

Communities and Climate: Building Local Capacity for Adaptation

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Basically, the project described below falls into the category of ‘people driven development’ in which external assistance, provided in this case by ENDA, is in the form of ‘driving from below’.

Abstract

Community-based adaptation to climate change is a complex multi-faceted social process taking place at several levels in the socio-ecological system (SES). This chapter examines the concept of community-based adaptation to climate change from the perspective of the SES in which climate is one of several biophysical and socio-economic inputs that interact to produce outputs of which resilience and vulnerability are just two. Adaptation takes place as a reaction to vulnerability, forming new inputs to the SES. This study discusses recent thinking in the domain of community adaptation to climate change and concludes that people’s capacity to adapt to exogenous and endogenous pressures and maintain the integrity of the socio-ecological system (SES) depends much on their ability to engage with stressors from a position of autochthonous ‘ownership’. It depends also on their ability to access old and new knowledge, skills and capabilities and diversify productive activities so that society can regain a sense of momentum, control and motivation to enhance living standards whilst conserving the integrity of the SES.

Much depends on the method of knowledge transfer or sharing, whereby reflective knowledge and information produced through western cognitive systems is bundled by discipline and is highly mobile due to its compatibility with globalised media and communications systems. Yet knowledge produced this way, such as climate science data and interpretation is often non-transferable in the less mobile local one-world cognitive system in use in poor vulnerable communities. These respond to exigency on a ‘just in time’ basis i.e. having sufficient capacity to take on just enough knowledge and information that can be made useful to engage with issues in a world of immediacy and crisis management. In this cognitive system, priority is given to survival and engagement with daily problems such as food security, health and shelter. Background processes such as climate change that have longer term ramifications do not garner the same degree of priority as they would in the North.

Germane also to this discussion is the concept of self-sustaining community organisations that enjoy legitimacy and sanction within the community. These organisations can be the driving force of adaptation, interfacing with the community and its responsible leadership, legitimating and valorising information and knowledge generated from within and without. Yet this is not an easy concept to operationalise. Many community organisations in poor vulnerable regions are, like their commercial counterparts, ephemeral entities surviving and even thriving during project work while funds funnel in, only to shrivel into shell entities once external funding ends. In so doing confidence in the adaptation process may dwindle due to lack of consistent support.

The trajectory of a single case study still taking place in the region of the Upper Zambezi floodplain known as Bulozzi in Western Zambia is explored to exemplify the process of implementation of a project that focuses on the fundamentals principals of CBA outlined

above - from inception through participative field research, local workshops, adaptation strategising to capacity building and implementation of adaptation strategies. A local community-based organisation lies at the heart of this project and its attempts to sustain itself and provide training, seed-funding and a general level of support for the pilot actions it has been associated with are a major feature of the study. This extends to turning the adaptation actions (including water harvesting and management), agricultural methods and technologies, aquaculture and livestock management, that the CBO intends to mobilise profitably, into a regional training centre. Further references are made to other case study work in Africa undertaken by the author's organisation.

The main project case studied in this chapter goes beyond awareness raising and strategising where most projects end, to see how it is possible for a small CBO to become self-sustaining and survive the cut-off of external funding for CBA projects and to be able to focus on activities that support adaptation while at the same time carrying out income generating activities as a survival strategy. Part of the answer to this, it is suggested, is for the CBO itself to become an entrepreneur, especially in the very issues of adaptation that pilot action communities have recommended. Secondly, more flexible deployment of key personnel who are unlikely to be able to earn sufficient by working for the organisation full time and who may also bring key skills from working in other institutions and agencies, is shown to be a core survival strategy. Key to this set of practices is the perception of local ownership of the adaptation agenda among adapting communities, and the ability to respond to local aspirations by the locally legitimated and representative CBO.

Vulnerability and community adaptation in Bulozhi floodplain, Western Zambia

CBA projects began in the Bulozhi floodplain in early 2007 under the aegis of a local NGO, based in the main town of the floodplain region, Mongu, and comprising a small team of dedicated Lozi personnel. The project has been entitled the Lyambai Vulnerability and Adaptation (LYVA) project. The team has received capacity building in the way of training, software, funding and equipment from outside organisations to start an adaptation project in four village clusters in and close to the eastern margin of the floodplain.

The strategy consisted of a strong early research component carried out by local field researchers in the villages concerned, followed by a community workshop in Mongu involving representatives of the four village clusters concerned, including livelihood operators, climate specialists (Lozi), local government and specialist departments, faith representatives, local media and organisation workers. The research methodology employed throughout this process was Participatory Action research in association with social learning whereby researchers and local scientists imparted information on climate and learnt from villagers about their interpretation of climate and its impacts on lives and livelihoods.

During field research and at the LYVA Community Workshop held in Mongu in October 2007, local livelihood workers and leaders from the four village clusters spoke of a growing sense of uncertainty and confusion that had crept into their lives as a result of unexpected weather events and their impacts. This uncertainty was reflected in the way that people

related to the natural environment, the plains system of which they and their ancestors had been a part for so many generations. It was also reflected in adaptation decisions such as temporary or permanent migration that served no useful purpose for self-sufficiency in the region leaving the population deprived of working age males in particular, and with a growing dependent population of very young and old (including retired Lozis returning to their beloved homeland from various locations of financial and material accumulation).

Most local people are very well aware of the way their floodplain ecosystem works. Some expressed confusion about increasing climate dynamics and all were anxious to move beyond the talking stage. This confusion was expressed through discussion of lives and livelihoods. It centred on immediate concerns regarding planting, loss of crops, damage to infrastructure, people injured or dying due to extremes of weather or other indirect impacts. In terms of contributing to vulnerability, of particular significance was the realisation of certain bad practices for example in fishing and burning and how these practices have been invaded and distorted by outsiders who are not aware of traditional Lozi practices.

People spoke also of the way they felt that sometimes they felt forced to do things that, in their hearts, they knew were damaging to the ecosystem such as fishing with mosquito nets and allowing pigs to roam uncontrolled. Pig-keeping has become popular in recent years as traditional cattle-rearing has become too expensive for local people. Unfortunately, when pigs not kept enclosed, they have tended to rummage for root vegetables and plants that form emergency rations for people in times of food shortage and crisis.

Many were critical of the fact that the traditional authority, the Barotse Royal Establishment (BRE) no longer polices ecosystem goods and services as in the past, while representatives from the BRE itself defended their institution robustly to local people stating that all their powers and resources to police the environment had been taken away over the years and that they now felt powerless to prevent bad practices from taking place.

Another significant theme at the workshop was that of belief with animated interaction developing between certain faith leaders and the climate scientists with the former almost accusing the latter of interference in the ways of "God". This debate attracted more comment on the issue of 'muloi' or witchcraft, something that most Lozis believe exists but never openly discuss. What these discussions may have pointed to was the idea that, in the past, the Lozi nation and natural environment had existed largely in harmony except when humans did something to upset the God or spirits, as a result of which, retribution would be exacted with penalties that were ecological in nature.

A further issue for discussion was that of broadcasting information. In the past, information, news or instructions were carried very quickly to different parts of the sphere of Lozi influence and beyond. This was a factor in the kingdom's eventual demise as a politico-economic entity as, like other redistributive world empires, to use Wallerstein's (2004) terminology, the ability to communicate became degraded by distance and time. Thus there exists in the contemporary era, a communications deficit because, to date, globalising modes of communication have not permeated much of the Bulozhi floodplain. People receive information in the villages more by accident than design. There are two local radio stations

both of whom came to the workshop. But both have limited coverage. Newspapers reach the main town of Mongu from Lusaka but are distributed no further. Thus, this became a key demand of local villagers, the need to receive information, whether it be news of a likely change in weather pattern (early warning) or information about issues concerning social welfare.

The second phase of the project in 2009 proposes to take the prioritised adaptation actions recommended by the village clusters and try to turn these into a reality by attracting funding and interest from outside. Key to this process is the enthusiasm and positive emphasis attached by local people to the LYVA project which is seen as Lozi people's own project helped from outside but designed and implemented by local people in the land and ecosystem of local people. Hence the sense of ownership responsibility for outcomes is high.

These consultative processes have resulted in the appreciation of local people for knowledge on issues such as climate change. Familiar refrains throughout the workshop were, 'we did not know about this' or 'nobody has ever discussed these things with us before' and 'we want to know more'. In the era when politico-centrality was centred in the floodplain, information was distributed, probably, it would be fair to say, on a 'need-to-know' basis, but it would appear that information provision and distribution was more effective than it is today due to higher levels of information and knowledge management.

Finally, during these essentially awareness-raising exercises, people made clear their dear affection and affinity with their floodplain environment and the socio-economic life associated with the annual shifts in ecological goods and services; by implication, this meant the ecosystem. There was consternation at the potential loss or damage to ecological goods and services as a result of processes which, for the one part are not controllable, but for the other, probably are (e.g. control over bad fishing methods, livestock and burning, cutting of timber for firewood or sale).

Self-sustaining community-based organisations

In order for community based, people driven adaptation to climate change to become a continuous narrative, the organisations that drive the process must become self-sustaining. This means that they must be able function continuously with some permanent serving personnel who can devote part or all of their time to their organisation's work.

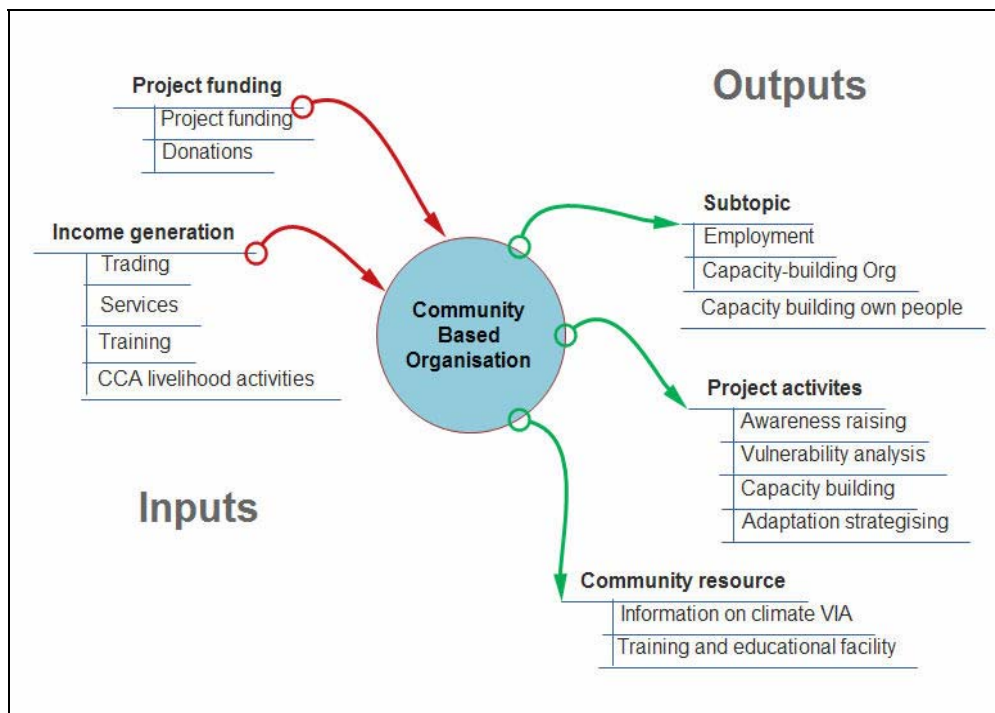
In very poor rural areas like western Zambia, where business skills are at a premium, and where basic services such as electricity, running water and telecommunications services are available on an intermittent basis at best, and where markets and consumerism remain undeveloped, the idea of sustainable local organisations tends to be a novel idea. In such circumstances there is normally high turnover of personnel and organisations as poorly paid and motivated employees quickly become disoriented with conditions of work, and organisations, both profit and non-profit, quickly lose liquidity.

NGOs and businesses alike spring up with an initial investment or project grant and great intentions only to fade away in the space of a year or two due usually to failure to secure more funding, a lack of appreciation of the considerable barriers facing organisational sustainability, poor and disproportionately expensive infrastructure and services, poor management, especially of human resources, and/or low business skills.

Meanwhile, for community adaptation to succeed, a lead time of several years may be required for medium to long term adaptation strategies to be realised, during which the consistent support of the community organisation is a perpetually enabling agent. Adaptive capacity is not built just with the provision of funds or a few training sessions, local knowledge budgets are not increased simply by the infusion of new information. Consistency of approach is essential which as far as communities in rural locations, particularly, are concerned, corresponds with seeing and interacting with trusted people who 'stay the course' and demonstrate their commitment and dedication to the community concerned. There are also important psychological factors such as community self-confidence, morale and cultural support, for example when adaptation strategies are hit by natural calamity, conflict or lack of funds that regular, friendly, supportive contact with CBO personnel can help to ameliorate.

Thus it is desirable for a community-based organisation such as Barotseland.com in Western Zambia to seek ways to permanentise its existence and establish strategic missions and personnel that support the project and that project a consistent and enthusiastic approach to issues concerned with climate change, vulnerability, impacts and community-based adaptation. Here, the Operations Manager is also a business entrepreneur, the Treasurer is a member of the local government administration and the Secretary is also the Provincial Fisheries Officer.

In Figure * below, an idea of the possible input and output flow of activities for a community based organisation is suggested, this one being a fairly accurate summary of the activities of Barotseland.com. In this scenario, the organisation's permanency turns it into an 'observatory', that is a community resource where information such as forecasting, early warning of potential climate hazard such as unexpectedly high volumes of water entering the plain, information on opportunities, old (local/indigenous) and new methods, all in the local language, are banked and shared with the community. When a member of Barotseland.com team visits one of the pilot action sites or anywhere else in the region, they become a mobile extension of the observatory



In western Zambia, this principal is being tested, since 2007, through a number of initiatives including renting an office in a prominent building offering a range of office functions including secretarial services and selling stationery while also operating as a showcase for the organisations activities, and operating a small catering outlet in the same building. Meanwhile, in order to try to support adaptation strategies of villages, engendered during the awareness-raising project period, the organisation has been active in procuring land in different ecosystem areas, donated by the traditional authority. This land has been used for growing rice (a previously underrated cereal crop with vast potential in the floodplain), a new variety of cassava, which does well in moist conditions and requires a growing cycle of just six months, and even re-introducing traditional crops such as sorghum and millet, which had formed the backbone of food security in the past but which had been forsaken for maize and cassava after Zambian independence when government subsidies had supported the growing of maize only.

Another new activity follows the idea of an oxen bank whereby four oxen have been purchased with a long-term loan at a concessional rate from a Japanese private donor and which have been put to use ploughing the rice fields and being loaned out to pilot action communities. The keeping of oxen will also allow for a new revenue earning activity for the organisation, the creation of an oxen loan facility and the provision of training in use and keeping of oxen, a practice which had fallen away somewhat due to the costs of keeping animals, particularly for women, a constituency that previously would not have been considered appropriate for association with oxen. More recently, with the increase in female headed households, some of these gender stereotypical barriers are starting to fall away which allows for much more productive activity for whole communities.

The CBO, meanwhile expanded its personnel by adopting a new constitution which enabled easier decision-making and recruiting of new committee members who are supportive of

the aims of the organisation while bringing new connectivity , knowledge and influence in the community (local government administration, extension services, religious authority).

Results of organisational self-sufficiency drive

These developments have not yet been very successful financially but have provided a very useful learning environment for the organisation's committee, team members and pilot action communities in the context of what is possible and what is not

The first rice harvest realised during the 2009 growing season was fairly disastrous with 75% loss of the projected harvest on account of an excessively high flood, that lingered longer than is feasible for rice (3-4 weeks) that wiped out an estimated 80% of Western Province's rice crop. Many local farmers suffered complete loss of crops, which caused considerable local misery and upset. On reflection and further research, it was discovered that the land used had previously suffered deep inundation and loss of crops. Another problem was inaccurate and insufficient budgeting for the rice growing activity, particularly in terms of weeding, security and post-harvest processes which meant that extra money had to be sought from the donor which still proved insufficient despite the poor harvest obtained.