

WRC K5-2719-4 Deliverable 7 Attachment 5
Samukheliwe Mkhize: PhD Concept Note in Social Policy

SOME OF THE GUIDING CONCEPTS:

COMMUNITY WEALTH, RESILIENCE AND VULNERABILITY

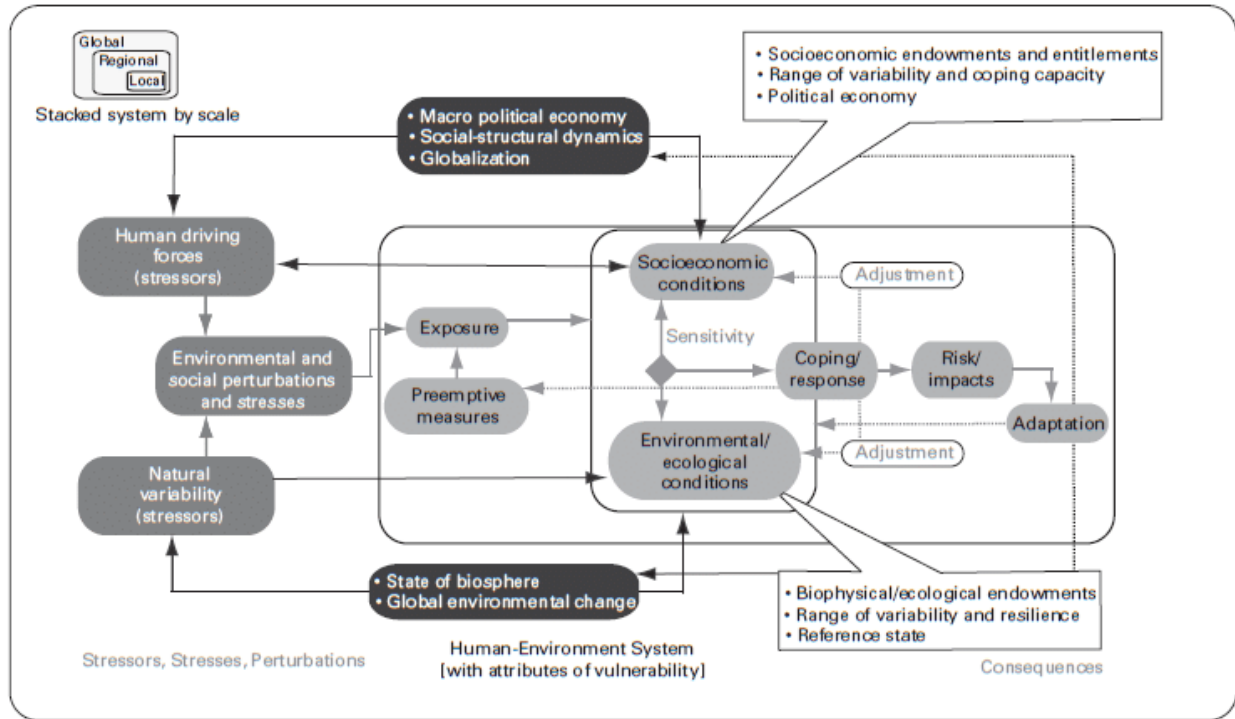
Climate changes are a function of physical changes in the climatic system, vulnerability occurs when these changes affect social human lives. When these come together: $\text{Impacts} = f(\text{CC}, \text{V})$ the physical impacts + human component it provides a sense of what might happen in a community. Much of the climate change budgets at all levels has been focused on climate change and impact modelling...not much has gone to the human aspect of vulnerability and adaptation (Moser, 2010). An aspect of this study will focus on:

The relationship between community wealth and human (community) resilience. To understand the community assets defined by local people. Potentially these will be defined into economic, ecological and social resilience categories **that assets that people and communities have to contribute to adaptation and how these assets develop during the process.** The premise is that, the greater a community wealth the more resilient it is not only to environmental but to socio-economic change and disturbances as well because accessing other resources and other chances affecting their lives. Focus groups would be an appropriate tool to gather a set of community wealth factors and resilience from the perspective of local people (both individual and collective) involving the design and implementation of participatory action activities to engage in dialogue and learning.

The study has a central focus on how people interact with their environment, how they view it and how this shapes how they interact with adaptation. Rural economies, quality of life, the health and well-being of local people are reliant on healthy natural environments and its ecosystem services. Science-based projections of potential changes in the physical climate are not enough to fully understand what climate change will actually mean for local communities. They have to be complemented by an understanding of the current 'on the ground vulnerabilities' and future conditions of potentially affected social and natural systems. A broader perspective than just climate-scenario dependent projections of climate change impacts on the county's people and economy. Instead, a summary of what is known about these potential impacts will be coupled with demographics such as (wealth, race, education, special populations), locally important economic sectors such as (tourism, agriculture etc.), and important infrastructure and community services such as (water supplies, transportation, and emergency management) to better understand how the regions and communities within the county are vulnerable to climate change.

This information will be related to, exposure (E), sensitivity (S), adaptive capacity (C), and resilience (R) to illustrate how certain demographic, socio-economic and other factors make locals and economic activities more or less vulnerable to climate change. It will also investigate what capacities the communities have to draw on and could leverage in the process of adaptation. The following assessment of vulnerability of the socio-ecological systems will be used: $V = f(E, S, R, C)$ formula to be used is $\text{Vulnerability} = f(\text{Exposure}, \text{Sensitivity}, \text{Exposure}, \text{Resilience})$ (see Framework below). The study will also focus on these on-the ground

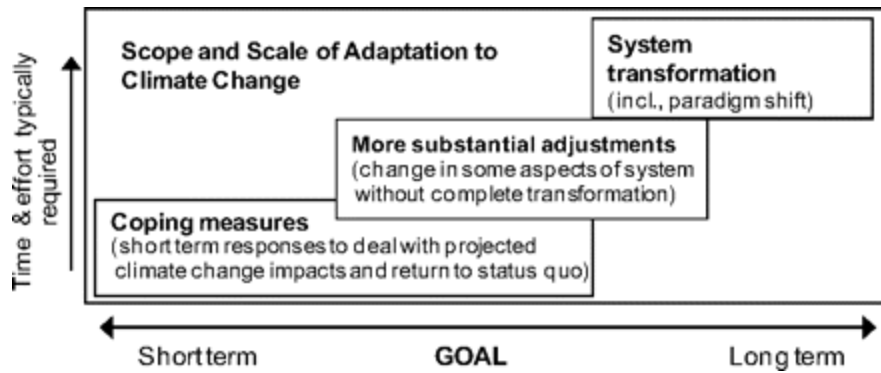
vulnerabilities and how these vulnerabilities interact with climate change to produce impacts on social systems. They will help identify climate-smart adaptation actions that could be considered no- or low regrets options, not because they are necessarily no- or low-cost or easy to implement, but because they can yield benefits to the environment, economy and to people regardless of precisely how climate change will unfold.



This is framework will be used to assess vulnerability (Source: Kasperson and Turner, 2009)

MOVING TOWARDS TRANSFORMATIONAL CHANGE

Moser and Ekstrom (2010) refers to adaptation as "changes in natural and human systems (ranging from short term coping to longer term, deeper transformations) in response to actual and expected impacts of climate change and concurrent interacting non-climatic change which **may** moderate harm or exploit beneficial opportunities". This is a modified definition version of the IPCC (2007) definition. This definition provides a broad understanding of adaptation which allows for the inclusion of short term coping strategies to long term transformational changes such as landscape ecosystem changes. As the framework above shows adaptation strategies can be minor-adjustments, immediate-coping and affecting system linked with system-level adaptations.



The barriers to achieving transformational changes and adaptations that affect human and ecological systems need to be addressed, this relates to more than the agricultural practices and technologies employed but the ways in which all stakeholders (incl communities) think about nature. There are may be limits and barriers that may impede the decision making and implementation of the adaptation process often relating to either process or structural components.

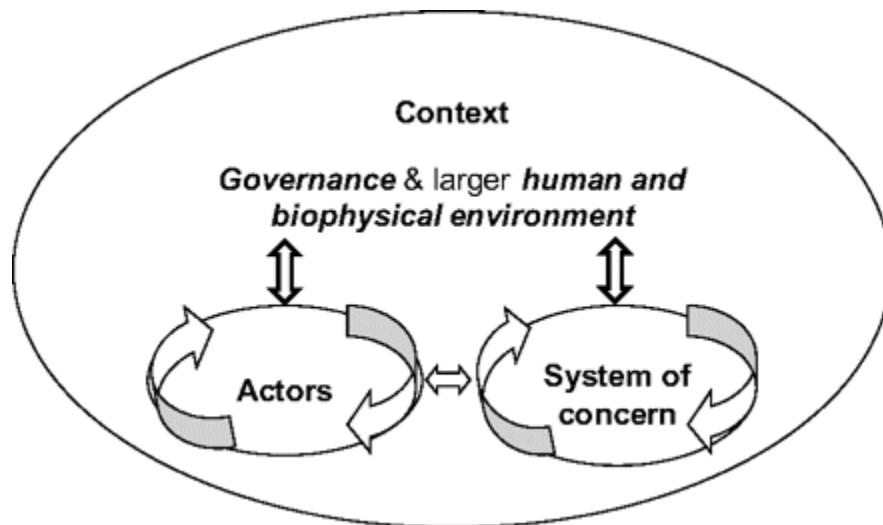
Researchers often use the concepts of barriers and limits together, even interchangeably, whereas others distinguish between them. Limits are understood as obstacles that tend to be absolute in a real sense: they constitute thresholds beyond which existing activities, land uses, ecosystems, species, sustenance, or system states cannot be maintained, not even in a modified fashion. Beyond such limits looms irreversible loss (and the adjustment to living with that loss) and/or radical system shifts, including innovation and novelty. Limits are common in physical and ecological systems in their natural state, but, in some instances, physical and ecological limits have been stretched or overcome with technological innovations (e.g., genetic modification of crops to increase heat tolerance). Those seeming limits that can be overcome will would be viewed as barriers.

Barriers are those obstacles that can be overcome with more concerted efforts, creative management, change of thinking, prioritization and related shifts in resources, land uses, institution building to name a few. Many issues especially social issues are often labelled as barriers but they can be overcome with sufficient political will, social support, resources and effort. Some barriers like regulations and policies or its implementation, not questioning the changeability of such barriers (however difficult to overcome) may itself be an obstacle to progressing in the adaptation process.

As such these implementation actions and frameworks need to be investigated as well. But it is equally important to recognise that some barriers may stop, delay, or divert the adaptation process. However, a hypothetical smooth, barrier-free process is not a sufficient condition to guarantee adaptation success. In turn, not even the best-run process should be expected to be free of barriers, and its outcomes may still require adjustments in the next iteration. But ignoring certain best practices throughout the process (such as effective stakeholder involvement, consensus or broad agreement if and when it is required, adequate information, considering

both biophysical and social dimensions of the problem, or adequate funding) could lead to maladaptation.

But, how do we diagnose and know where these changes are? Ekstrom and Moser (2013) argue that a diagnostic model (see below) can be used to answer the question: how do actors, context (governance) and the system of concern contribute to impediments? The answers to this will assist to derive both structural and process solutions. The diagnostic model (see below) will be tested and used to diagnose and identify the issues. It is appropriate because while the study will mainly focus on be on the intentional, planned adaptation process, the Ekstroms model does not presume a particular set of actors, level of planning and implementation, or involvement of government; rather accounts for the complexity of a deliberate and more involved process. It will be used to investigate across community-local-provincial and national levels addressing both structural and process elements.



Source: Ekstrom and Moser (2013)

The systems of concern relate to: What are decisions being about (e.g community, water, land),

The actor component relates to: What can the actor do in the position they are in, how do they think about change/particular issue, decisions they make,

The Governance component related to: the rules, laws, decision process, cultural norms that affect how they make decisions

The human and ecological environment: the system of concern takes place here (where decisions are being made)

GOVERNANCE

ACHIEVING EFFECTIVE COMMUNITY COMMUNICATION & ENGAGEMENT

The long term impacts of climate change are not known in certain local contexts, particularly in rural communities this necessitates for local people to be committed to life-long learning process. How do we assist farmers to become life-long learners? How do we develop communication strategies required for this? How do we facilitate this process? Developing good communication skills is an important element of the co-production of knowledge at community level. Good communication is necessary to create a climate that will allow researchers and community members to work together effectively. For example, how do we communicate land degradation in a way farmers will understand based on experience? Certainly not by pounding the science into peoples minds. In some cases, the use of dramatic images may alienate local people who may feel the situation depicted is not something that can happen to them. How do we work with farmers in a co-production of knowledge process? Directing and telling farmers how to do something does not guarantee that you will return to a completed task. In fact, in my experience the opposite is likely to happen.

The methods and skills required for effective communication in participatory research and teaching are quite different from those which come naturally in everyday conversation. Thus, the skills include the skills to organize and facilitate communication with community people, organize and facilitate discussions and meetings, group activities, workshops, field days, interviews and other forms of communication. Therefore, effective communication requires both verbal and non-verbal skills in asking questions, probing and listening. In other words, effective communication requires good facilitation skills. But in some cases, this may not be sufficient particularly where learning issues are interlinked with socio-cultural issues which relate to myriad of social issues that necessitate for structure to be put in place to facilitate learning.

We generally start with the idea of starting with the positive and focus on community strengths but we also need to build and sustain them. One way such is persistence. If we understand climate change as having unprecedented changes on our lives that may disrupt our current efforts...how do we create a learning environment that helps farmers to persist? Getting out of your comfort zone is just the start, what happens when I am out of my comfort zone? Adults live complex lives which will be further complicated by continuous changes that affect the coping strategies and adaptations. What happens when farmers have emotional drawbacks that could potentially get them back to their 'comfort zones'? If adaptation is a long-life learning process, how do we assist farmers to develop a pattern of reverting back to developing innovative and creative ways? These are some of the questions the study will develop further.