

Climate change induced poverty and social adjustments among indigenous peoples in Tanzania

Introduction

Climate is involved in most of the shocks that keep or bring indigenous peoples into poverty – notably, natural disasters (such as droughts and floods that cause asset loss and disability); health shocks (such as malaria that results in health expenditures and lost labour income); and animal losses and food price shocks (due to drought or animal diseases).

Indigenous peoples are disproportionately affected – not only because they are often more exposed and invariably more vulnerable to climate-related shocks but also because they have fewer resources and receive less support from government financial system, and even social safety nets to prevent, cope, and adapt. Climate change will worsen these shocks and stresses, contributing to a decoupling of economic growth and poverty reduction, thereby making it even harder to eradicate poverty in a sustainable manner.

Climate change ignites impoverishment on indigenous peoples

In Tanzania, like the rest of the world, indigenous communities have long faced challenges from a range of social, economic, political and environmental factors and the threat from these factors has only intensified due to the current climate change. Their regions, most of which are savannah ecosystems, are extremely sensitive to climate change. Savannah grasslands constitute hotspots of threatened, rare and endemic species, as well as of the poorest people, highly dependent on biological resources for their survival. Societies in those areas are characterized by the closed interconnection that they maintain with nature and its natural resources. They have been conserving the biodiversity of the region over countless generations through their strong informal rural institutions and community knowledge systems. The traditional institutions as well as the indigenous knowledge in the past have played a significant role by making the

local inhabitants less vulnerable to uncertainties arising from global change.

However, in recent times, due to various anthropogenic factors along with cultural changes among the pastoralist and hunter-gatherer communities, these traditional social institutions as well as the indigenous community knowledge systems have started to erode mainly among the younger generation. This has also led to rapid degradation of natural resources which poses serious threats to the lives and the livelihoods of the natural resource-dependent communities. While traditional practices such as subsistence pastoralism/hunter-gathering and local knowledge systems provide the much needed coping capacity to offset climate risks, but limited livelihood options, lack of mainstream information, poor access to modern services and inequitable access to productive resources reduce their capacity to cope with future climate events.

While poverty tends to be conceptualized as linear and uni-dimensional, rather than as dynamic, multidimensional and differentiated across societies, among pastoralists/hunter-gatherers poverty can be defined as deprivation of well-being related to a lack of material income or consumption (the conventional measures of poverty), low levels of education and health, poor nutrition and low food security, high levels of vulnerability and exposure to risk, and a profound lack of opportunity to be heard. This multidimensional and dynamic nature of poverty weakens their resilience to change and places severe limits on their ability to eradicate multidimensional poverty so that they can effectively manage the impact of climate change and sustain resilience.

Resilience includes both an element of recovery and of change. Resilience in climate change context has two facets – social and ecological dimensions. Social Resilience (the ability of groups or

adapt to the environmental changes. Resilience is determined by sustainability of livelihoods, infrastructure, financial system, resource management and technology, at the local level. The determinants of resilience include the capacity of the community to be able to meet the basic needs (food, water, shelter, health) and to build assets (physical, natural, financial, social, political and human) as assets are seen as critical ‘buffers’ to withstand shocks and stresses. Hence, strengthening resilience of pastoralist/hunter-gatherer communities is critical to

communities to cope with external stresses and disturbances as a result of social, political and environmental change) and Ecological Resilience (characteristic of ecosystems to maintain them in the face of disturbance). These two aspects are paramount in eradicating poverty and building climate change resilience among pastoralist/hunter-gatherer communities

Climate-informed development needs to be complemented with targeted adaptation interventions and a more robust safety net system

Rapid and inclusive development can prevent most of the impact of climate change on poverty, but only if new investments and developments are climate informed—that is, designed to perform well under changing climate conditions so that they do not create new vulnerabilities to climate impacts. For example, new land titling and mainstreaming indigenous economy and national development programmes can make a big difference for livelihood improvement, but only if it can absorb the more extreme climate change

impacts such as resource conflicts that are expected in many regions.

However, even a rapid, inclusive, and climate-informed development will not cancel out the need for targeted actions that are aimed at lowering people’s vulnerability to climate change impacts. Although some of them are pure climate change adaptation measures (like livestock mobility and hunting cycles), others (like increasing financial inclusion) can be seen as “good development” and would make

sense even in the absence of climate

change.

Today's actions determine the magnitude of future climate change impacts on indigenous peoples

Climate-smart pastoralism and protected ecosystems

Climate-smart pastoralist practices can increase productivity and resilience. More productive and more resilient practices, however, require a major shift in the way land, water, soil nutrients, and genetic resources are managed to ensure that these resources are used more efficiently. links, and the new techniques that result from innovation must actually be broadly adopted, including by poor livestock keepers.

Land use regulations and better and more infrastructure for natural hazards

Land use regulations can ensure that new development occurs in places that are safe, or easy and cheap to protect using hard or soft infrastructure. Land use planning can realistically function only if accompanied

Better health infrastructure and universal health care

Poor people, majority of whom are indigenous, have limited access to health care, and face out-of-pocket expenditure exceeding their production capacity. Although health centres exist in the country, benefits from better access to care depend on the quality of care, and hence, parallel efforts are required to develop and improve health infrastructure. Climate change makes this need even more important. Local authorities should invest

Livestock improvement, smarter use of veterinary services, approaches to strengthen animal resistance to pests and diseases, and reduction of animal losses can contribute to the sustainable intensification of pastoralism—thereby leading to greater food production. For this to happen, innovation is needed to keep increasing profits through market

by investments in transport and communication network to make it possible for people to settle in safe places while maintaining access to the same (or comparable) jobs and services. New infrastructure also needs to be designed to remain efficient in spite of changes in climate and environmental conditions. Innovative methods for managing the uncertain risks of climate change and multiple (and sometimes conflicting) policy objectives can be applied to meet these challeng

in strong monitoring and surveillance systems able to detect new health issues that will periodically arise in response to changing climate conditions. They also need research and development on the diseases that affect marginalized people and that are expected to increase with climate change.

Social safety nets and financial tools

Insurance and social safety nets are efficient tools to support marginalized poor

people when they are affected by natural disasters or environmental and economic shocks. To ensure that the financial sector and social safety nets provide instruments relevant to climate change, governments need to design a holistic risk management and climate change strategy, giving a voice

to indigenous people and making their protection a priority. Such a strategy will necessarily include a range of instruments, targeted to specific disasters such as droughts and floods.

Table 1: Many targeted actions can lower poor people’s vulnerability to climate change impacts

Sectoral options to reduce vulnerability	Intervention actors		
	Local private sector	Governments	International community
Agriculture, ecosystems, and food security Adopt climate smart technologies and agricultural practices, with support from agricultural extension	x	x	
Develop higher yielding and more climate-resistant crop varieties and livestock breeds, adapted to developing country contexts and climate conditions	x	x	x
Develop transport infrastructure and facilitate market access (domestic and international)		x	x
Reduce non-climate stresses on ecosystems, including through conservation and ecosystem-based adaptation		x	x
Natural disasters and risk management Increase financial inclusion and participation in banking to reduce the vulnerability of poor households’ assets	x	x	
Improve households’ and firms’ preparedness and ability to act upon warnings (contingency plans, regular drills)	x	x	
Improve access to risk information, invest in hydro-meteorological services—for observation and forecasting—and link with early warning and evacuation systems, and collect more data on disaster consequences		x	x
Enact risk-sensitive and enforceable land use regulation and building norms		x	
Improve tenure to incentivize investments in housing quality and resilience, and enforceability of building norms		x	
Invest more and better in infrastructure by leveraging private resources and using designs that account for future climate change and the related uncertainty	x	x	x
Health Increase R&D and eradication/control efforts toward health issues that affect poor people and are expected to increase with climate change	x	x	x
Invest in health infrastructure and access; train health workers		x	
Implement or strengthen effective surveillance and monitoring systems to detect emerging health risks		x	x
Increase health coverage to lower the share of expenses that are out of pocket		x	
Support systems: financial sector, social protection, remittances, and governance Develop market insurance for the middle class to concentrate public resources on poor people	x	x	
Enact well-targeted and easily scalable social safety nets designed to maintain incentives for long-term adaptation investments and grant portable benefits		x	
Manage the government’s formal liability using reserve funds, contingent finance (such as Cat-DDOs), and insurance products, along with developing and scaling-up tools to share risks internationally		x	x
Facilitate flow of remittances and reduce cost burden on remitters	x	x	

Basic social protection and revenue diversification can help households at all income levels cope with small and frequent shocks. But for larger shocks, additional tools are needed. Social protection schemes also need to maintain incentives to invest in long-term adaptation to economic and environmental changes. Poorly designed social safety nets can

reduce the incentive for people to quickly adapt and change occupation or activity when the first effects of climate change appear. This problem is not new and specific to climate change: indigenous peoples understand that social protection is a facilitator of and not an obstacle to long-term change and adaptation, for instance by facilitating mobility to capture better opportunities.