

Gender and Coastal Ecosystem Management

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Coastal ecosystem management is currently considered to be a key element for the sustainable development of these zones. Coastal areas are high activity zones for fishing, but also for farming, trading, tourism and industry. Coastal regions are especially vulnerable to the hazards of climate change, namely sea level rise, coastal erosion and extreme weather events like tsunamis and tropical cyclones. These impacts are leading to coastal vegetation and mangrove forests being destroyed and seawater flowing into freshwater reservoirs. People inhabiting coastal areas are especially at risk from natural disasters that threaten their lives or destroy the means to provide their livelihoods.

On the coast, both men and women play important but different productive, economic and social roles. There are differences in resource use patterns, access to land, natural resources, equipment, labour, capital, outside income, and education, and in the control that women and men exert over these resources.

Sustainable coastal ecosystem management and conservation thus require a clear understanding of the differences and inequalities between women and men, because their needs and interests are often quite different in relation to coastal ecosystem resources. Access to and control over these resources, the resulting benefits and related decision-making are all differentiated by gender. Women tend to have access to land through male family members (husband, father, or brother), rather than hold titles in their own names. Land ownership has proved to be important as it influences who can make formal decisions about land use, who is consulted on development plans, and who has access to other supportive services such as credit and extension services.

One of the most documented differences between the work of women and men in coastal areas is the segregated nature of the fishing activity. Studies show that men tend to fish offshore or in major inland water bodies, while women fish close to shore. Women tend to be more involved than men in post-harvest activities, particularly in small-scale fisheries. These differences are important, as women's tasks have often not been counted in economic analyses or received the same level of investment (for example, in terms of technological support, credit, or training). Women's economic activities may also be more difficult to categorise than men's. Women tend to juggle multiple activities (such as combining aquaculture with vegetable gardens or fish-smoking), whereas men's work is often clearly focused on one set of inter-related activities.

Women are especially aware of the need to protect ecosystems and biodiversity because they are often responsible for supplying freshwater for their families. Other traditional female tasks like harvesting mussels and mangrove crabs are also dependant on the sustainable use of natural resources.

Despite valuable role that women play on the coast, the coastal management decisions are often made without the perspective and leadership of female stakeholders and professionals. Women are still the minority decision-makers in political processes, because women tend to have less access than men to formal decision-making authorities and to local decision-making structures, including those related to coastal management.

In terms of environmental risks, it is important to highlight the increasing vulnerability of coastal

zones, particularly for women. According to a study conducted by Shirkat Gah-Women's Resource Centre, the floods in 2010 and heavy rains in 2011 in Pakistan had differential impacts on women and on men, due to the strong gender-based division of labour of productive and reproductive activities in the areas these happened.

The Indian Ocean tsunami of December 2004 is a good example to see vulnerability of women as compared to men. Traditionally, men have taken care of fishing and marketing, while women are responsible for fish processing. Therefore, when tsunami struck the Indian Ocean, more men were away in the sea while women were along the shores, resulting in a very high death toll for women and children. However, many relief and rehabilitation efforts continue to focus more on men than women because of land that is mostly owned in the name of men.

Accordingly, for better management of coastal ecological resources and an effective response to such natural disasters, understanding and measuring the gender differences is essential. An age- and sex-disaggregated analysis of the composition of contributions to natural resource management and conservation efforts like mangrove rehabilitation and land conservation must be carried out. In case of natural disasters, such a data of survivors as well as the constraints to rehabilitating the livelihood options open to both genders will also facilitate a better response.

Coastal areas of Pakistan are very deprived where poverty is widespread. Areas along the Pakistan coastline are facing environmental degradation and loss of livelihood opportunities for the local people. Currently, the livelihoods in these areas are very limited and continue to be based primarily on fishing, agriculture, and the extraction of natural resources. As consequence of loss of livelihood opportunities, the dependence of local communities on natural resources has been increased.

Traditionally agriculture, livestock and fishing were three major sources of livelihood for the communities of the area. The agriculture has now deteriorated due to water logging and salinity of lands, causing degradation of natural agriculture livelihoods. Scarcity of fresh water in the area from the Indus and seawater intrusion into the land has been degrading the area.

There is extensive depletion of mangrove forests as a result of climate change, commercial logging, and cutting of trees for fuel purposes as well as for feeding the animals. The phenomenon has threatened the lives and livelihoods of the local communities. The local communities are exposed to threats of cyclones as a result of the reduced mangrove coverage. Similarly, fish and shrimp catch has also reduced as a result of the depletion of the mangrove habitats of these natural livelihood resources. As a consequence, vulnerability of inhabitants of the coastal zone has increased and out-migration of families is occurring at unprecedented rates.

People in the coastal areas are insular in outlook and don't believe in female education and public participation. The on-going livelihood activities in the area are also dominated by men that continue to be based primarily on fishing, agriculture, and the extraction of natural resources. Women community members lack the opportunities and skills to participate in livelihood activities; fully comprehend the threats to the coastal ecosystem; and have the capacity to cope with climate change and ecosystem degradation. They are thus unable to fully take part in sustainable management of the coastal ecosystem.

Recommendations:

Women's contributions to natural resource management and conservation efforts like mangrove rehabilitation and land conservation should be recognized. Women should be empowered to participate actively in decision-making processes and activities such as environmental education and campaigning, water resource protection and sanitation.

Given that climate change accelerates the totality of negative impacts on agricultural production, fish stocks, water availability and livelihoods, that coastal areas are particularly vulnerable and also that mangroves are a natural buffer from natural onslaughts, it is imperative that due attention be given to coastal communities especially women to include/prepare them for disaster related risks and build their resilience.

Mobilization and participation of community women in alternate livelihood activities is likely to benefit coastal ecosystem in many ways. The raised awareness and living standards will help build community resilience to climate change and ecosystem degradation. Currently, the livelihoods of coastal communities are heavily dependent on natural resources and women participation along with alternate livelihood options will reduce pressure on these resources. Out-migration from the project area will be prevented and community engagement and participation will prove to be powerful agents in making better decisions on coastal ecosystem management.

With traditional systems of coastal livelihoods getting limited, new options for improving living conditions of local community that involve women and creates opportunities for them need to be introduced. Women Friendly Spaces (WFS), an intervention tried out by Shirkat Gah in areas affected by earthquake and floods as hubs of mobilisation, skill development and collective action for sustainable livelihoods could be the best strategy to get involve community women. WFS had now demonstrated their viability by providing community women a social platform for problem sharing, providing mutual support and organising activities. WFS have in fact become the spaces for women to collectively decide upon their priorities, identify capacity building areas, develop advocacy strategies and ensure inclusion of their voices in local planning.

Improving coastal area governance and planning through gender mainstreaming and expanding civil society access to coastal governance is also important. Gender-based knowledge should be used for management of coastal resources. Planners can borrow tools from gender analysis to work with women and men to collect information on gender differences in resource use, access to decision making and community priorities. Sex-disaggregated information must be collected and incorporated into coastal zone plans and projects. Often when women's priorities are not included in programmes or projects, they stop participating in them. If the programmes and projects are implemented with such information, it is less likely that coastal area policies or natural disasters will have extra negative impacts on women.

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