



WWF-Pakistan – with the cooperation of Climate and Development Knowledge Network (CDKN) and global change SysTem for Analysis, Research and Training (START) - has developed this Policy Brief in the interest of informing policy development on the issue of mainstreaming climate change adaptation and disaster risk reduction in Pakistan.

POLICY BRIEF II 2014

GENDER ROLES AND VULNERABILITY IN THE FACE OF CLIMATE CHANGE

CCA AND DRR MAINSTREAMING

The iterative process of integrating climate change adaptation (CCA) and disaster risk reduction (DRR) into policymaking, budgeting and implementation processes at national, sector and subnational levels. It's a multi-year, multi-stakeholder effort that entails working with government actors, political parties and parliament, national statistics office, non-governmental actors, and development actors.

KEY POINTS

1. The blanket treatment of household members in disaster interventions fails to utilize differentiated roles of members that guide a single activity such as livestock grazing or sale of livestock and its produce.
2. Multiplying training beneficiaries, to incorporate additional household members, can be a solution to the drawbacks associated with the blanket treatment.
3. Adjustments are needed to livestock and fishing activities that are likely to remain on what may be described as “business as usual” trajectories.
4. Community level gender-responsive resource management bodies and small groups need to be established to ensure access to resources needed for livestock and fisheries development.
5. Marginalized groups of fishers and livestock breeders require access to new and improved markets and improve working



conditions in existing labor markets that are largely unregulated.

6. Gender responsive advisory services can be integrated in existing and new activities to provide essential information and skills to ensure the competitiveness of small-scale family production systems.
7. Extension of alternative livelihoods to marginalized groups, including poor women, can reduce their reliance on fragile and limited natural resources.

THE ISSUE

A recognized weakness of disaster interventions, be it trainings or provision of emergency services, is a blanket treatment of household members which fails to utilize their differentiated roles in the entirety of a single activity. A single activity such as livestock grazing and sale of livestock and its produce, for example, is typically a labor allocation choice that employs children, women, and men (besides hired labor) for differentiated tasks such as walking, feeding, vaccinating, managed rotational grazing, value added activities such as preparation of milk products, and visits to wholesale markets. To the extent that each of the myriad differentiated tasks making up a single activity require minor adjustments to lessen disaster risk or bolster entrepreneurial initiative in view of changing climatic factors, adaptation interventions that hand sole responsibility for all task adjustments to a single household member will tend to be sub-optimal.

Multiplying training beneficiaries, to incorporate additional household members, may be too simplistic a treatment of drawbacks associated with the above mentioned blanket treatment. Not only would it multiply intervention costs, it would also augment existing interventions along an unimaginative linear path. Instead, it remains to test low-cost interventions, identify household-member and task-specific entry points, and generally rethinking the design of incentives and regulations so they operate by knitting together roles played by family members.

While the focus of the 2013-2014 Climate & Development Knowledge Network (CDKN), global change SysTem for Analysis, Research and Training (START), and World Wide Fund for Nature – Pakistan (WWF-Pakistan) was on climate entrepreneurship training and generating new studies to supply the meteorological and economic rationale for disaster risk reduction investments, the empirical work especially revealed much about gender roles and the possibility of strengthening the design of future interventions. Broadly speaking, for both livestock and fisheries sectors, two sets of findings have emerged, each with recommendations for incentive-based and regulatory instrument design, and are the subject of this brief: a) adjustments needed to activities likely to remain on what may be described as “business as usual” trajectories; and b) new value-added initiatives that arise in and of themselves as adjustments to climatic factors.

STUDY HIGHLIGHTS

- The CDKN/START funded project titled: “Mainstreaming Disaster Risk Reduction and Climate Change Adaptation in the Indus Ecoregion” (2013-2014) is aimed at enhancing the capacity of planners, practitioners, and policy makers in implementing integrated disaster risk reduction and climate change adaptive measures in livestock and fisheries sectors of Sindh province.
- A project study titled: “Assessment of Climate Change Impacts on Indus Ecoregion Fisheries” made use of Pakistan Metrological Department’s (PMD) 22-yr time series temperature and precipitation data covering 6 districts of the Indus Ecoregion (Badin, Dadu, Dokri, Jamshoro, Sukkur, and Thatta). The study focuses, over the period from 1990-2012, on identifying trends in extreme events and identifying “ecosystem based livelihood” practices needed in response. Based on the results of its “extreme event analysis”, the likeliest flashpoints for future public investments are Thatta, Dadu, and Jamshoro districts that received the highest monthly average precipitation among the 6 districts, resulting in floods in 2010 and 2011 (at 1.2 mm/month Jamshoro and Badin’s average rainfall was twice that of Sukkur for 1990-2012). Practices recommended



for coping with future disasters and climate impacts include installation of early warning systems and developing emergency plans to avoid damage to fish farms and fishing ports. Costing for future investments may therefore include procurement of early warning infrastructure/communication devices and training of communities in sustainable aquaculture practices.

- **A project study titled: “An Application of the Difference in Differences Method to Estimate Livestock and Fisheries Productivity Losses at Manchar and Chotiari”** examined the immediate and long-term impacts of disasters on the well-being of flood affected households. Results for Chotiari (Sanghar) and Manchar (Dadu and Jamshoro) indicate that on average floods do not have long lasting effects on consumption, income or assets in either of the two sites. Nonetheless, planners are advised to retain a staggering outcome in terms of the fate of productive assets such as land, but also boats, tractors, and storage facilities, among others: on average, the per household loss for such assets is as high as 50% for flood stricken households at Chotiari. From a policy perspective, the highest income quartile (who typically own such assets and report their loss) is also targeted by small and medium scale enterprise (SME) investments and encouraged to break-out into higher value added segments of production. Should climate/disaster resilience practices be mainstreamed into SME policies for the fisheries sector? The loss figures suggest Chotiari would be a priority location, at least for the high income quartile category of affectees. At Manchar, investments of a different kind – perhaps of a social safety net nature – may be required for losses among low income quartiles which are restricted to consumption and incomes.



reduction policies in context of fisheries and livestock sectors and to identify underlying political, economic, and historic factors that serve as barriers to effective implementation of climate change adaptation and disaster risk reduction measures. A key finding of the study is that the capacity of government officials, especially at the district/union council level, and stakeholders such as community based organizations active in livestock and fisheries, needs to be strengthened for specific kinds of actions: deputy commissioner notification and use of a “climate adaptation/disaster” fund, design of land use plans, and scaling of practices by building centrally-placed demonstration ponds/rangelands.

- **An academic article titled: “Building resilience of women through integrated disaster risk reduction and climate change adaptation in rural Sindh”** proposes cultural-sensitive and gender focused measures that can assist women in rural communities to lower the risks of climate change impacts and disasters on their livelihoods. These primarily include innovative livelihood measures such as ornamental fish breeding, dairy farming, and integrated livestock fish farming, as well as, participatory processes such as establishing women led community based organizations and linking women with local buyers so that they can sell their outputs directly at higher returns.

POLICY RECOMMENTATIONS

8. **Establish community level gender-responsive resource management bodies and small groups to ensure access to resources needed for livestock and fisheries development** - The basic premise of community management entails that sustainable resource management is best achieved when driven by those who rely on the resource for their survival. In many instances, marginalized groups, such as women, who are involved in resource management tasks, are often excluded from decision making roles that hamper their ability to access resources and earn adequate income from livestock and fisheries production. In this respect, formation of community-led women’s user groups is ideal

to provide resource access rights to poor women who are dependent on natural resources for productive activities.

9. **Provide marginalized groups of fishers and livestock breeders with new and improved access to markets and improve working conditions in existing labor markets that are largely unregulated** – Ongoing changes such as economic shifts at national and local levels threaten the livelihoods of small-scale fishers and livestock breeders. Further, such small-scale suppliers of fish and livestock are less organized and have fewer business and negotiation skills than buyers such as wholesalers, contractors, and exporters, who are considered as more powerful players in the marketing chain. This often leads to poor and unethical working conditions for marginalized groups, particularly women. It is, therefore, important that such groups are provided with access to markets, credit and training for improved business, management, and negotiation skills. It is also important to ensure that they have links with associations, federations, and cooperatives that are in the position to support smaller groups through connecting them with vertical institutions.

10. **Provision of gender responsive advisory services providing essential information and skills to ensure the competitiveness of small-scale family production systems** – Women are frequently described, in many community wide assessments, as lacking in knowledge and skills that are regarded today as critical for engaging in modern fisheries and livestock production systems. This neglect of women's capac-

ity needs is largely due to the focus of many service delivery organizations on delivering trainings to male heads of households who are engaged in fishing and livestock rearing. Additionally, most of the trainings that are delivered by such organizations ignore the different learning styles of both men and women; women's lack of familiarity with formal learning environments and their lower levels of literacy results in their particular needs and requirements being overlooked. To overcome these issues, service delivery organizations should opt gender-balanced policies in their trainings, and focus on family-based approaches through which both men and women are trained in sustainable aquaculture and livestock methods.

11. **Extension of alternative livelihoods to marginalized groups, including poor women, to reduce their reliance on fragile and constricted natural resources** – Fishers and



livestock breeders often have limited alternative livelihood options, which makes them particularly vulnerable to the changes in the conditions of natural resources on which they depend. In this context, supporting fishing and livestock communities through alternative livelihoods bears much importance. Income diversification through alternative livelihoods have already been proven effective in assisting resource dependent households in Sindh to maintain household incomes and ease pressure on natural resources, allowing their sustainable growth and regeneration.



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