is an emerging field of social performance capability requiring greater attention and investment by mining industry leaders.

In mining, resettlement can occur at any point throughout the project cycle. Resettlement can take place at both greenfield and brownfield sites and can occur over a period of several decades.[4] Unlike other sectors, project planning and investment decisions in mining are overwhelmingly governed by external factors, such as commodity prices, shareholder expectations, project financing requirements, in addition to national level legislative requirements and international standards at different project phases. Rapid fluctuations in commodity markets can lead to rapid changes to a project's mine development plan. This can in turn result in an unexpected demand for land by the project, which places pressure on all stakeholders to manage the process and effects of land acquisition and any associated displacement. These types of fluctuations are not as pronounced in other sectors (e.g. for rail, dam or highway projects).

In mining, a single displacement event can straddle different phases of a project's development. For instance, a resettlement may be planned during feasibility, physical relocation may be undertaken at construction, with livelihood programming later becoming the responsibility of operations. In practical terms, this means that different company personnel with different knowledge, skill sets and engagement with the project become involved in the management of a single resettlement event. Where MIDR events span multiple project phases, research suggests heightened levels of social and business risk around local economic dependency,[5] human rights impact, [6] and community conflict.

Within this context, livelihoods, and livelihood restoration more specifically, is increasingly recognised as an area for improvement. In this discussion paper, we outline key issues relating to livelihood restoration in the context of MIDR. Food security is included given its relationship to livelihoods, and because of its relevance to recent cases and debates.

Part 1 of this discussion paper begins with an overview of the Sustainable Livelihoods Approach (SLA). The SLA is used in this paper as a foundation for exploring the relationship between household livelihood systems and the external factors and events that drive both sustainability and impoverishment outcomes. We have used the Department for International Development's (DFID) SLA model as the basis for discussion.[7] The SLA

[4] Owen, JR & Kemp, D 2015. 'Mining-induced displacement and resettlement: a critical appraisal', *Journal of Cleaner Production*, vol. 87, no. 1, pp. 478-488.
[5] Filer, C & Macintyre, M 2006. 'Grass roots and deep holes: community responses to mining in Melanesia', *The Contemporary Pacific*, vol. 18, no. 2, pp. 215-231.
[6] Terminski, B 2012, Mining-induced displacement and resettlement: social problem and human rights issue (A global perspective), viewed 20 September 2017, https://www.miningresettlement.org/elibrary/mining-induced-displacement-and-resettlement-social-problem-and-human-rights-issue-a-global-perspective.
[7] DFID (1999) Sustainable Livelihoods Guidance Sheets. London: Department for International Development.

schematic below (figure 1) presents key components of the approach that are useful for understanding the drivers of livelihood outcomes.

A number of other well-known international frameworks, such as the International Finance Corporation (IFC)'s Performance Standard, make explicit reference to the central importance of household livelihood systems. We make use of the IFC's Performance Standard 5 on Involuntary Land Acquisition and Resettlement (herein IFC PS5) as the mining industry's benchmark standard for resettlement and livelihood restoration.[8] While IFC PS5 contains specific clauses and guidance notes for developers relating to the restoration of livelihood systems, the standard is not a conceptual or explanatory framework. Similarly, we have used Michael Cernea's Impoverishment Risks and Reconstruction (IRR) model as a means for highlighting areas of identified risk in resettlement practice.[9] Cernea's model, though well established in the international development policy literature, is concerned with a range of resettlement risks, of which livelihoods are but one component. The advantage of the SLA is that it provides users with a clear conceptual interface through which to examine the relationship between household assets, changes in the social and economic context, and the livelihood outcomes that follow.

Part 2 of the discussion paper the SLA framework is re-configured with each component of the model having an explicit emphasis on MIDR. The SLA provides a helpful structure through which to explore the effects of industrial activity, policy frameworks, government institutions and social programming on livelihood outcomes in MIDR. A major conceptual benefit of the SLA for resource companies is that the sequence of analysis begins with project's operating context and then moves through key areas where impacts and mitigation measures can shape the direction of livelihood outcomes. MIDR immediately affects the "vulnerability context" and offers a logical starting point from which to undertake analysis. In this section, a set of questions is presented to encourage discussion about how the industry is engaging with key issues. The discussion questions are provided to prompt thinking around capability and performance at policy, corporate and operational levels of practice.

Livelihood restoration has been identified by the industry as an area for improvement. Research findings from the recent practitioner study, together with direct engagement with the industry on resettlement projects, suggests that companies are not working from a strong knowledge base on this topic. [10] This discussion paper is designed to assist in surfacing knowledge gaps with a view to progressively establishing a technical foundation to support improved policy and practice outcomes.

8 International Finance Corporation (IFC). (2012). Performance Standards on Environmental and Social Sustainability. IFC. Retrieved from http://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/ifc+sustainability/publications/publications_handbook_pps.

[9] Cernea, M.M. (1997). The risks and reconstruction model for resettling displaced populations. World Development, 25(10): 1569–1587.

[10] In a recent study involving over 50 interviews with global practitioners in the mining industry, "livelihoods" was consistently identified as a neglected area of practice. This study supports decades of evidence from the hydropower, oil and gas, roads and urban development sectors, where the "livelihoods" have been seen as the primary barrier to proponents delivering successful resettlement outcomes for displaced peoples. See Kemp, D, Owen, JR, & Collins, N 2017, 'Global perspectives on the state of resettlement practice in mining', *Impact Assessment and Project Appraisal*, vol. 35, no. 1, pp.22-33.

PART 1: THE SUSTAINABLE LIVELIHOODS APPROACH

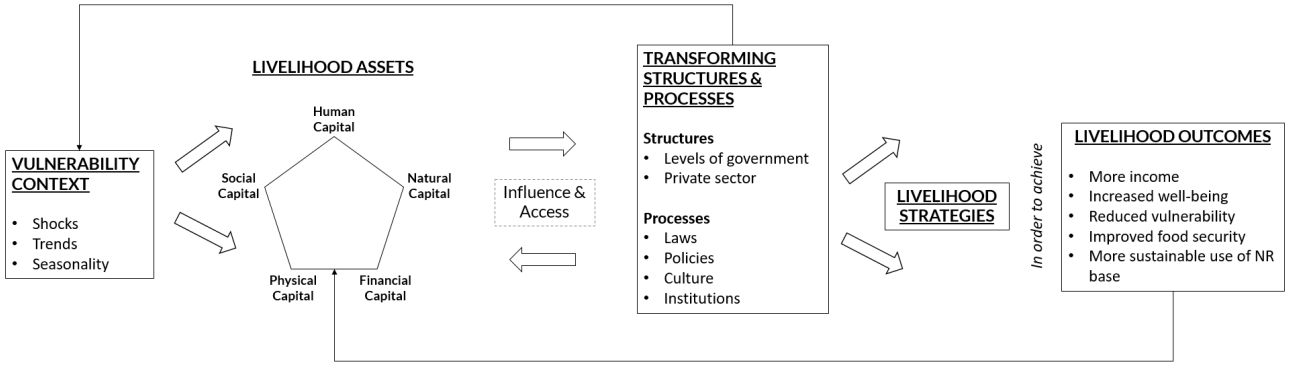
The concept of 'livelihoods' came to prominence in the international development literature in the 1970s as scholars and policy practitioners began to document the limitations of the post-war technical, top-down approach to development and poverty alleviation. There was increasing evidence that thinking about livelihoods solely in monetary terms was masking a set of underlying complexities that were inhibiting the success of many development programs.

The post-war model of "development" as industrial reconstruction was heavily inputs orientated and this extended to agricultural extension and poverty alleviation programs. This model focused largely on the transfer of technologies at one end of the intervention, with a view that increased incomes would result from cash crops at the other. Development practitioners in the 1970s and 1980s began trialling a series of "participatory" and "grass-roots" styled approaches as a means of ensuring that programs suited local conditions, took the relationship between local people and institutions into account, and a sense of sustained commitment and ownership from the proposed beneficiaries. These emerging models of development practice are increasingly centred on households as points of engagement.

A number of sustainable livelihoods approaches (SLAs) were developed in the 1990s. These approaches emphasise the importance of putting livelihoods *in context* where the relationship between households, assets, institutions, interventions and outcomes can be more fully understood. While the SLA is not strictly a "bottom-up" or "grass-roots" model, it does require practitioners to develop a grounded understanding of how livelihoods function in context. The SLA consists of a theoretical framework with a set of principles that guide livelihood analyses and subsequent interventions. Popularised by the British Department for International Development (DFID), following the publication of "*Sustainable Rural Livelihoods: Practical Concepts for the 21st Century*" by Chambers and Conway in 1992, the SLA remains one of the most widely used frameworks dealing with the dynamic dimensions of poverty and development. [11] The take home message is that institutions, policies and program interventions should be geared toward supporting sustainable livelihood outcomes for households. Although the SLA has been applied predominantly in international development contexts in poorer countries, the approach is also widely used in urban settings to support the design and planning dimensions of program and policy level interventions.

Figure 1. Sustainable livelihoods framework

Source: Carney 1998[12]

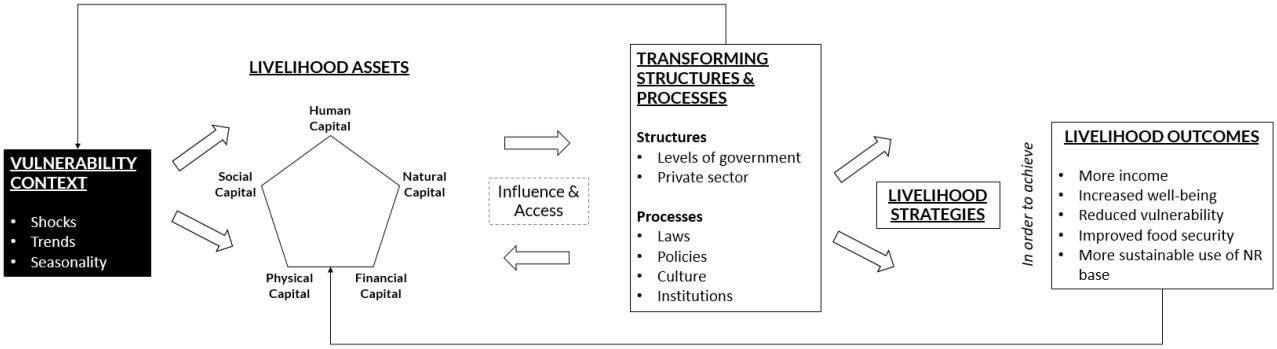


[11] Chambers, R & Conway, GR 1991, *Sustainable Rural Livelihoods: Practical concepts for the 21st Century*, IDS Discussion Paper 296, Institute of Development Studies, University of Sussex, Brighton, UK.
[12] Carney, D (ed.) 1998, *Sustainable Rural Livelihoods: What contribution can we make?*, Department for International Development, London, UK.

The framework centres on the "asset pentagon" which poor individuals, households and communities use to sustain their livelihoods. One of the main assumptions is that people require a mix of different types of assets to achieve sustainable livelihood outcomes, with no single type or category of assets being sufficient to meet people's livelihood requirements. The context and utilisation of household assets is explored through the five key components of the framework, which first need to be understood separately, and then analysed in order to determine points of inter-connection. These components are listed below and then described in the sub-sections that follow:

1. Vulnerability context, which includes the external uncontrollable factors that influence people's assets and livelihood opportunities. These are described as shocks (e.g. environmental, conflict-related); trends (e.g. resources, technology) and seasonality (e.g. price fluctuations, employment opportunities)
2. Assets, depicted as a pentagon of capitals in the framework that include human, natural, financial, physical and social capitals.
3. Policies, institutions and processes (also known as transforming structures and processes)
4. Livelihood strategies, which are the available and implemented choices and options for pursuing livelihood goals.
5. Livelihood outcomes, which are the outcomes of livelihood strategies such as higher incomes, greater well-being (e.g. self-esteem, physical security, political empowerment), reduced vulnerability, food security, and improved environmental sustainability.

(i) The vulnerability context



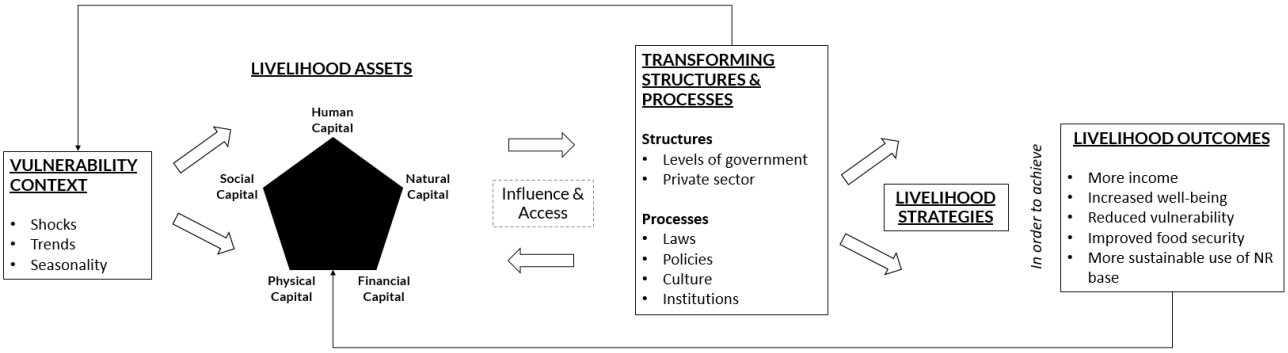
The vulnerability context is the dimension of the framework that sits furthest from people's control. In the SLA 'shocks' are unanticipated events such as conflict, illness, floods, storms, droughts, pests, diseases. 'Trends' are medium to longer terms changes in demography, the environment, structural changes in the economy or systems of government, as well as the influence of technology. 'Seasonal vulnerabilities' relate to periodic or cyclic changes in commodity, labour and agricultural markets. Vulnerability emerges when households or communities are exposed to shocks or trends without having the adequate capacity to respond effectively.

The ability of households to avoid or reduce vulnerability, and to increase economic productivity depends on their initial assets and on their ability to transform those assets into income, food or other basic necessities, by intensifying existing, developing new, or diversifying their strategies. [13] Therefore, analysing vulnerability involves identifying not only the threats to individuals and households and their assets, but also their

[13] Moser, CON 1998, 'The asset vulnerability framework: reassessing urban poverty reduction strategies', *World Development*, vol. 26, no. 1, pp. 1–19.

resilience – their ability to mobilize assets to exploit opportunities and resist or recover from the negative effects of the changing environment.

(ii) Livelihood assets ("the asset pentagon" or the "five capitals")

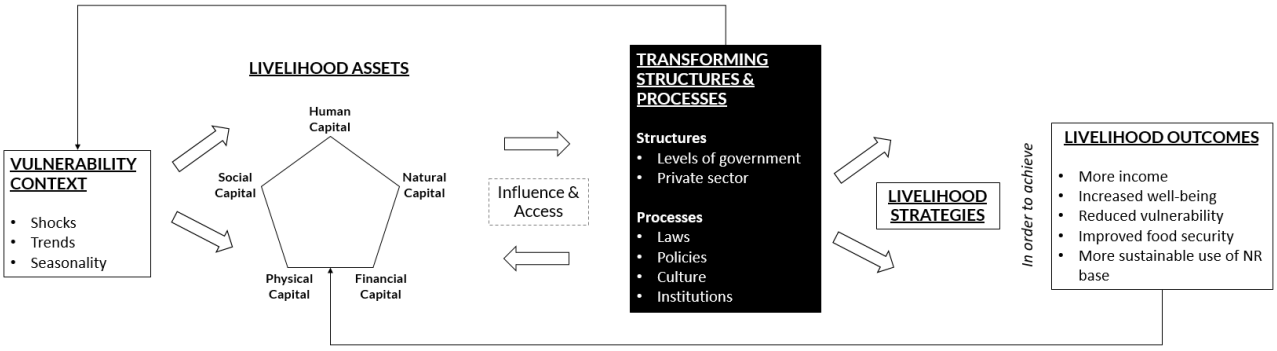


Livelihood assets are also known as the "asset pentagon" or the "five capitals". These comprise:

- physical capital (also known as "built capital" (e.g. including housing structures, roads, drainage, etc.)
- financial capital (e.g. savings, credit, insurance)
- natural capital (e.g. fish stocks, land, crops, water ways, forest resources, alluvial gold);
- human capital (e.g. people's 'capabilities' in terms of health, labour, education, knowledge, skills etc.);
- social capital (e.g. kinship networks, associations, membership organisations and peer-group networks that people can use in difficulties or turn to in order to gain advantage).

As a conceptual and a methodological exercise, the SLA takes a broad approach to the mapping and identification of assets that a household may have ownership or rights to access.

(iii) Policy, institutions and processes (PIPs)



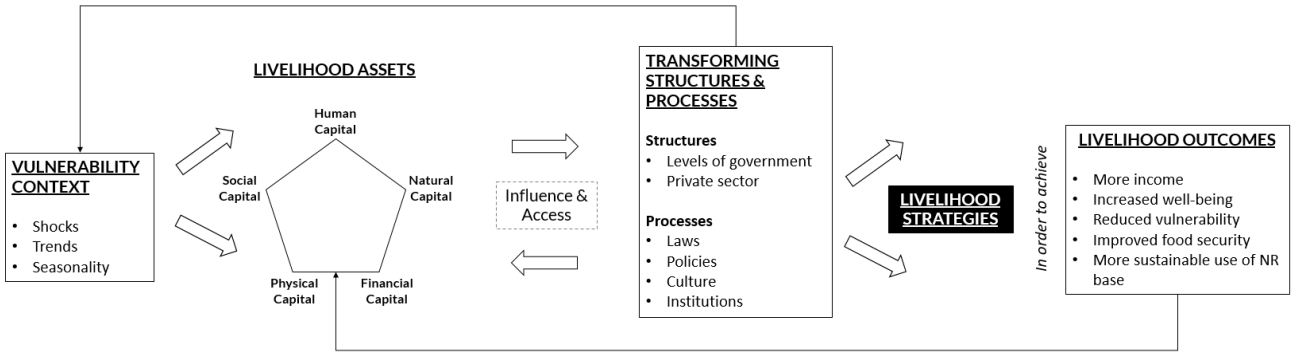
The "transforming structures and processes" in the original SLA diagram are now referred to as 'policies, institutions and processes' (or PIPs).[14] PIPs describe the wide social and political environment that govern household livelihoods. PIPs include (but are not limited to);

[14] Hobley, M 2001, *Unpacking the PIP box*, Discussion paper, Hobley Shields Associates, Somerset, UK, viewed 20 September 2017, http://www.eldis.org/document/A40369.

- organisations which influence people's lives – formal and informal at micro, meso and macro levels, and include producer organisations, NGOs, government agencies, private sector organisations
- services provided by the above set of organisations
- the policy environment and institutions, such as laws, markets, land tenure arrangements
- social relations and power structures such as gender, caste, religious norms and ethnicity.

Structures and processes have a strong influence on how households and communities access, transfer, or trade on the value of their assets. Markets, and legal restrictions around land or common property, for instance, can have a profound influence on the extent to which one asset can be replaced or converted into another type of asset. The PIP arena is where the macro-micro linkages exist and the relationships between households, the state and other governance jurisdictions, private sector, civil society and communities play out.

(iv) Livelihood strategies



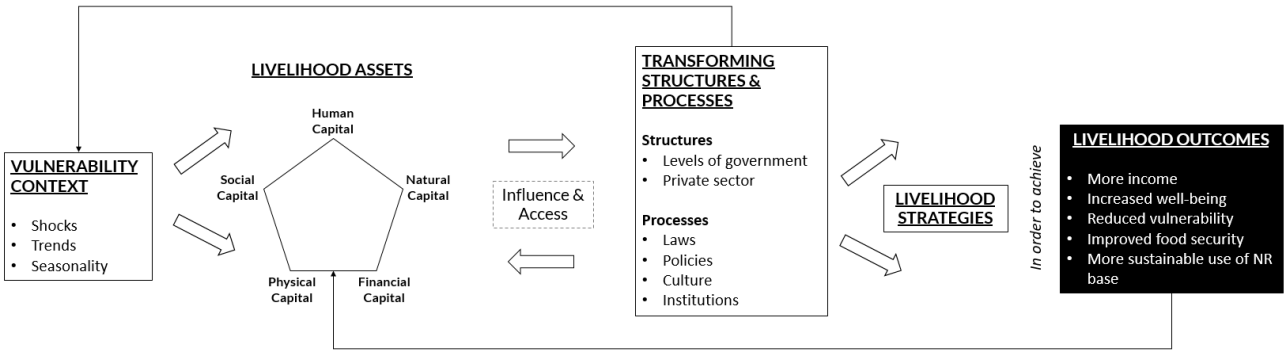
Livelihood strategies are the combination of activities and choices that people make/undertake in order to achieve their livelihood goals. They are a range of dynamic processes in which people draw on different resources and activities to meet their various needs at different times. Members of a household might live and work away from the primary household, but remit funds to support other family members, or in their new location provide an avenue that supports other household members migrating in search of paid employment.

Engaging in a wide range of activities is one of the best ways of spreading risk because it allows households to change the mix and relative importance of activities in response to emerging circumstances and opportunities. The strategy of a household at any given time is determined by its goals and aspirations, assets, and the constraints imposed or opportunities provided by prevailing policy and institutional structures. When confronted with events in the vulnerability context, people may respond through either *coping* or *adaptation* strategies. Coping strategies are the short term responses to unplanned crises, while *adaptation* strategies refer to the longer term approach by households in responding to adverse events, cycles and trends. When adaptation strategies are successful, households become less prone to crisis over time, and their capacity to resist shocks is improved. Over the longer term households might choose to build up their assets, change their asset mix, diversify their income sources, or migrate in order to take advantage of opportunities elsewhere.

Improvement strategies can be grouped under three broad 'clusters': [15]

(i) agricultural intensification (more output per unit area through capital investment or increases in labour inputs), or extensification (more land under cultivation);
(ii) livelihood diversification (to a range of off-farm income earning activities or improving inputs such as labour, seed varieties and fertilizers to increase output per acre)
(iii) migration (moving away, either temporarily or permanently, elsewhere). Households often adopt combinations of these strategies to achieve a desired livelihood outcome.[16]

(v) Livelihood outcomes



Livelihood outcomes are the results or outputs of livelihood strategies, such as changes in income, well-being, vulnerability, food security and use of natural resources. A livelihood is sustainable if people are able to maintain or improve their standard of living related to well-being and income or other human development goals, reduce their vulnerability to external shocks and trends, and ensure their activities are compatible with maintaining the natural resource base. Mining can contribute to positive opportunities through direct and indirect employment, technological skills, and improved infrastructure and access to capital and finance. At the same time, mining can also result in a significant altering of the physical landscape, and a change in the function and distribution of key livelihood dimensions such as land, various kinds of markets, policies and institutions, as well the flow of people and capital. These changes can negatively impact on livelihood outcomes.

The advantage of the SLA is the clarity it offers in terms of the relationship between household level assets, changes in the social and economic context, and the livelihood outcomes that can follow. The schematic provides a framework for understanding how assets can gain or lose value through the prevailing social, institutional and organizational environment (policies, institutions and processes) and through the effects of short-term shocks and longer-term trends. This context shapes the livelihood strategies that people can pursue, and the range of outcomes that can result from these strategies given the context, the capitals available to them, and the policy, institutions and procedures they operate within.

[15] Scoones, I 1998, *Sustainable rural livelihoods: a framework for analysis*, IDS Working Paper 72, Institute of Development Studies, Brighton.
[16] Ellis, F 1998, 'Household strategies and rural livelihood diversification', *The Journal of Development Studies*, vol. 35, no. 1, pp. 1-38; and, Yaro, JA 2004, 'Theorizing food insecurity: building a livelihood vulnerability framework for researching food insecurity', *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, vol. 58, vol. 1, pp. 23-37.

PART 2: MIDR AND SUSTAINABLE LIVELIHOODS

It was noted above that there is no inherent reason to assume that resettlement should automatically result in negative livelihood outcomes for displaced people. There have been several notable shifts in the way that policy practitioners and scholars approach the management of displacement risks. One important shift was the change in terminology: from "relocation" to "resettlement", acknowledging that projects effectively needed to do more than simply move people from place A to place B. To ensure that people were able to recover from the displacement process, project proponents have been encouraged to take a more holistic approach to the post-relocation phase of the displacement process. The restoration of livelihoods has been a central theme in policy discussions.

Over the course of the last decade, scholars have reinforced this position by promoting the term 'resettlement with development', implying that resettlement can and should have positive outcomes for those involved. This assertion – that development should accompany all resettlement activities – was advanced following decades of poor performance in Development Induced Displacement and Resettlement projects. Under the current set of international policies and performance standards, this position is represented by the requirement for displaced people to be "better off" in their post-relocation environment with improvements in their livelihoods and overall quality of life.

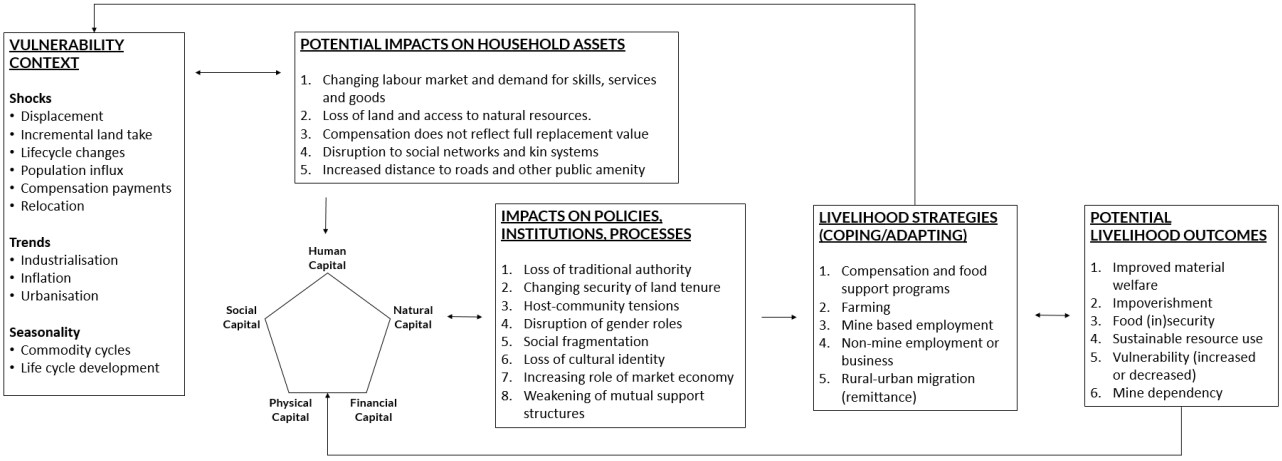
Despite international standards promoting an improvements agenda, and mining companies actively seeking models of "best practice" to emulate, there are few examples from across the suite of DIDR case studies which qualify as "best practice". Across all sectors, livelihood research and practice remains a neglected area. The Three Gorges Hydropower project in China has been hailed a success, however, this case example makes for a difficult benchmark given the absence of reliable independent data to support performance claims, the fact that China has a political system that affords the State a unique set of powers over private investors and its citizens.[17]

In the majority of DIDR cases, including those in the mining sector, the approach is to identify resettlement locations that are close in proximity to people's existing place of residence. This is to minimize the sense of disruption to social networks and entitlements, and to avoid relocating people to unfamiliar settings. A key feature of the Three Gorges project was the mass relocation of households out of the dam impacted area into urban centres where relocated households had ready access to established education, health and employment opportunities. In other resettlement cases, it is uncommon to see households settled in areas with high levels of pre-existing economic activity, with roads, and established markets. While the Chinese government was able to insist that the developer relocate households to an area with existing markets and public services, this is atypical. Companies generally find it difficult to secure replacement land in near proximity to where people have strong ties, and host governments are rarely in a position to contribute to resettlement planning in the manner displayed in the Three Gorges examples.

[17] Wilmsen, B, Webber, M, & Yuefang, D 2011, 'Development for whom? Rural to urban resettlement at the Three Gorges Dam, China', *Asian Studies Review*, vol. 35, no. 1, pp.21-42.

In Figure 2 below, the SLA diagram has been re-configured to reflect a situation in which MIDR and livelihood restoration are the central points of concern. Each of the five SLA dimensions are then described with that context in mind. Each sub-section concludes with a set of discussion questions. These questions have been formulated to encourage mining companies and other parties to engage each dimension in greater depth, by sharing insights and reflections with colleagues.

Figure 2: MIDR in relation to the Sustainable Livelihoods Approach



(i) MIDR and the vulnerability context

Vulnerability refers to exposure to contingencies and stress. The literature expresses vulnerability as having *external* and *internal* dimensions. The external dimension covers changes in circumstances, particularly those changes that a household may find difficult to cope with. These changes are described in the SLA as shocks and trends. The internal aspect of vulnerability is related to a household's ability to manage negative changes without incurring a "damaging loss". The SLA assumes that households will continue to function in the face of hardship events; the challenge is to ensure that such events do not undermine the capacities of households and communities to survive and thrive.

A point of difference between DFID's SLA and IFC PS5 is that the SLA focuses on both the vulnerability "context", and the vulnerabilities that exist within households in terms of their ability to "cope" or "adapt" to change. IFC PS5, by contrast, leads with a prescribed set of vulnerability categories: i.e. widows, orphans, people with disabilities, and the elderly. Because the SLA begins with an analysis of contextual drivers of vulnerability, and not pre-determined categories, we suggest that the SLA offers a more comprehensive framework for identifying and responding to household vulnerability.

Mining activities, from their outset, can introduce new risks into the vulnerability context. The introduction of foreign capital, the forming of new markets, the conversation of agricultural or forested land for industrial purposes, and the movement of people each create conditions of change and potential risk. Displacement events impose shocks – and if managed poorly can create damaging losses to households – particularly in cases where a household's asset base is being eroded. Resettlement takes place in the context of major industrial changes in the local economy, often with the influx of migrants, heightened competition for land and labour, and the steady increase and reliance on cash as a means of economic exchange. The negative "shocks" associated with displacement from mining can be greatly amplified by the surrounding economic "trends" if compensation and social programming are not carefully managed. In practical terms this means ensuring that mitigation strategies for managing "shocks" (like displacement) take the changing social and economic circumstances into account so that interventions effectively keep pace with local "trends" and are sustainable over the longer term.

In some instances, the mine's own life cycle can delay the shock of displacement. For example, many displacement and resettlement events occur during the construction phase of mine life. In this phase, there can be employment opportunities available for unskilled and semi-skilled labour. These employment opportunities can improve a household's ability to cope with sudden disruptions to their livelihood activities. In instances where companies do not have effective livelihood restoration programs in place, this time bound employment is especially significant for households. When construction comes to an end, and employment opportunities dry up, households can face the shock of both of displacement and job loss.

Understanding vulnerability in the full sense involves identifying the threats to individuals and households and their assets. This must then be accompanied by an analysis of how well households are able to mobilize their assets to exploit opportunities or as a means to resist or recover from the negative effects of "shocks".

Discussion questions:

- How does industry capability and performance in this area compare with other strategic planning and management processes within the business?
- What organisational systems are, or have been, established to manage MIDR and livelihood restoration activities?
- How well do developers understand the baseline vulnerability context in the locations in which they operate?
- Do companies have access to adequate resources, knowledge, or expertise in identifying and managing livelihoods related risks/responses?
- What major differences exist between greenfield and brownfield resettlement projects in terms of general vulnerability context?
- How did this project/operation seek to understand the vulnerability context? In retrospect, was this the best approach?

(ii) Productive capitals and household assets

While mining can provide opportunities by introducing productive capital into the vulnerability context, "shocks" such as displacement and resettlement can put household assets at risk. Assets are an essential part of a household's ability to adapt and cope with changes in their vulnerability context. The IFC guidelines promote an "avoidance" strategy as one way of protecting households and communities from the disruptive effects of displacement. This strategy suggests that resettlement should be avoided, wherever possible. Where MIDR cannot be avoided, the emphasis should be on well-designed and well-managed resettlement programs that not only minimize disruptions to household assets, but potentially enhance their long term utility by drawing on the economic capabilities and expertise of the proponent. Many of the risks identified by Michael Cernea in the Impoverishment Risks and Reconstruction Framework (IRR) relate directly to the disruption of household and community assets.[18] These risks can surface in cases where people are either physically and or economically displaced. For example:

Human capital: changes in livelihood activities can make certain skill sets less valuable or viable for households (e.g. when farming is no longer sufficient to sustain household needs). Relocation to a new settlement location can make accessing work more difficult than it was previously. The time required to participate in resettlement planning activities, together with the stress associated with displacement, may impact on an individual's ability to undertake steady work. An influx of skilled migrants can reduce the competitiveness of local unskilled labour.

Natural capital: difficulties in securing replacement land can result in households receiving less land than they had access to previously, or land that is more remote and less productive. The impact of households losing access to natural resources such as river systems and forests is often overlooked in resettlement planning. These resources generally play a key role in securing household subsistence.

Financial capital: displacement can result in assets being traded out as cash at a rate below their full market value. This would result in an instant erosion in the value of a households' assets. Similarly, the payment of cash compensation in an environment where assets do not commonly have a well-established "liquid" value can introduce "shocks" and pricing irregularities into local markets. Payment of compensation monies to male heads of households can both reinforce gender inequality, and disrupt local cash management practices (i.e. in many societies women are responsible for managing household finances).

Social capital: changes in physical location can, for some groups, result in a change in social standing (e.g. becoming an 'outsider' in an unfamiliar location, or a 'tenant' where the person was previously an 'owner'). Reduced social standing can mean that people are have decreased ability to influence or access certain types of opportunity. Connections within social groups, and between social groups, are essential for maintaining social cohesion, for ensuring support in difficult times, and for reducing the potential for conflict and isolation.

Physical capital: proximity to infrastructure is essential for several reasons – linkages to markets, education and health services, and for maintaining or improving access to known or emerging opportunities. Physical infrastructure, when viewed against the IRR, encompasses housing, health, education and common amenity. Modern housing provided through resettlement projects often results in households receiving a high-value asset as compensation for loss of housing, however, as the materials used to construct these houses are

[18] Cernea, M 1997, 'The risks and reconstruction model for resettling displaced populations', *World Development*, vol. 25, no. 10, pp. 1569-1587.

typically imported and not available in local markets, these houses can become expensive financial liabilities for both households and companies as they fall into disrepair.

Discussion questions:

- Which household assets – or combinations of assets – are considered most difficult to re-establish from this project/operation's perspective? Why?
- What approaches to compensation and restoration have you observed as providing displaced people with the greatest long-term security over assets and asset values?
- To what extent is the relationship between household assets considered and managed in practice?

(iii) Policies, institutions and processes

There is a consistent recognition among international institutions, and within guiding policy standards and frameworks, of the importance of safeguarding against displacement based livelihood risks. These institutions include, for example, the World Bank Group, and other International Financial Institutions (IFIs). In the mining industry, these institutions would include the International Council on Minerals and Metals (ICMM) and industry representative bodies that exist at the national level. Policies and policy style frameworks, such as the IFC Performance Standards, have been publicly endorsed and adopted by these institutions.

Within the international set of standards and policies, local level systems that are necessary for support livelihood activities are identified. These include land tenure arrangements, traditional authority and or customary laws, kinship and social networks, and local systems of exchange. Most of the world's major mining companies have corporate policy statements that recognise the importance of these systems. A focus of the international standards and policies on resettlement is to preserve, where possible, the protective dimensions of these systems in terms of the safeguards they offer to people in times of need. These systems are also referred to as "mutual support" or "social welfare" systems because of the stabilising function they provide in times of adverse change.

MIDR can, and often does, disrupt well-functioning social welfare systems that would otherwise be critical in responding to the general suite of environmental and social impacts of mining, and resettlement more specifically. When displacement impacts on these pre-existing informal social welfare systems in a major way, the capacity of local systems to weather "shocks" can be greatly diminished. This, understandably, transfers a larger share of responsibility for livelihood outcomes onto both the developer and the state. Both mining companies and nation states would view these sorts of outcomes as unfavourable, especially in terms of their potential for creating long-term dependency. Given the inherent difficulties associated with re-establishing informal systems of social protection, preventative measures in the form of project design are far more effective than programmatic interventions.

Markets are also recognised in the SLA has an "institution". Mining, and MIDR especially, create new market precedents through the acquisition of land. Over the life of a project, the alienation, and trading of land, can result in drastic changes in the availability of land for a resettlement project. Changing market norms, along with increased demand for land close to the project, can impose major limitations on companies and displaced people in terms of accessing replacement land that is both suitable for subsistence agriculture and in relatively close proximity to markets and or the project. Access to productive land with established market linkages is a key successful factor for livelihood projects.

A recent study of legal and regulatory frameworks for resettlement in the global mining industry suggests that despite improvements in the practical functionality of international standards, for the most part, country-level laws and policies operate without clear objectives or standards that define expectations for how livelihood restoration activities are to be understood and managed.[19] In practice, the governance of livelihood outcomes in mining projects and operational settings appears to default to a negotiation between the developer and the displaced population. These negotiations often occur during the operational phase of mine life where the effect of resettlement impacts are more pronounced. Throughout the process, it is often the case that the

[19] Vivoda, V, Owen, J, & Kemp, D 2017, *Comparative analysis of legal and regulatory frameworks for resettlement in the global mining industry*, Centre for Social Responsibility in Mining (CSRM), The University of Queensland, Brisbane, Australia.

state is absent, and either unwilling or unable to ensure that social welfare systems are understood and safeguarded, and that the necessary investment is made to ensure that livelihoods are restored.

Discussion questions:

- To what extent does the company understand the international and national policy requirements with respect to risk management and performance outcomes for resettlement and livelihood restoration?
- What institutional supports can the company draw upon to ensure long term economic stability, and a fair distribution of opportunities, among displaced peoples and host communities?
- In this context, what are the supports that are missing and what can be done?
- Which government functions are fundamental for operational level execution of livelihood restoration and improvement initiatives in this location?
- Where is policy guidance at its most, and at its least, instructive in this area?
- As a leading economic institution, how can mining stimulate markets in this jurisdiction to support displaced households in preserving the value of their assets, to avoid impoverishment risks, over the long-term?

(iv) Disruption and restoration of livelihood strategies

Households often have mixed "livelihood portfolios" that allow them to deal with the uncertainty and seasonality of rural economies. Portfolios include a range of activities that support provisioning for food and other livelihood goals. Common components of a livelihood portfolio are: crops and livestock production, a mix of farm and non-farm enterprises, part-time and seasonal wage labour, as well as collecting water, firewood, cooking, child rearing, and caring activities that contribute to the overall welfare of the household.

Following a displacement event, a component of the household's livelihood portfolio may cease to be viable. There may be a requirement for households to rely more directly on a single set of activities in order to "cope" while the household "adapts" to new opportunities and circumstances. In mining, replacement activities tend to be presented as mine-based or non-mine-based. Mine-based supports, such as compensation or employment, can provide important safety net features, principally because the mine determines the level of welfare support, and predicts with a high degree of certainty, when these activities will no longer be supported.

For periods of transition, where reconfigured food systems have yet to re-establish, and where a large degree of uncertainty exists around the local economic prospects of the new environment, mine-based supports are essential from a safeguard perspective. Companies are understandably cautious about extending interim supports into long-term welfare measures. To avoid long-term term dependency, non-mine livelihood strategies must be available, viable and accessible. This is not to discount or distance displaced people from participating in the mine's supply chain, but to promote activities where households are active in accumulating and deploying their internal resources as a means of developing a sustainable livelihood portfolio.

Discussion questions:

- As a livelihood restoration strategy, how viable is preserving existing household livelihood activities at your project?
- How much of the resettlement project's livelihood success rests on compensation monies being sufficient and well utilised by recipient households? How much of its success is dependent on targeted, well-resourced program interventions?
- What balance of inputs, programs and activities are required to support strong performance in resettlement practice?
- Is the current balance working well at your project site and for people impacted by resettlement?

(v) Shaping livelihood outcomes

Most documented cases of MIDR indicate a net overall decline in living conditions for displaced peoples. The literature, while accepting the inherently difficult nature of restoring livelihoods amid new—and often less favourable—geographic, environmental, social, and economic conditions, has attributed poor outcomes to a lack of commitment on the part of project proponents.

While the rapid economic growth that surrounds mining development may be essential for improving livelihoods and preventing impoverishment, there is not an automatic relationship between economic activity and the ability of displaced households to take advantage of expanding economic opportunities. Much of the capital that flows in and around mining projects cannot be harnessed by poorer households. Mining companies often find themselves having to undertake significant and dedicated work in order to build the capacity of local businesses so as to incorporate them into the supply chain of the mine. Initiatives to build more locally inclusive supply chains can take several years to yield positive outcomes. Strategic interventions, when considering assets, the influence of policies and institutions, and the mix and timing of livelihood activities, are needed if affected people are to achieve a positive set of livelihood outcomes following displacement.

In terms of the SLA elements, livelihood outcomes have a direct relationship with two other dimensions of the approach. Livelihood outcomes can be realised, and are sometimes measured, through the balance, quantity and quality of household assets. Livelihood strategies both drive and reflect the quality of livelihood outcomes: when outcomes are poor, households will, where possible, cope or adapt in response. An indirect connection, but no less significant, is the relationship between livelihood outcomes and the vulnerability context. Both gains and losses will become evident through the presence, emergence or softening of shocks and trends in the vulnerability context. Needless to say, a key objective of livelihood planning should be ensure that livelihood outcomes do not lead to a worsening of existing vulnerabilities, or surfacing of new vulnerabilities.

Discussion questions:

- Is livelihood restoration an acceptable outcome in the context of MIDR? Should the industry be aiming, and resourcing projects to ensure higher levels of performance in this area?
- To achieve “improvement” is it necessary to demonstrate gains across all asset categories? What thresholds are companies presently working towards?
- How does the mine life cycle affect the setting of livelihood targets for developers?

FOOD SECURITY AND MIDR

Food (in)security is a recognised resettlement risk, both in the IFC and World Bank Group of Safeguard policies and standards, the IRR Framework, and in case studies describing livelihood outcomes in MIDR.[20] The recently adopted set of United Sustainable Development Goals (UNSDGs) has as their second goal the objective of ending hunger, ensuring access by all people to safe, nutritious, and sufficient food all year round by 2030.[21] Article 25 of the Universal Declaration of Human Rights makes specific mention of food.[22] Food security is a basic fundamental outcome for all livelihoods, and has been identified by the mining industry as a key risk domain for resettlement and livelihood restoration projects.[23]

As DIDR scholars have demonstrated over the past three decades, food insecurity is rarely the result of absolute shortages in food, but rather occurs when local and regional systems that guarantee people access to food are disrupted or breakdown.[24] The academic literature refers to several causes: political instability, war and civil strife, trade adjustments, climate change, environmental degradation, rapid population growth and migration, as well as social disadvantage, resulting from gender inequality, inadequate education, and poor health.

Food security can be read as having four (4) main supporting dimensions:

1. Availability: This refers to the different sets of capitals (land or saleable assets, social networks, cash or credit, skills) that taken together ensure that food is being produced, traded, and is available.
2. Access: assuming that a supply of food is available, as above, a household must be able to access that food either through productive land, reciprocal social networks, or through market mechanisms.
3. Utilization: This refers to how people use food, and the changes that can occur in terms of consumption patterns. Common indicators include increased or reduced consumption, transition to less or more nutritious foods (including highly refined and packaged foods replacing traditional diets), or direct impacts related to water, sanitation and health, changes in access to water resources, distances to access water and fuel for food preparation.
4. Stability: the ability of communities to call upon food resources in the context of everyday life, in addition to ongoing and new emergencies.

Resettlement interacts with multiple parts of the food system: from displacing and or restoring the capital assets needed to produce, buy or exchange food to contracting, expanding or re-configuring the institutions and processes that support transactions around the food economy. In the context of mining, food insecurity can occur in circumstances where access to natural capitals, such as land, water or forestry resources are disrupted or removed. Local producers that supply food tend to adapt to meet the opportunities of waged migrants. This both diverts the supply of food toward markets and typically results in inflated prices around foodstuffs. Food insecurity can also occur because there is a tendency for developers to over-estimate the

[20] International Finance Corporation (IFC) 2012, *Performance Standard 5: Land Acquisition and Involuntary Resettlement,* World Bank Group; and, Cernea, M 1997, 'The risks and reconstruction model for resettling displaced populations', *World Development*, vol. 25, no. 10, pp. 1569-1587.
[21] In September 2015, the 193 United Nations (UN) member states adopted "*Transforming Our World: the 2030 Agenda for Sustainable Development*", which includes a set of Sustainable Development Goals (SDGs) for 2015-2030. The SDGs represent the world's comprehensive plan of action for social inclusion, environmental sustainability and economic development.
[22] Universal Declaration of Human Rights (UDHR) 1948, (resolution 217 A), adopted 10 December 1948.
[23] International Council on Mining and Metals (ICMM) 2017, *Land acquisition and resettlement: Lessons learned*, viewed 16 September 2017, https://www.icmm.com/en-gb/publications/mining-and-communities/land-acquisition-and-resettlement-lessons-learned.
[24] Sen, AK 1981, *Poverty and famine*, Oxford University Press, Oxford, UK.

ability of households to adapt to new circumstances and under-estimate the length of time required to re-establish self-sufficiency in food. Likewise, market studies for cash crops tend to over-state the level of regional and national demand for particular commodities, and again understate the barriers that displaced people are likely to face in producing for these markets. Issues such as these become more pronounced when replacement land is poorer in quality that the land lost to the project, is farther away and without good road access, and where market linkages need to be developed from ground zero.

Food insecurity can occur when compensation monies, which are designed to meet short and long term livelihood goals, are dispersed in a manner that results in those funds being squandered. This can occur because the household has received a quantity of money that is significant in relative terms (i.e. the household has not previously received that quantum of cash), but not significant enough to invest in replacement assets, or because the household does not have experience or resources for managing cash. Due to financial difficulties, household members may elect to leave the primary place of residence in search of waged labour elsewhere. In the immediate term – while outgoing residents are looking for work or waiting to be paid this places additional strain on the household's ability to secure food. Similarly, there are instances where compensation funds are paid directly to a male head of household, who either subsequently abandons the family or takes on additional wives. In mining projects, particularly where people are resettled onto the lease area of the mine, or in close proximity to the operational activities of the mine, the mine's activities can directly encroach on the natural resource based used by households to secure food. These changes have a determining influence over the livelihood strategies that households adopt and how they mobilise their resources in order to secure food, and likewise how developers and states intervene to ensure that people do not become food insecure through MIDR.

Discussion questions:

- How well does the industry understand the "food systems" of near-mine populations?
- Does the industry understand how its activities, including resettlement, may disrupt these established food systems and trigger food insecurity?
- Specifically, how are the capital assets needed to produce, buy or exchange food most easily disrupted by MIDR?
- How would a transition from traditional diets to store-bought foods affect food security in a resettlement population?
- To what degree does the industry understand the link between:
    - food security and seasonality
    - nutrition profiles per household and land acquisition
    - reliance on farmed food versus food from common resources (e.g. forests, rivers etc.)
- At what stage of resettlement could food security become an issue?

NEXT STEPS: ADVANCING THE DIALOGUE

This paper establishes a foundation for discussion. It has been written for a general industry audience, assuming a mix of readers from site, regional and corporate organisations. The discussion is based on a component-by-component review of DFID's Sustainable Livelihoods Approach (SLA) where mining, livelihood restoration and food security have been put at the centre of the analysis. This approach is intended to provide a framework for identifying livelihood and food security risks that may otherwise not be surfaced through industry-endorsed guidelines, such as the IFC Performance Standards. While not mining specific, the SLA offers a systematic framework for examining issues, drivers and potential risks throughout the entire displacement and livelihood restoration process.

The questions throughout the paper are intended to encourage professional dialogue within organisations about the issues raised. This is in recognition of the inherent challenges associated with engaging with complex, multi-dimensional resettlement issues in operational settings. We encourage multi-disciplinary, site-based teams to work through the paper, and consider the discussion questions posed under each component of the SLA framework. This will help to identify how livelihood interventions and outcomes for people affected by MIDR may be improved.

Further Readings

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