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Working paper

World Vison's resilience programming: adding value to development

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Abstract

Resilience is now at the heart of development thinking, climate change adaptation and humanitarian policy. The 2011-2012 famine in the Horn of Africa and 2012 crisis in the Sahel revealed not only the vulnerability of pastoralist livelihoods in these regions, but also the high toll on development progress. These and other high impact events have led the international community to look for durable solutions that address the underlying drivers of risk, particularly for marginalised communities.

The tables and case studies described in this paper are the culmination of lessons learned and reflections on experiences of over a decade of development practice, from within and outside World Vision. The authors present resilience as a radical and alternative way of understanding and practicing development with the potential to overcome some constraints faced by traditional programming. They identify five programming approaches needed to operationalise resilience thinking: recognition of complex interactions; appreciative inquiry; dynamism and flexibility; multi-sectoral approaches; and open systems approaches. The authors argue that these can be used to promote community empowerment and reduce vulnerability to natural and anthropogenic shocks and stresses.

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Abbreviations

ADP	Area Development Program
CCA	Climate change adaptation
CEVCA	Climate Change and Environmental Degradation Vulnerability and Capacity Assessment
CIDA	Canadian International Development Agency
CODEL	*Comité de Emergencia Local* (local emergency committee)
COPECO	*Comisión Permanente de Contingencias* (permanent commission for contingencies)
COVACA	Community Owned Vulnerability and Capacity Assessments
DRR	Disaster Risk Reduction
DFID	Department for International Development
EU	European Union
HRM	Holistic Rangeland Management, Somalia
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
PLA	Participatory learning and action
SLA	Sustainable Livelihoods Approach
UN OCHA	United Nations Office for the Coordination of Humanitarian Affairs
UNDP	United Nations Development Fund
VCA	Vulnerability and capacity assessment

1 Introduction

The high exposure of people's livelihood assets to a range of environmental hazards, coupled with the anticipated increase in the frequency and severity of extreme weather events due to climate change, is likely to lead to further losses of life and livelihoods in the next decades (Field, 2012). According to the Climate Vulnerability Monitor (DARA, 2013), the annual global death toll from climate change is set to rise to 700,000 by 2030. In addition to these environmental shocks and stresses, violent conflict is also a reality that many impoverished people continue to face. Countries and regions affected by conflict are the hardest environments in which to achieve and consolidate development gains and despite substantial progress elsewhere towards achieving the Millennium Development Goals (MDG), particularly on child education and mortality, most fragile or conflict-affected states have not achieved a single goal.

In light of these constraints on development, policy makers would benefit from a deeper understanding of the range of risks communities face, how these are exacerbated by existing processes, such as urbanisation and environmental degradation, as well as the likely alterations to these risk scenarios in the near future. Likewise, development agencies would probably be more effective in improving human wellbeing if they could reflect this evolving risk landscape in their programmes.

This paper discusses the limitations of traditional programming methods used by development non-government organisations (NGO) and presents resilience thinking as an alternative way of understanding and practicing development that may have the potential to overcome some of these constraints. It discusses lessons learned and reflects on experiences of development practice, from within and outside World Vision. The authors endorse a radical approach to enhancing resilience and put forward a set of programming principles and methods that promote community empowerment so that communities can intervene in, and alter the structural causes of, vulnerability to natural and anthropogenic shocks and stresses.

2 Resilience: from theory to policy

The concept of resilience is used to understand how social and ecological systems cope with shocks and stresses and maintain their capacity to function in a changing environment (Pelling, 2011). Resilience research has gone through several phases to understand this complexity, with an initial emphasis on ecological resilience, followed by socio-ecological resilience approaches linking questions about social and ecological drivers of change and, more recently, a focus on *social resilience* that emphasises the responses of human systems to changes in their environment (Adger, 2000). Adger defines social resilience as the ability of human communities to withstand external shocks to their social infrastructure, such as environmental variability or social, economic and political upheaval. It is this kind of resilience that the development community is most interested in, although appropriate measures to enhance social resilience that take into account complexity and uncertainty are still very much in the early stages of development.

2.1 Donor endorsement

Development agencies had been saying it for years, but the Humanitarian Emergency Response Review (Ashdown et al, 2011), shook up the humanitarian sector, highlighting the need to do more than just respond to crisis. Meanwhile, 'resilience thinking', as laid out in the Department for International Development (DFID) approach paper *Defining Disaster Resilience* (DFID, 2011), has been taken up and adapted by United States Agency for International Development (USAID), the European Union (EU), the United Nations Development Programme (UNDP), the World Bank and the United Nations Office for the Coordination of Humanitarian Affairs (UN OCHA), and has been included in development strategies around the globe. DFID, in particular, have been seeking to join up work on climate change adaptation (CCA), disaster risk reduction (DRR) and long-term development, and have promoted practitioner and policy models that do so, such as the Climate Smart Disaster Risk Management Approach (Mitchell et al., 2010), the Local Adaptive Capacity Framework (Jones et al., 2010) and the Vulnerability-to-Resilience Framework (Pasteur, 2011).

Similar to DFID's Sustainable Livelihoods Approach (SLA) developed in the 1990s, the concept of resilience demands a consideration not only of assets, but also the governance context, and the shocks and stresses that affect livelihood strategies. The SLA required development practitioners to think holistically and work across sectors and scales, but unlike the SLA, resilience thinking recognises the complexity and uncertainty in development, which is critical in a changing climate. What this means for programming is still unclear for many donors and practitioners and is the subject of this paper.

2.2 Traditional versus resilience development practice

Owen Barder contends that development is better understood in terms of the characteristics of economic, social and political systems; and not simply in terms of people's wellbeing.[4] These systems are complex and intertwined, and generate a diverse range of development challenges, one of which is disaster risk. Nonetheless, current NGO development programmes tend to work with a simple understanding of the context in which they operate, demonstrated through their reliance on linear problem-solution analysis and planning tools such as problem tree analyses and logical frameworks, where outcomes are linked to particular activities and ignore changes in the external context, including shocks and stresses. Behind the promotion of these tools is the assumption that development can be achieved by focussing on sectors and short-term initiatives.

More generally, development agendas continue to be based on traditional economic models in which development is about asset accumulation through productivity and rising household incomes (DFID, 2013). However, these economic models fail to explain why some economies experience rapid economic growth while others do not, or why particular social groups are missing out on the benefits of growth. Nonetheless, within the development community, there is a growing recognition that many development challenges, including climate change, demonstrate characteristics of 'wicked problems' (Australian Public Service Commission, 2007) and are therefore difficult to define, socially complex and continually changing. Interventions to deal with these problems often have unforeseen consequences, altering the very nature of the problem that is being addressed. This view of development resonates with systems and resilience thinking, and represents a paradigm shift with very different assumptions about the nature of development to those found in traditional development practice. Development is seen as an interplay of factors embedded in the system, including power relations, institutions and social organisation (such as gender, ethnic exclusion and class inequality), the nature of which is context specific: exogenous approaches implemented by single agencies along sectoral lines thus do not –and arguably cannot– work.

2.3 A radical development agenda?

Promoting the resilience of (human) systems should not be considered a politically neutral endeavour. Resilience thinking will do little to reduce disaster or climate change risks unless the thorny issues of drivers of risk and unequal power relations are addressed explicitly (Levine et al, 2012) According to the report, Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation (O'Brien et al, 2012) :

> 'A prerequisite for sustainability in the context of climate change is addressing the underlying causes of vulnerability, including the structural inequalities that create and sustain poverty and constrain access to resources [...] This involves integrating disaster risk management and adaptation into all social, economic, and environmental policy domains'.

Technical interventions that address narrow issues such as disaster preparedness will not promote resilience. Ultimately, resilience approaches will only stand the test of time if they are capable of empowering people to reconfigure the power relations that make them vulnerable; and this will require a change to the way development practitioners operate. Development programmes based on resilience framings should therefore not only seek improved efficiency but address power relations and improve access to resources and decision-making for the most vulnerable members of society. When the SLA was first adopted in 1999 it was clear that (FAO/DFID, 2000):

> 'If agencies are to embrace adoption of SL [sustainable livelihood] principles, and expect their field partners to do likewise, they need to adjust their management styles and cultures, as well as their structures, systems and skills mix, in favour of a more flexible, adaptable, open-ended, process-oriented, client-driven mode of doing business. This will entail more emphasis on process monitoring and iterative learning-by-doing, with ample beneficiary participation in goal-setting, implementation and impact evaluation'.

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4 See Owen Barder's Kapuściński Lecture: 'The implications of complexity for development', 15th August 2012. www.cgdev.org/content/multimedia/detail/1426397/, downloaded 4 March 2013.

3 World Vision's resilience agenda

World Vision recognises that poor and marginalised communities face multiple risks: from economic shocks to natural hazards and man-made conflicts. Moreover, urbanisation, rising food prices, climate variability and the increasing intensity and frequency of climate extremes, are compounding people's vulnerability to these shocks and stresses. Increasingly, poor households are also those living within fragile contexts:

> 'People living in conflict affected states are twice as likely to be undernourished as those in other developing countries, three times as likely to be unable to send their children to school, twice as likely to see their children die before age five, and more than twice as likely to lack clean water' (World Bank 2011).

In this context of risk, uncertainty and fragility, how can World Vision help marginalised communities to become more resilient? Can the integration of disaster risk reduction, climate change and conflict sensitivity into development programming represent a more efficient, effective and empowering approach than existing development strategies, such as sustainable livelihood approaches? World Vision thinks that it can and is beginning to undertake important changes in the way it defines development problems, designs programmes and works across sectors and contexts and with different groups of stakeholders, while at the same time seeking ways to embrace the uncertainty and the complexity that surrounds development practice.

To begin to tackle the issues outlined above, this paper sets out the differences between 'traditional development' and development programmes conducted with a 'resilience lens' (see Table 1 below), based on a literature review, over sixty years of development experience and initial experiences of applying resilience principles in World Vision programmes. Five dimensions of a resilience approach were identified:

1. Recognition of complex interactions

2. Appreciative inquiry

3. Dynamism and flexibility

4. Multi-sectoral approaches

5. Open systems approaches

Table 1 (below) highlights the authors' conception of the distinction between the assumptions and characteristics of traditional and resilience approaches to development.

Table 1: Understanding development through 'traditional' and 'resilience' lenses

Assumptions and characteristics	Traditional lens	Resilience lens
Nature of interactions between system elements	**Linear interactions** The relationship between problems and solutions is one of simple cause-and-effect, as identified through problem trees.	**Recognition of complex interactions** The understanding that actors, their assets and the activities that they engage in through relationships can alter the functioning of a system.
Mode of inquiry	**Creation of new assets** A focus on the lack of assets and creation of new ones.	**Appreciative inquiry** Building on existing assets to create change using an appreciative inquiry approach. The aim is to move away from a problem-focused approach towards understanding existing opportunities and building capacities.
Planning modalities	**Static** Planning is rigid and there is little flexibility to adjust activities and outputs when the problem shifts, putting achievement of outcomes at risk.	**Dynamic and flexible approach** Emphasis in planning is placed on achieving outcomes. Flexibility in the design, implementation and revision of outputs and activities is explicitly recognised as necessary to adapt to change and unpredictability.
Sectors addressed in programming	**Single sector programming** Involvement of stakeholders is often limited to the sector of interest and is largely an extractive, information gathering process.	**Multi-sectoral approach** People perceive and experience problems and solutions in different ways depending on history and context, so integrated approaches are needed across sectors and scales.
Scales of intervention and range of stakeholders	**Closed systems** Engagement in project level intervention is often at micro level scales on short time frames and limited to improving outcomes for certain sectors.	**Open systems approaches** Development processes interact across time, sectors, scales and places. A more inclusive approach integrates local, sub national, national and regional scales, and engages with the institutions and structures that support or impede development for poor households and communities.

The resilience lens represents more than just a concept: it begins to denote a series of principles for development practice. The implications of thinking through what these characteristics meant when applied to development programming led World Vision to identify a number of methods that could be used to operationalise resilience thinking:

- Participatory assessment of complexity and root causes

- Broad stakeholder engagement and capacity building

- Cross-sectoral design and implementation

- Flexible programme design and implementation

- Scenario planning

Case studies from Somalia, Kenya, Indonesia and Honduras were then selected for further analysis, as it was felt they best reflected some of these methods for applying resilience thinking as well as good practices in development programming in hazardous contexts.

4 World Vision case studies in resilience programming

The following case studies show how features of resilience thinking have been applied in development programming. Specific features, as well as the methods and principles employed to operationalise them, are highlighted in bold in each case study. These experiences and other examples from World Vision programming, as well as the lessons drawn about putting resilience thinking into practice during different stages of the project cycle, are then summarised in Table 2.

4.1 Holistic Rangeland Management in Somalia

A. Context and programme characteristics

In Somalia, poverty is widespread with 43% of the population living on less than $1 a day (UNHCR, 2011). Climate variability has led to a drier long rainy season, contributing to dramatic increase in food prices and water shortages. The World Vision Somalia Holistic Rangeland Management (HRM) project 2011-2012, sought to reduce the impact of drought on chronically water-stressed pastoralists, agro-pastoralist and internally displaced communities. It also involved working with a broad spectrum of actors, across sectors **[broad stakeholder engagement and capacity building]** and through a more integrated approach to land management and risk reduction, benefitting 30,645 individuals in Mudug, Nugal and Goldogbo.

The project was designed using holistic vulnerability and capacity assessments (VCAs) **[participatory assessment of complexity and root causes]** to collect data on livelihoods, socio-economic trends, hazards and governance. The VCAs were conducted with women, men, elders and youth as well as government officials from the Ministry of Livestock and Husbandry and the Ministry of Environment, Range, Wildlife and Tourism. Participants identified vulnerabilities, capacities and current coping strategies. These assessments highlighted the importance of traditional rangeland management practices as well as current institutions controlling access to resources for HRM. The project was innovative in mimicking wildlife behavior in Savannah ecosystems and the practices of the Samburu tribe in northern Kenya who still use traditional systems of pasture management. Degradation of land is often the result of pastoralists letting their herds spread out widely, while in natural ecosystems livestock walk in a line. Training pastoralists to consolidate their livestock in a narrow group and keep them moving forward, reduces degradation and allows for regeneration.

The findings from the VCAs led to the identification of livestock markets, animal health care systems, livestock feeding and the availability of land for grazing, and water resources as areas that need attention. A training curriculum on pasture management was also created to address the various challenges.

As a result of the VCA findings, World Vision Somalia implemented a combined approach to mitigate the immediate effects of the drought and help reduce longer term vulnerability by strengthening infrastructure, local

institutions and the community's asset base. This included work across four sectors **[cross-sectoral design and implementation]**:

- Social Protection: the rehabilitation of strategic water points and the construction of pilot water entrapment/soil retention sites using cash-for-work programmes.

- Disaster Risk Reduction: establishment of DRR committees and community preparedness plans; training in maintenance of constructed sites and rangeland management practices.

- Food Security: a curriculum was developed on good agricultural practices; drought resistant seeds were provided; trainers were trained in the ministries of environmental conservation, agriculture and livestock.

- Water and Sanitation: participatory training carried out in ten community water committees in hygiene and sanitation **[broad stakeholder engagement and capacity building]**.

B. Programming success

Implementing a project across sectors **[cross-sectoral work]** allowed a range of risks to be addressed, including economic shocks, conflict and epidemics, whilst also protecting existing assets and developing peoples' ability to identify and manage risks over the longer term through tailored training on VCAs and more resilient agricultural practices. Many benefits of the HRM approach were visible within a year, including:

- One-third of beneficiaries were able to access 15 litres of water per person, per day, after the project; in comparison to 6% of beneficiaries before the intervention.

- Dryland farming technologies, such as planting pits, resulted in increased access to and the availability of food, reducing the duration of food scarce months.

- Increased livestock productivity as pasture quality was enhanced: 38% of beneficiaries reported that they had more pasture as a result of the project intervention

- Enhanced capacity to produce more food and conserve the environment

- Production of a Somali management curriculum so that government officials and colleges can train communities and students in HRM

C. Ongoing challenges

Despite a nominally holistic approach to rangeland management, there were gaps in the VCA process and some governance issues were not included. Increasing livestock productivity was an important aim of the project but positive results were constrained by the existence of illegal enclosures, which limited access to grazing lands and led to overgrazing in non-enclosed areas. This had negative consequences for vegetation and soil quality; it also lead to health problems with livestock and the interruption of the hydrological cycle, which may further contribute to water scarcity. If this issue had been identified in the planning phase, two strategies could have been adopted to improve access to grazing lands: a) increasing dialogue and consensus building between pastoralists and agro-pastoralists to identify joint solutions, and b) strengthening the enforcement of regulations and community laws on land access - through traditional decision-making structures.

A related environmental problem, also undetected, was deforestation. This is a key driver of environmental degradation and is prevalent throughout the project areas. Despite this, no action was taken to reduce deforestation or improve the efficiency of charcoal production. Charcoal burning is particularly common after droughts due to the lack of other livelihood options and high rates of poverty. This situation is exacerbated by an inadequate enforcement of resource management and conservation regulations for communally-owned land, which in turn, is due to inactive community structures. Again, this highlights the need to consider the governance of rangelands. The

HRM approach could therefore have been strengthened by working through communally-owned land management systems and traditional decision-making structures. The project was also constrained by the lack of broad stakeholder engagement: it did not coordinate well with other international NGOs, leading to a duplication of activities.

D. Recommendations

This case study highlights two main recommendations for resilience programming. Firstly, *conflict sensitivity* or *power analysis* exercises are needed during the design phase to ensure access to resources, and that other power dynamics, are acknowledged and mediated; this should be followed up with stakeholder engagement activities in order to build dialogue and consensus over the long-term to reduce potential conflict. Secondly, there is a need for coordination between aid agencies in order to avoid duplication of activities and ensure maximum use of resources to meet the identified vulnerabilities and capacities.

An important observation concerning the success of this project was the capacity of World Vision Somalia staff and consultants to work holistically using a participatory research methodology **[participatory assessment of complexity and root causes]**. The team comprised of consultants who specialised in Rangeland Management through training at MSc and PhD levels. The consultants had experience in designing pastoralist livelihoods projects in the Horn of Africa and World Vision Somalia lead staff had formal training in range science and rangeland management as well as programming and community development experience. The combination of technical skills to implement the project as well as suitable training to design the curriculum was needed **[broad stakeholder engagement and capacity building]**. World Vision staff's understanding of the region in terms of the relationship between rangelands, community dynamics and their contribution to their livelihoods blended well with the consultant's research experience in other regions of Africa. Together they delivered and facilitated a coordinated package to the community and the Puntland/Somaliland governments. According to Charles Otieno, World Vision Somalia's Technical Advisor in Livelihoods and Food Security: 'We had to contextualise the holistic rangeland management approach in to a model that resonated well with the immediate needs of the community as well as addressing their future natural resource base with the same interventions' **[flexibility in design and implementation]**. It is clear that a team with the necessary technical skills in holistic rangeland management as well as the ability to work with local governance systems and empower communities through a participatory methodology is essential to implement resilience programming.

A monitoring and evaluation (M&E) system gathered information on direct support to asset accumulation (increased household food basket) and indirect support through transforming structures and processes (inclusion of health and sanitation in the education curriculum). It also offered feedback on achieving livelihood outcomes through virtuous circles (directing planning to priority areas that were identified by the community). This presents an important shift towards recognising the importance of monitoring outcome and process indicators for resilience.

4.2 Governance, ecosystems and livelihoods in Kenya

A. Context and programme characteristics

Mukogodo is located in Laikipia North District, one of the 43 districts of the Rift Valley Province in Kenya. It is classified as semi-arid with an average annual rainfall of only 400mm per year, which is erratic and unreliable. The Maasai community here are pastoralist and the main inhabitants of Mukogodo. Nevertheless population growth and the tendency towards a more sedentary life style have made the traditional Maasai livestock-based livelihood less tenable. Shortages of water due to increased upstream use by farmers on the slopes of Mount Kenya have exacerbated this problem.

The World Vision Canada-funded Area Development Program (ADP) in Mukogodo was active for 15 years, but there were still significant issues affecting children's health that had not been addressed through traditional development projects, such as building schools, training teachers and supporting health care. A participatory assessment process identified complex governance and environmental issues that were constraining development

[participatory assessment of complexity and root causes]. Much of the land is taken up by privately owned and operated ranches, so that the Maasai are restricted to smaller community ranches with narrow corridors between them. Problems were also growing over shared use of water resources caused by upstream water users damming the rivers running through their land and so preventing water from reaching some Maasai community ranches.

Following the closure of the ADP in 2009 an assessment was carried out to decide if further funding should be given to the area. A radically different approach was needed and with support from the Canadian International Development Agency (CIDA), a six-month pilot project in Mukogodo was initiated. The concept was unique in adopting a combined emphasis on governance, environmental management and increasing and/or diversifying household incomes and assets in order to improve community resilience. To do this, an assessment was carried out using stakeholder engagement tools and a systems lens to assess community assets and activities in relation to each other and to determine the root causes of vulnerability **[participatory assessment of complexity and root causes]**. As a result, the dynamics of the relationships were better understood and appropriate interventions to improve the capacity of marginalised actors **[broad stakeholder engagement and capacity building]** were identified. A new organisational structure was also needed. World Vision Canada partnered with established community-based organisations to implement, manage and monitor the project activities, and engaged in multi-stakeholder forums to advocate for the needs of marginalised communities.

The assessment revealed the existence of health problems, especially during drought periods, and exposed the fact that only the symptoms of these problems were being treated rather than the causes. A main cause was the lack of access to good pasture. Over grazing and a lack of pasture management led to land degradation and a lack of fodder for livestock; this was also contributing to malnutrition. One intervention taken was therefore to implement holistic rangeland management techniques in order to control the grazing of livestock and allow rehabilitation of grasslands.

By consulting with other stakeholders and analysing the root causes of poverty, pastoralists also realised that pastoralism would not be able to sustain them indefinitely and that further livelihood strategies were needed. Sending children to school was given high priority, as this would allow them to seek alternative livelihood options later on. The pastoralists also identified income generating activities that could complement their livelihoods such as producing honey and handicrafts to sell.

By engaging with a range of stakeholders over a longer period of time the project also gave marginalised groups a stronger voice **[broad stakeholder engagement and capacity building]**. Women and young people were invited to take part in decision-making processes and multiple meetings were held until the louder voices were softened and the quieter ones heard. A serendipitous outcome was improving women's leadership in community decision-making.

B. Programming success

Several positive outcomes were achieved in terms of increasing the capacity to cope with drought and longer-term resilience, through more equitable local governance structures, promoting education and greater sustainability of pastoralist livelihoods:

- 210 acres were set aside for rangeland rehabilitation to encourage pasture growth in partnership with the communities and the private land owners, line government ministries, the Laikipia Wildlife Forum and African wildlife forum.

- Increased dialogue between community ranches and private land owners through multi-stakeholder forums resulted in increased cooperation and mutual support to protect the environment and improve the livelihoods of communities.

- Pastoralist communities were empowered to pursue alternative livelihood strategies with increased skills and support to access new markets; for example, women (in groups) have started selling aloe vera products for cash, and can now send their children to school.

- Women's involvement in decision-making has increased by 10%, and 6 out of the 13 group ranches have elected women to be included in local decision-making bodies that deal with conflict resolution and land disputes.

- A reduction in child labour and school drop-outs, with about 85% children staying in primary school.

- Over 475 households and 10,000 cattle now have access to water at a distance of less than 2km

Agri-pastoralist communities in Kenya have been empowered to pursue alternative livelihood strategies including vegetable greenhouses. ©2009 World Vision

C. Ongoing challenges

This case study highlights two sets of recommendations for resilience programming: first, the need to engage with multiple local stakeholders from the private sector, the local community and government, as they all need to be engaged in promoting the development of the most vulnerable groups. This is particularly true when conflict and mistrust exists between stakeholders and this consequently exacerbates existing vulnerabilities, as is the case in Mukogodo.

Second, a holistic perspective is needed to tackle local development problems, based on a shared understanding of their root causes. In Mukogodo, the root causes of malnutrition were identified as environmental degradation, low quality of products (honey and handicrafts), lack of access to markets for produce, as well as poor governance of water and land use.

By adopting a more integrated approach to programming in Mukogodo, World Vision has achieved positive social and economic impacts, including improving the well-being of children through increased enrolment and longevity in schools and improvements to healthcare and nutrition. It has also tackled the root causes of malnutrition by focusing on governance issues, ecosystem services and livelihood options **[cross-sectoral design and implementation]**, in partnership with multiple groups of local stakeholders.

4.3 Climate vulnerability and capacity assessments in Indonesia

A. Context and programme characteristics

Deforestation, peat land degradation and forest fires make Indonesia one of the top three greenhouse gas emitters in the world (Sari et al, 2007). It also has a long coastline, making it extremely vulnerable to climate change, and this has resulted in inundation of some parts of the archipelago including Jakarta Bay.

The West Kalimantan region is expected to be particularly adversely affected by climate change. More than 50% of the population lives below the poverty line and the poorest communities, who depend on agriculture and forests for their livelihoods, are amongst the most vulnerable. Moreover, in World Vision's ongoing work with these communities, it became clear that they were already experiencing the impacts of climate change, of which the most visible effects are:

- Forest-based livelihoods are being threatened by dry spells during which peatlands can catch fire destroying cropping lands.

- Reduced fresh water resources, decreased soil fertility and the disappearance of wild animals for hunting, as well as a reduction in the availability of fish.

- Food insecurity and child malnutrition is increasing due to poor harvests caused by pests, diseases and an unpredictable growing season; there is also The incidence of diseases such as diarrhoea, malaria and asthma are increasing, particularly among children.

- New diseases are appearing, such as rheumatic fever and chikunguya.[5]

- Flooding, tidal inundation, soil erosion and the silting up of rivers is increasing.

Traditional strategies used by communities and households to cope with shocks and stresses are inadequate in the face of more frequent and intense extreme events such as flooding. Communities have limited access to weather forecasts and effective early warning systems for extreme events. Households respond to crises by selling liquid and productive assets which reduces their coping capacity over the long-term. To limit the deterioration of assets and promote adaptation in West Kalimantan, World Vision Indonesia sought to increase communities' ability to respond to the impacts of ever increasing environmental stresses in a way that builds longer term sustainability.

As a first step in a capacity building process World Vision developed and piloted a new assessment tool, the Climate Change and Environmental Degradation Vulnerability and Capacity Assessment (CEVCA) in the sub-districts of Teluk Keramat and Sajingan Besar **[participatory assessment of complexity and root causes]**. The objectives were to:

- Undertake a realistic assessment of vulnerabilities and the adaptive capacity of communities.

- Understand how communities experience climate change and mobilise community action for adaptation.

- Combine local wisdom with secondary scientific data (regional and national level), assess current and future impacts of climate change and environmental degradation and identify new adaptation methods.

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[5] CHIKV virus which causes an illness with symptoms similar to dengue fever.

The results from the assessment have helped improve World Vision Indonesia's understanding of how climate change will affect programming and these have been used as the basis for developing an action plan to integrate CCA and environmental sustainability into existing and future programmes/projects.

B. Programming success

Understanding the root causes of vulnerability is a critical element in the success of this project, and the CEVCA highlighted a number of underlying problems that would not have been addressed through traditional World Vision programmes, which have focussed exclusively on education and health interventions to achieve child well-being. Children were increasingly suffering from health problems such as diarrhoea and skin diseases, nevertheless the health programmes only dealt with the symptoms, treating the illnesses with medication on a case-by-case basis. The CEVCA analysis revealed that these outbreaks stemmed from illegal logging upstream, hundreds of kilometres away from the village, where toxins were polluting the river where children washed laundry and themselves, causing gastro-intestinal and dermatological problems.

This comprehensive analysis revealed that the most effective way to treat the health problems was to engage in policy and advocacy work around the illegal logging, as well as provide medical solutions. With the guidance of World Vision, communities now interact constructively with relevant government agencies dealing with land and forests and have gained respect from neighbouring communities and the government. Programmes have begun to focus on strengthening property rights, starting with a community-based mapping process, whilst working with local governments to issue legal land titles to families. The legal recognition of their land has given people a sense of entitlement, as well as a voice to advocate for changes in local land use policies and enforcement of existing laws that control logging activities. Without the land titles they did not feel able to claim their rights and protect their own land.

New methods have also been found to have a positive impact on awareness and education of the role of forest land protection, which they have done without alienating local mandated authorities. These include instituting a 'Green School' curriculum, organising public events for World Environment Day, collaborating with other like-minded civil society groups and publishing articles in the local press.

By tackling the root cause of disease, World Vision has helped reduce vulnerability and has empowered communities. It cannot claim responsibility for eliminating illegal logging in Indonesia, but by addressing the root causes of health and related problems through a comprehensive decision-making process, it can have a more sustainable impact on child wellbeing in the ADP.

C. Ongoing challenges

The project design originally focused on understanding vulnerability to climate change, and as such, many of the problems were directly related to climate change issues. However, in retrospect, World Vision recognises that the design process should have been more open **[flexible programme design and implementation]**. Vulnerabilities are not only related to climate change issues but a broader range of social, economic, political and environmental factors; given this complexity World Vision faces an enormous M&E challenge. How can success be measured in terms of a reduction in vulnerability? A better understanding of vulnerability is needed and the ADP aims to continue using the CEVCA tool to explore the dynamics and inter-relationships of vulnerability. The project will also continue supporting communities to exercise their land rights and work towards rehabilitating degraded land through reforestation, regeneration and education.

D. Recommendations

More action-research on social-ecological systems is needed to understand the root causes and dimensions of vulnerability, as well as the multiple impacts of actions taken to address it **[participatory assessment of complexity and root causes]**. The outcomes of this project in West Kalimantan suggest that an adaptation project can do more than reduce vulnerability to climate change. Action taken to tackle the root causes of health problems also reduced tenure insecurity and empowered communities to exercise their property rights and prevent illegal logging.

Nevertheless, more research is needed to understand these pathways to resilience. By using and combining local wisdom and scientific data better, World Vision can offer a much richer picture of how to improve resilience.

4.4 Integrating risk management in Honduras

A. Context and programme characteristics

Honduras has a population of 7.7 million, of which about 37% are less than 15 years old. It has one of the highest levels of poverty and social inequality in Latin American. Poor communities are particularly vulnerable to environmental and social threats. In recent years, the decline in exports due to rising food and oil prices on international markets has aggravated this situation.

World Vision Honduras ADPs in Shalom and Maya face environmental hazards and social conflicts that have had a negative impact on project implementation and child well-being outcomes. ADP Shalom, in the south, is hit by regular floods and drought due to El Niño, and is also located within a seismic area. It is also an area of high insecurity due to gang violence, common to other urban settings in Honduras. In ADP Maya, in the west, topographic characteristics mean that some communities are regularly affected by landslides and in the rainy season they are often cut off because the roads are in poor condition. Maya is also on a drug-trafficking route, where there are outbreaks of violence between drug cartels. Land tenure is also a problem: productive land is concentrated in the hands of very few people and many families do not own land at all, which creates conflict. Community leaders and World Vision staff recognised that these risk factors interact and are constantly changing **[participatory assessment of complexity and root causes]**.

B. Programming success

When ADP Shalom was designed in 2009, disasters were identified as a major problem and DRR was selected as a priority area for intervention. Most DRR activities focused on preparing for, and responding to, rapid onset disasters as well as on education and awareness-raising. They included, for example, teaching people how to build latrines and internal walls to reduce the health problems associated with flooding. Through these actions World Vision has supported people to take measures themselves to reduce the impact of flooding. However, a lack of resources and the limited range of interventions are constraining factors. Although many houses are located in flood-prone areas, World Vision does not have the necessary resources to buy land and help people relocate.

Another area of DRR work in ADP Shalom is with the local emergency committees (called *Comité de Emergencias Locales*, or CODELs, in Spanish). Nine of the 11 communities within the ADP have a CODEL, and of these, seven are active. World Vision has worked hard to reactivate the committees and build the capacity of members so they can prepare each year for the rainy season **[broad stakeholder engagement and capacity building]**. Nevertheless, World Vision staff noted that most do little to reduce vulnerability or help people adapt. The need for more up-stream DRR work is clearly an area that needs further attention and consideration in the ADP redesign process, as does dealing with the causes and consequences of gang violence. Here, a major limiting factor was lack of knowledge about tools that could be used for conflict prevention.

ADP Maya did not have a DRR project despite suffering from regular floods, however it had engaged in awareness raising activities on climate change and disasters with the Red Cross National Society and the fire brigade through its education programme.

C. Ongoing challenges

ADPs Shalom and Maya begin a process of redesign in 2013, offering the ideal opportunity to assess the diverse risks affecting project implementation and child well-being outcomes, as well as the chance to examine existing tools and methods for managing these risks. A scoping study was thus carried out from November 2012 to January 2013, to review how risk management is currently approached in Maya and Shalom ADPs. It revealed that disasters had been treated as a 'humanitarian' issue, rather than a development problem, and that awareness of future climate

change impacts was low amongst World Vision staff and community leaders. Conflict, on the other hand, was seen as an important issue by all stakeholders, even though it had received little attention in programming.

The main barriers to integrating risk management in development programmes are:

- *Lack of awareness*: Current participatory learning and action (PLA) tools used during the design and redesign processes do not include an explicit focus on environmental or social risks and their root causes. Without this analysis, communities and ADP staff alike lack awareness of the multiple dimensions and causes of risk. For example, violence has increased in ADP Maya in recent years due to increased drugs trafficking, but World Vision are not addressing this issue directly through programming.

- *Low salience*: In most ADPs, disasters are not considered an important enough problem to be dealt with through a stand-alone project and are consequently supposed to be addressed as a cross-cutting issue in sectoral projects **[cross-sectoral design and implementation];** nevertheless these activities are not allocated an additional budget within the sectoral strategy, and are effectively invisible.

- *Lack of training and trainers*: Lack of understanding and knowledge of methods for reducing vulnerability associated with environmental hazards and climate change, but perhaps more importantly for dealing with violence exists. More training on methods for conflict prevention is needed at all organisational levels within World Vision Honduras **[broad stakeholder engagement and capacity building]**.

Residents of a peri-urban community in southern Honduras are developing a common understanding of the risks they face by carrying out participatory mapping exercises, facilitated by community leaders. ©2013 Emily Wilkinson/ODI.

D. Recommendations

To overcome these constraints, the study recommended adding two phases to the ADP re-design process.

- An awareness-raising workshop prior to community consultations, to help community leaders identify and understand the causes of risk in their communities. Six PLA tools were adapted from existing VCA methodologies and have been used to help communities develop a common understanding of these risks **[participatory assessment of complexity and root causes]**. The aim is that during the *problem identification phase* (when data is gathered on the key problem areas for different age groups), community leaders will understand how vulnerability relates to the main economic, social, governance and environmental problems facing the community.

- A scenario planning workshop prior to *the prioritisation phase* (where key areas for intervention are identified), to help community leaders and World Vision staff consider future risk scenarios and possible interventions needed **[scenario planning]**. These workshops would be facilitated by World Vision staff with support from **geographic information system** (GIS) and modelling experts and presentations on innovative examples of integrated approaches to risk management used elsewhere.

In addition, three further recommendations for integrating risk management in the redesign process in ADPs Shalom and Maya are suggested:

- Scale- up activities through partnerships **[broad stakeholder engagement and capacity building]**. World Vision Honduras should engage in partnership building and seek to involve district and national government representatives from the Comisión Permanente de Contingencias (permanent commission for contingencies) (COPECO), education, health and planning departments in the redesign process. This way of working will present some contractual issues and WV Honduras will need support to ensure that appropriate agreements are signed between partners to formalise their contribution. All partner contributions and collective outcomes could then be included in the logistical framework (log frames) of the project **[flexible programme design and implementation]**.

- Mainstreaming risk management in sectoral projects **[cross-sectoral design and implementation]**. Much more can be done to address disaster risk, potential climate change impacts and other environmental shocks and stresses through education, health, food security, economic development and leadership projects. Risk management measures should be included in the log frames of each project (with clear activities, indicators of progress and budgets assigned). Presentations of practical examples and options for mainstreaming, plus scenario planning exercises, will help World Vision Honduras staff to understand how disasters affect sectoral activities and how to integrate DRR and CCA in project planning **[scenario planning]**.

- New national strategy for conflict reduction. The level of understanding of the causes and consequences of social conflict is particularly low in ADPs Shalom and Maya, and will require deeper engagement from World Vision Honduras over the medium term to get to a point where conflict sensitivity can be integrated into ADP redesigns. Capacity building on conflict analysis and prevention is needed, starting with national office staff, with the aim of ultimately developing a national strategy for conflict management **[broad stakeholder engagement and capacity building]**. A series of peer-to-peer learning exercises is recommended with experts from Guatemala, Colombia and El Salvador who are experienced in dealing with gang violence and insecurity related to drugs trafficking.

5 Discussion

5.1 What does resilience-building look like in practice?

Resilience, in practice, represents an approach to development that places attention on generating a collective understanding of risk in all its complexity – its components, causes, evolving nature and the collective action needed to reduce it. The case studies outlined in this paper demonstrate that using a 'resilience lens' to understand development problems can result in more integrated programming to address the root causes of poverty and vulnerability, rather than simply treating the symptoms. While this may not be new to development theory, it does represent an important step forward in development practice. The case studies should not be considered 'best practices' in a normative sense, but rather provide useful lessons as they display some of the steps, challenges and outcomes of adopting more joined up and collaborative methods to help communities manage short and longer-term risks.

The case studies all reflect, to varying degrees, the five characteristics of resilience thinking identified in Table 1, above. Nevertheless, the principles and methods most commonly used to operationalise resilience thinking are participatory assessments of complexity and root causes, broad stakeholder engagement and cross sectoral work. There is still a need to incorporate more action planning based on VCAs, flexibility in design and implementation and scenario planning in order to achieve a better understanding of uncertainty and complexity.

Recognition of complex interactions

This refers to the understanding that actors, their assets, and the activities that they engage in through relationships can alter the functioning of a system. At the heart of these resilience approaches to development programming is the fact that communities operate within open, dynamic processes that do not operate within a linear framework. In the four case studies, an assessment of the root causes of risk revealed complex interactions between social and ecological systems and between stakeholders, their activities and assets. Interventions could therefore be identified that address the nature of the problem, rather than fitting pre-determined sectoral approaches. Once the root causes had been identified, scenario planning exercises were used by some programmes to prioritise activities and involve multiple stakeholders.

Appreciative inquiry

This involved building on existing assets to create change using an appreciative inquiry approach. Innovative PLA tools have been used to identify multiple dimensions of risk in all four case studies: holistic VCAs, CEVCA and Community-Owned Vulnerability and Capacity Assessment (COVACA) each combine different kinds of data (social, environmental; qualitative and quantitative) that can be collectively analysed through GIS maps and other visual representations. This permits a diagnosis of problems that are multi-tiered and uncovers unexpected drivers of risk, such as illegal logging, as well as strategies for building on existing capacities that are both endogenous and exogenous to the community.

Dynamic and flexible

Flexibility in the design, implementation and revision of outputs and activities is explicitly recognised as necessary to adapt to change and unpredictability. The need for greater flexibility in programme planning and implementation was recognised in ongoing challenges and recommendations in three of the four case studies. In Indonesia and Honduras, programme designs need to be more flexible so that a range of issues contributing to vulnerability can be identified, and so that new actors, such as educational institutions can be incorporated in planning and implementation. In Somalia, World Vision recognised that existing measures would have to be better adapted to meet future challenges, such as changes in resource availability.

Multi-sectoral approaches

People perceive and experience problems and solutions in different ways depending on history and context, so integrated approaches are needed across sectors and scales. The case studies here demonstrate serious efforts by World Vision to open up project implementation to include partners and policy areas that are not predetermined by any particular internal procedures or rules, generating projects that include different sectors (multi-sectoral) but work across and integrate sectors (trans-sectoral). The HRM projects in Somalia of social protection, DRR, food security and water and sanitation, collectively address short- and long-term risks through a trans-sectoral approach. These innovations require new skills and World Vision staff will have to acquire these and the relevant tools in order to implement projects effectively.

Open systems approaches

Development processes interact across time, sectors, scales and places. A more inclusive approach integrates local, sub-national, national and regional scales, and engages with the institutions and structures that support or impede development for poor households and communities. In all four case studies attempts were made to involve a broad range of local stakeholders in risk identification, analysis and planning activities in order to address governance issues by creating a) buy-in from all those involved in addressing the 'problem'; and b) a sound understanding of the formal and informal institutional arrangements governing access to resources. The participation of multiple stakeholders also generated more holistic risk assessments, capturing information about the different ways in which people perceive and face risks. As seen in Honduras, World Vision needs to partner with actors operating at higher levels of governance in order to scale up project activities. How to include the activities of these partners within World Vision's logical framework (and vice-versa) and adjust them as the projects progress, remains a challenge. Guaranteeing stakeholder involvement is also a challenge, and is not always entirely successful (particularly among government officials, due to lack of perceived political benefits from greater participation and transparency) and will this will require longer-term engagement with stakeholders to form stronger partnerships.

The case studies demonstrate clearly World Vision's desire to apply resilience thinking in a way that will empower poor, vulnerable people and communities and improve their entitlements to land and other assets. Many of the interventions can be considered enabling, in that they do more than just provide households with physical or financial assets; rather they enhance people's ability to manage evolving risks at the household level and to address the root causes of vulnerability more successfully. Examples include promoting secure land tenure and providing spaces for dialogue with local stakeholders who control access to resources. Whether or not these projects have enabled people to manage risk more effectively or have contributed to strengthening the entitlements of the most vulnerable – or if they if they simply carried on with business as usual – can only be assessed over the longer term and through in-depth evaluation of a programme's relevance, effectiveness, efficiency, impact and sustainability. For now, it is interesting to note that changes in programming initiated under the resilience guise have permitted interventions to tackle the root causes of vulnerability, of which lack of entitlements or access to resources is an important component.

The case studies also suggest that there may be some conceptual as well as practical constraints to applying resilience thinking in practice. Integrated approaches dealing with multiple risks (including natural hazards and conflict) may not always make sense. For example, in the case of conflict prevention in Honduras, World Vision

staff and communities were far less aware of the causes of, and ways to deal with, violence than the risks associated with environmental hazards; no single project or set of projects could be designed to deal with these risks at the local level in a joined-up way. To better understand these systems and relationships, more research is needed on the spatial, temporal, and causal aspects of different risks and how interventions affect these. Furthermore, capacity building around conflict sensitivity is needed to produce more joined-up programmes that address a range of natural to man-made risks.

6 **Further reflections**

This research has highlighted areas that need further thought and development in the process of project implementation. Based on the findings above, Table 2 below pulls together the key processes and steps needed to integrate resilience thinking into development projects and compares these processes to more traditional ways of assessing and implementing projects. In addition, a number of other good practices have been identified through experience and reflection on World Vision programming over the last 60 years that could also add value to the overall work of contextualising resilience thinking and addressing vulnerability.

Data collection and analysis

Data collection is often mandatory but can play a minimal role in challenging our biases or preconceived notions of what the problems are. Spatial analysis of vulnerability indicators can be used to identify social, environmental, and economic issues of concern in specific locations (or hotspots), and provide an input to identifying the context-specific drivers of vulnerability in hotspot areas. Communities and other stakeholders can then be included in a dialogue to understand if the drivers identified in the data are the real drivers and how to address these. World Vision is currently in the process of developing spatial models that can be used to synthesise hundreds of data points into understandable and actionable vulnerability concerns.

Adaptive management

Adaptive management is based on learning by doing: interventions are experimental but based on a sound body of knowledge and are implemented systematically using a solid methodological process to arrive at the best understanding of complexity. Interventions can be adjusted during a programme, in response to immediate results, and a different course of action pursued if necessary, in order to meet the same outcome in a continual process of reflection and adjustment. Rigid project designs do not allow for such changes in management; adopting adaptive management approaches will also require changes by donors and project managers.

Once adaptive management processes are in place, scenario planning and crisis modifiers can help support a quick change in activities when necessary. Adaptation at the community level is a natural coping strategy in response to external shocks. It stresses the need to capture the action in these responses – and in particular traditional knowledge – which is an important input in dealing with future shocks. An appropriate way of managing this operationally will be to move towards a sub-granting model that devolves responsibility to community structures to operate more organically towards desired goals. Development organisations deal with communities that exist in dynamic environments; the ability to manage this complexity is limited. A sub-granting model also creates greater ownership and builds better long term capacity.

Monitoring and evaluation

Resilience thinking has stimulated new reflections on M&E practices at World Vision. Collecting, managing and monitoring social, environmental and economic data is not new to development programming, but there needs to be a renewed focus on how this data interacts with location. GIS can be used to manage, consolidate and spatially

represent data collected by a range of stakeholders to improve understanding of trends over time and where and how vulnerability is being successfully reduced. Technology allows data to be collected and submitted in real time, improving monitoring and allowing for more flexibility in programming and implementation. With more granular and up-to-date information, programme managers can identify appropriate interventions for specific contexts, instead of a single solution for a whole community or region, and can measure progress against these social, environmental and economic indicators.

In addition to improving the measurement of baseline data and refining outcome indicators, resilience programming requires paying greater attention to the processes involved, and hence the observations of the methods and principles used, and these need to become part of continual M&E. The documentation of World Vision case studies goes some way towards demonstrating how resilience principles can be operationalised, but this needs to be formalised with indicators and evidence gathered against these indicators. Whether resilience programming is more effective in improving child well-being than other ways of programming cannot yet be stated categorically. This is because the process indicators need developing and progress needs to be measured against these; due to the fact that programming so far has been analysed retrospectively against new resilience thinking, so the application of resilience principles and methods has been sporadic.

Outcome and process indicators are not new and can be drawn from best practices in participatory and cross-sectoral development since the 1980s, as well from humanitarian practice. Increasingly, humanitarian accountability frameworks highlight the importance of measuring processes; development practitioners could therefore learn from and apply these principles to M&E systems for resilience.

Ultimately, by improving processes and linking these to outcomes, World Vision believes that resilience thinking can help ensure development programmes empower communities to bring about changes in the socio-ecological systems and power relations that keep people marginalised and unsafe.

Table 2: Business-as-usual versus resilience programming

Business as usual	Resilience programming, approaches and principles
Design phase	
1) *Data collection and analysis* • Often interventions are pre-determined based on donor interests or sectoral lenses. • 'Development problem' is defined through a single sector 'lens' (such as poor health) and analysis of this problem tends to focus on the single aspects of the problem without recognising its multi-sectoral nature. • Baseline data collected along narrow sectoral intervention • Design process assumes static communities and environments. • Designs and planning process cannot adapt and interventions no longer become relevant to meeting desired goals.	• GIS can be used to gather data on economic, environmental, health and social/institutional vulnerability and be used to: a) improve ability to target resources and define interventions geographically; b) manage and analyse data spatially; c) open doors to analysing relationships between sectors and highlighting cross sectoral problems; and d) understand dependencies and root drivers of vulnerability. • Holistic and participatory VCAs for livelihoods, hazards, governance and social and environmental trends, including climate change. GIS can be used to analyse multiple sources of data (social, economic and spatially) and map vulnerability. • Systems analysis and power dynamics used to understand the complex nature of -and interaction between- actors, assets and activities. Analysis addresses power dynamics and vested interests contributing to vulnerability. By using a systems-based approach to analyse needs, more appropriate interventions can be defined.
2) *Stakeholder engagement* • Stakeholder engagement is often limited to those involved in a particular sector and groups such as community-based organisations. • No analysis of the impact of power relations to identify who benefits and who is being marginalised	• A broader spectrum of stakeholders is included in analysis to improve appropriateness, effectiveness and accountability of interventions (marginalised groups, private sector, public sector, research institutions and civil society). Governance challenges are overcome by multiple groups finding ways to act collectively in their own best interests (Berg et al, 2010).
3) *Identifying solutions* • Problems and solutions are identified using tools such as problem trees, which connect causes to effects in linear relationships. These linear relationships do not take into account the complex interactions within a given system or impacts of potential/evolving risks, shocks and stresses.	• Scenario planning through new understanding of complex systems, with diverse stakeholders. This can support understanding of potential changes in the economic, political and natural environment. It provides an opportunity for stakeholders to agree on interventions at national and sub-national levels. Participants discuss scenarios and intervention options, anticipating how these might affect the overall system positively or negatively.

Business as usual	Resilience programming, approaches and principles
Implementation phase	
• Development planning is rigid and fixed into a logical framework with fixed targets set for outcomes, activities and budgets set with little flexibility to revise and renew plans if the context changes. Development interventions cease when violence erupts or shocks/stresses peak and contingency plans are not in place.	• Log frames need to be more focused on the outcomes, rather than activities and outputs, allowing for adaptive management and different potential pathways for implementation. • Crisis modifiers (identified in the scenario planning) can be introduced so that alternative responses can be implemented in response to shocks and stresses. • Stakeholder 'steering committees' for ongoing dialogue and reviewing of progress and barriers across levels – micro to macro.
Monitoring and evaluation	

• Periodic monitoring and a mid-term and final evaluation
 	
• Little time and space for reflection to analyse change as they are bound by administrative/compliance tasks and are not able to manage changes effectively as the meeting outputs and activities are the key goals.
 	
• Reflection on achieving overall goals does not occur until the evaluation stage, at which point new projects are being designed so they do not incorporate learning.
 	
• Inefficient tracking procedures and lack of accountability to stakeholders produces mistakes in the use of data for decision making processes.
 	
• There is no prioritisation for funding to ensure project learning is captured and shared.
	• Multi-Stakeholders should be responsible for reviewing the results of data throughout implementation and should make use of innovations in GIS and mobile technologies for real-time data entry and monitoring to effectively manage evolving scenarios.
	
	    o GIS allows for monitoring changes geographically/spatially and reaction through flexible adaptive management scenarios if results are not being achieved
	
	    o Mobile technologies increase transparency and empower local communities to contribute more effectively to evidence gathering.
	
	• Document and map systems to see where certain interventions led to success. System mapping should be an iterative process in understanding how best to achieve the desired outcomes. Learning can be captured through case studies, action research and participatory videos to share and influence policy and practice.

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Cover image: World Vision Somalia helped Ms Roda Awshuki Abdi rehabilitate two acres of land using drought-tolerant sorghum seeds. ©2013 Ailyna Chie/World Vision.

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