

The Livelihoods Centred Approach to Disaster Risk Reduction

Lessons from Matebeleland South, Zimbabwe

Practical Action Southern Africa



LIVELIHOOD CENTRED APPROACH TO DRR IN ZIMBABWE

Disasters are defined as a serious disruption of the functioning of a community or society causing widespread human, material, economic or environmental losses which exceeds the ability of the affected community or society to cope using their own resources.

Disasters are triggered by **hazards**; external factors that can impact on peoples' lives with the potential to affect wellbeing or do harm: e.g. to cause hardship, disruption to livelihoods, damage to property or the environment, and cause loss of life.

The distinction between a hazard and a disaster is important. There is no such thing as a "natural disaster". There are "natural hazards", such as cyclones and earthquakes, but disasters only occur when a hazard impacts on people. A cyclone making landfall on the coast of Mozambique is likely to cause a disaster to the local population, while the same cyclone at sea in the absence of humans is a mere meteorological event with no impact on humans.

The severity of a disaster is determined by the extent of the community's **vulnerability** to the hazard. But this vulnerability is not natural – "it is the human dimension of disasters, the result of the whole range of economic, social, cultural, institutional, political and psychological factors that shape peoples' lives and create the environment that they live in"¹.

Essentially, all disasters are human-made, for a catastrophic event whether initiated by a natural phenomenon or human activities only becomes a disaster when those affected are unable to cope. The sensitivity, resilience and preparedness of the affected community to respond (elements of their vulnerability) coupled with the intensity of the hazard determine the extent of the disaster

The Zimbabwe context

Due to its climate, geology and vegetation, Zimbabwe is prone to a range of natural hazards such as storms, floods, droughts and cyclones. Some of these are seasonal, such as cyclones and floods, others are less predictable. Many areas of Zimbabwe (Matabeleland, Masvingo and southern parts of Manicaland) are naturally dry, some areas experiencing less than 350 mm of rain in a "normal" year. Yet attempts are still made to cultivate crops such as maize which are ill-suited to these conditions. Given the uncertainty of adequate rains, it is not surprising that frequent crop failures occur. Disastrous "droughts" are most frequently the result of the adoption of inappropriate crops coupled with erratic rainfall. As such they are largely man-made disasters. Over grazing, deforestation, veld-fires and other poor land management, worsen the impact of natural hazards.



Aftermath of a veld –fire

Other major hazards include pests and diseases which affect humans, crops and livestock. Epidemics, the most important of which is HIV/Aids², continue to decimate communities, causing widespread hardship, suffering and death. Economic pressures, such as the country-wide hyper-inflation and the international food crisis of 2008 have had major detrimental impacts on the lives and livelihoods of the vulnerable poor.

In addition Zimbabwe is subject to a range of disasters resulting from human-induced and technological hazards that include

transport and industrial accidents. More people die from human induced disasters than any so-called natural disasters. While drought is the most common and widespread natural hazard experienced in the country, no deaths due to drought induced famine have ever been recorded. Road accidents account for far more deaths. While the death rate due to disasters is lower than that of many other disaster-prone countries, the substantial socio-economic losses suffered are a significant obstacle to development gains.

Disasters and poverty

Since disasters are primarily the consequence of human vulnerability, it should be possible to reduce or even prevent disasters by appropriately reducing vulnerability. Vulnerability reflects a state of “being” – it is how things are due to a number of factors which include poverty, inequality, exploitation and marginalisation. Resource poor people are not well represented in decision-making; they are often disenfranchised. Weak government and community institutions and poor development decisions exacerbate the situation. While poverty and vulnerability are not the same, the poor tend to be the most vulnerable.

While disasters have traditionally been viewed as dramatic natural occurrences over which passive victims have little or no control, many more resource poor people are at risk from hazards other than cataclysmic events. Hunger, disease, slow-onset, man-made disasters and conflict claim many more lives and cause greater suffering and economic losses than floods or earthquakes. Yet these disasters pass largely unnoticed; they are “normal” events in less developed countries. Disasters are rarely just one-off events, but more often the result of deep-rooted long-term failures of development. Very often the cumulative impact of several small adversities is all that is required to drive the resource poor from a state of vulnerability to one of total destitution.

The links between disasters and poverty are

clear; it is the poorest that are worst affected and suffer most. Their capacities to cope with the impacts of hazards and recover from their effects are constrained by their lack of access to resources. They are vulnerable. Their vulnerability is made worse by their exposure, being forced to live in fragile and insecure situations (steep slopes, flood plains, drought-prone and degraded environments, informal settlements) with minimal services and inadequate infrastructure.

Livelihoods

People living in rural areas (such as Matabeleland South) adopt a range of strategies and activities in order to make a living. All these activities together comprise their **livelihood**. People, particularly the resource poor, seldom have only one way of making a living. They adopt a range of strategies which depend on their assets, skills, social standing, time of year and access to services, etc. They are frequently opportunistic, changing tactics as and when needs arise. Everyday threats are of greater concern than possible “one-off” disasters.

A livelihood comprises the capabilities, assets and activities needed for a means of living – and is sustainable when it can cope with and recover from shocks and stresses, maintain or enhance its capabilities and assets and provide sustainable opportunities for the next generation. The sustainable livelihoods approach considers vulnerabilities as the main factor that shapes how people make their livings.

The level of vulnerability of an individual or community to a particular hazard is determined by how weak or strong their livelihoods are, what occupational activities they are engaged in, the range of assets they have access to for pursuing their livelihood strategy and the strength and support of the social networks and institutions that they are part of or which have influence over them.

Box 1

Two Contrasting Livelihoods

Picture a farming family eeking out an existence on a small farm in a semi-arid area. They have a few chickens and two goats and no savings. Without draught animals they are forced to cultivate their land by hand, limiting the area they can plant. They have few skills never having attended any training or had contact with the extension services. They have two small children. Luckily the man of the house is able to supplement their farming income from a cash-for-work project. They are struggling, but surviving from day to day. Then the man loses his job – the road-works are completed and no other manual jobs are available. They are reduced to eating two meals a day and as they can no longer afford the fees, the eldest child is forced to leave school. But they are still surviving albeit under extreme hardship. While out gathering firewood, the woman is injured and requires treatment at the nearest clinic. Despite selling their remaining chickens transport and medicine costs force them to borrow from a neighbor or shop owner. They are now in debt and the wife is unable to work. Unable to afford the drugs needed to routinely treat their goats for worms, one breeding goat dies and the other is rapidly losing condition. They have no reserves and despite resorting to eating only one meal a day, they are unable to cope. They have no options other than to become dependent on food aid or the father has to leave home and migrate in search of work.

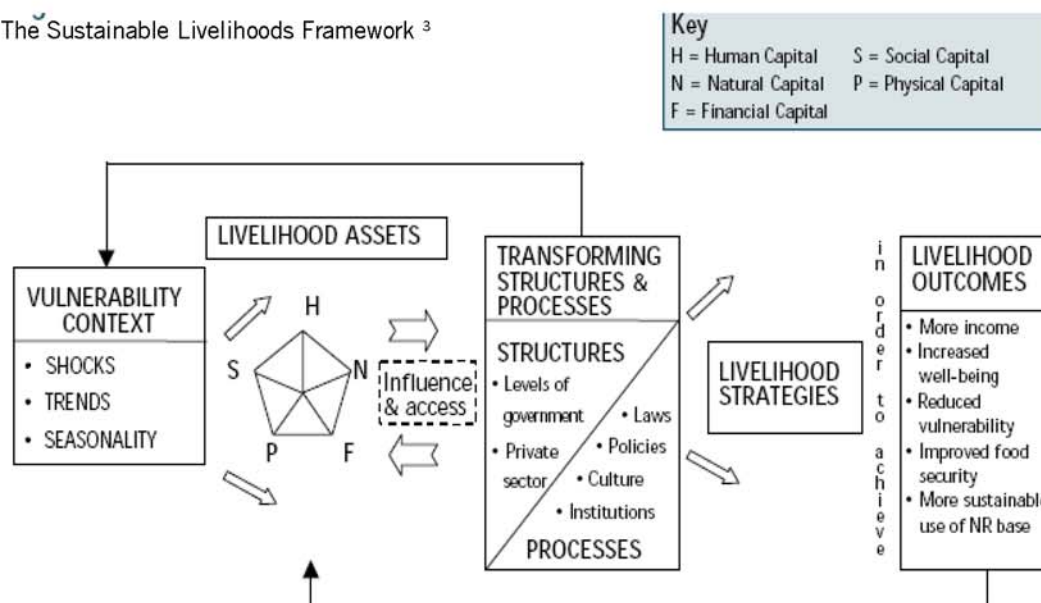
Alternatively, picture a similar family who live under very similar conditions, own a cow which provides a limited amount of milk. Without another to make a span to pull a small plough, they are unable to cultivate a large area. They have invested in a small poultry unit from which they are able to sell eggs. The man of the house has attended a farmers' field school and learned to grow vegetables, which both supplement their diet and provide a small income. Contact with the local paravet ensures that his goats are routinely dosed. The wife makes mats and baskets to sell in the local market. They are relatively wealthy, send their eldest child to school and have accumulated some savings. Despite a prolonged drought which devastates their crops, decreasing yields by some 80% they are able to survive on their savings and through the sale of a goat. Their reserves allow them to pay for the medicines needed by their sick daughter and the wife increases the number of baskets she makes for sale. By deepening the hand-dug well they have made, the family is able to continue limited vegetable production. Despite having to tighten their belts, the family is able to cope and should be able to recover once the rains come.

What is the difference between these two families?

The most obvious answer is their access to assets. Assets (or capitals) comprise the resources which people need to use in order to make a living. These assets include their homes, water supplies, social groups, farms, tools, jobs, knowledge and skills, etc. The sustainable livelihoods framework identifies five (5) groups of assets (or capitals).

- **Financial** – These are objects, activities or resources that can generate cash such as selling labour or running a shop, etc. Livestock and other saleable assets, savings and financial services are included.
- **Natural** – These are natural resources such as land used for cropping or grazing, rivers for fishing and irrigation and forest for wild foods, timber, fuel and products for sale or consumption.

- **Physical** – These are physical structures such as roads, buildings, schools, shops and markets, etc and include the tools used to make a living such as ploughs, blacksmiths' tools, etc.
- **Human** – These are the qualities that help to make a living such as health, knowledge, skills, ability to work and access to health and education facilities.
- **Social** – People are less vulnerable when there is group cohesion. Family links, groups (churches, women's groups), support networks, inclusive leadership, influences over political decisions and a sense of belonging are all important. In the first scenario, the family has access to very few assets; their livelihoods options are limited, they have few alternative income earning opportunities and few reserves to fall back on. Their inability to cope with stresses or shocks makes them vulnerable.



The second family is better able to cope and recover from stresses and shocks as they have a larger pool of assets to draw on and several alternative ways of earning a living. One of their key assets is knowledge or skills. They are less vulnerable and more able to cope and recover.

The Sustainable Livelihoods Approach takes a holistic view of how people make their living, and recognises the broad range of assets and activities required to survive. Access to assets is influenced by institutions, policies and legislation, by social, political and economic structures and processes; the underlying causes of vulnerability. Trends, shocks and seasonality are part of this context and as such have major influences on vulnerability.

Resilience

The case study illustrates how drought can devastate the lives of a resource-poor family by negatively impacting on their severely restricted means of making a living. Without being able to draw on reserves (savings) or resort to an alternative livelihood strategy they are unable to feed themselves and are driven from poverty to destitution. The second family, however, are able to cope and will

probably “bounce back” once the drought is over. They are not vulnerable but are resilient.

Resilience is the ability to withstand hazards and stresses, absorbing them and being able to recover and carry on.

Resilience encompasses the capacity to mitigate, prepare for, respond to and recover from the impacts of potentially disastrous hazards. It is a positive attribute (unlike vulnerability) which can be strengthened by appropriate capacity building. A guidance note, showing what a disaster-resilient community might look like has been developed ⁴. Identifying the many elements of resilience, it provides ideas on how to progress towards resilience.

Livelihood centred approach to DRR

People are at risk because of their vulnerability to hazards, shocks and stresses. This is commonly expressed as **Risk = Hazard x Vulnerability - Capacity**. Natural hazards are in many instances uncontrollable (for example the duration and intensity of a drought cannot be reduced), but we can reduce the vulnerability or increase the resilience of the exposed community. The preceding sections have explained how vulnerability

is both the cause and consequence of poverty; and is characterised by lack of access to secure livelihoods, limited assets, living in insecure environments and marginalisation.

DRR focuses on assessing both the hazards faced and the vulnerabilities of the affected peoples and enabling those affected to self-organise, plan and implement initiatives that increase their resilience. Vulnerability and capacity analysis (VCA) is a participatory tool most frequently used to facilitate gathering information from a community and relevant stakeholders. Using the results of this analysis, communities are able to identify risk reduction options which both reduce vulnerability and, where possible, measures to mitigate hazards. These include strengthening livelihoods and planning and preparing for the impact of prevailing natural hazards.

Access to food is the prime concern of all people. Food security is threatened by many factors including climate related hazards such as floods and drought. DRR is thus a key element in securing food security. Many communities in Zimbabwe do not recognise disasters as the main obstacle to securing access to food and fail to focus on the production of development plans which take account of prevailing and future hazards. These community based plans must include DRR initiatives, capacity building for empowerment, access to knowledge and technologies and access to and control over local resources.

Improving access to assets (or capitals as defined in the sustainable livelihoods framework) alone will not necessarily be sufficient to reduce the vulnerability of a community. While community based planning strengthens the ability of communities to take responsibility for their own development and protection, linkages with local institutions and service providers cannot be ignored. Communities do not exist in isolation, but are reliant on external support, such as Agritex, social services, local clinics, etc. Communities should attempt in their development plans to forge

strong linkages with local development agencies and service providers, civil society organisations and government officials. Gaining the support of local government is of paramount importance in ensuring ongoing support for development and DRR initiatives.

Examples of drought risk reduction strategies from Matabeleland South

Drought risk reduction strategies are long term and preventative in nature, encompassing mitigation and preparedness, whereas coping strategies are short-term responses. Due to the increase in frequency of droughts in the locality, many of the DRR strategies listed have evolved over several years.

- Livelihood diversification (e.g. blacksmith, craft work and forest products)
Conservation farming
- Early planting (with or before the rains)
- Grain storage
- Livestock feed storage for dry-season feeding
- Small livestock (e.g. adapted indigenous chickens and goats)
- Adoption of suitable seed varieties
- Drought tolerant crops such as sorghum and millet replacing maize



Drought Tolerant crop in Madlambudzi ward

- Water harvesting (e.g. dead-level contours and infiltration pits)



A sand abstraction pump

Conclusion

While communities have always lived with shocks and stresses, their coping strategies are being eroded by rapidly changing external pressures such as population growth, HIV, environmental degradation and the impacts of climate change. Changing weather patterns and increased frequency and intensity of hazardous events are overwhelming traditional coping strategies evolved over generations. While communities are all too aware of these challenges, their poverty and lack of access to appropriate information and technologies has increased their exposure to disastrous events. Facilitating community based planning, which incorporates DRR and the promotion of appropriate technologies which strengthen and diversify livelihood options, provides opportunities to increase the resilience and reduce the poverty of resource poor communities.

The National Civil Protection Unit in the Ministry of Local Government, Rural and Urban Development has published a Resource Book for Educational Institutions in Zimbabwe entitled “Disaster risk Management”⁵ which promotes the concept of Total Disaster Risk Management. “The increasing prevalence of disaster risks and the growing vulnerability of communities to disasters tend to reduce the effectiveness of local

capacities and coping mechanisms. This has brought to the fore the need for a holistic and proactive approach focused on the fundamentals of disaster risk and the vulnerabilities of communities”. This approach will be cross-cutting, involving stakeholders at all levels and in all ministries. The direct involvement of communities whose local experience will complement expert knowledge and technologies is vital. There is likely to be a shift in focus from tackling hazards to reducing socio-economic vulnerability.

The links between disasters and poverty are clear. All activities which strengthen livelihoods, increase resilience and reduce the vulnerability of resource-poor people to hazards while contributing to both risk and poverty reduction. Development and DRR are thus part of the same continuum and cannot be addressed in isolation. Mitigation should address the underlying causes of vulnerability; namely, poverty, lack of access to resources and underdevelopment. Disasters should not be seen as extreme events created entirely by natural forces, but as unresolved problems of development. While there is no single formula for risk reduction for the poor, DRR should be a core component of all long-term sustainable development activities. Without the application of effective risk reduction strategies positive development gains and the attainment of the Millennium Development Goals are unlikely.

Notes

¹ Twigg, J, 2001. *Sustainable livelihoods and vulnerability to disasters*. Disaster studies working papers 2.

² Latest estimates (2009) from www.unaids.org/en/KnowledgeCentre/HIVData indicate that the HIV prevalence rate has declined from 25% to less than

³ <http://www.nssd.net/pdf/section0.pdf> “Sustainable livelihoods guidance sheets” - DFID

⁴ J. Twigg, (2007) “*Characteristics of a disaster-resilient community*”. A guidance note.

⁵ Civil Protection Organisation of Zimbabwe (2009). “*Disaster risk management. A resource book for Educational institutions*”.

CASE STUDY

The Bango community's drought mitigation strategy

Background

The Bango community in Mangwe District rank drought as the natural hazard which has the greatest negative impacts on their lives and livelihoods. Since 2005 outside assistance in the form of food aid, which has often not reached the most vulnerable members of the community, has been reduced. Living in agro-ecological zone 5, the community are reliant on crop production and live-stock rearing. Food shortages are common, reducing the ability of households to cope. Migration and the impacts of HIV/AIDS are decimating the available labour force, while leaving the older generation to look after orphans after the death of their parents. Resources are dwindling and coping strategies are being undermined.

Bango community drought coping mechanisms

In 2009 the Chief, Local Councillor and other Traditional Leaders recognised that depending on food aid and external assistance in times of hazards is not a sustainable solution. A Ward meeting was called to consult the community on how they viewed the hazards they faced and how they could be dealt with. The key hazards identified by the community as needing to be tackled were:

- Drought
- Thieves

Community strategy to reduce the effects of these hazards

The following strategies were proposed to tackle the major hazard, drought:

- Create a community field where all the villages will work together
- Construct a community granary where the harvested crops will be stored
- Establish a Chief's court where community problems will be settled
- Establish a prison where prisoners awaiting the arrival of the police can be held. (The nearest Police station is far from the area.)
- Identification of Orphans and Vulnerable Children and other vulnerable people who will require assistance in times of drought.

The Village Heads and community members agreed to contribute 100 Rand per household towards the creation of a fund that could be used to meet these objectives. It was further agreed that the distribution of the food reserves from the granary would be the responsibility of the Traditional leadership in consultation with the community.

The community field acts as learning field for the community. Drought coping agriculture strategies are practiced and lessons learned. Drought tolerant crops will be planted to increase the chances of a reasonable harvest in drought years.

Government efforts to encourage communities to start the *Zunde Ramambo* (chief's granary) programme have not been successful, but by mobilising their own resources the Bango community has shown how progress can be made towards reducing the impacts of drought in their community.

Cover Photos

Clockwise from top left;
Conservation Farming—Small Grains
Marula Ward Community—Celebrating Success
Paravet Treating Small Livestock
Hingwe Community Leadership Planning Meeting

Practical Action is an international development agency working with poor communities to help them choose and use technology to improve their lives for today and generations to come. Our work in Africa, Asia and Latin America is in partnership with poor people and their communities, using technology to challenge poverty. We work with poor people to build their capabilities, improve their access to technical options and knowledge and help them to influence the social economic and institutional systems for the use of technology

For further information, please contact: Kudzai.marovandze@practicalaction.org.zw
Pieter.vandenende@practicalaction.org.uk

PRACTICAL ACTION

Practical Action Zimbabwe

P O Box 1744

Harare

T +00 263 4 776107

F +00 263 4 788157

E practicalaction-zimbabwe@practicalaction.org.zw

W www.practicalaction.org