Annex 33

CLIMATE CHANGE AND FISHERIES: THE PHILIPPINES EXPERIENCES

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Summary

Climate change, as defined by the United Nation's Convention on Climate Change (UNCCC), is already evident in the Philippines. Sea level rise, atmospheric temperature increase, changes in typhoon patterns, increase incidence of harmful algal bloom occurrence etc. have been recorded in the past decades in the country. In terms of vulnerability, the Philippines have been consistently predicted as among the most vulnerable to Climate Change. This is largely because majority of the population lives in the coastal areas, are heavily dependent of fisheries and have low capacities for adaptation. This is compounded by the poor state of the country's resources and habitats, and increasing threats such as overpopulation, overfishing, destructive practices etc. In addition to various predicted impacts of climate change to Philippine fisheries and aquaculture, a relatively more accurate way to know such potential impacts can already be drawn from the country's past experiences and events including the El Nino of 1997 and 2010, where there were recorded changes in tuna migration, increased incidence of "ice-ice" in seaweeds, bleaching in corals, and fish kills in culture ponds. Here we present the various plans and activities being undertaken by the Philippines to address climate change impacts to fisheries and aquaculture at various levels following the overall framework of the Philippine Strategy on Climate Change Adaptation (PSCCA). This includes CC-related knowledge management, vulnerability assessments, risk reduction, mariculture parks establishment, climate-proofing using indigenous knowledge, coastal habitat monitoring among others. Lastly, since the Philippines is the lead country under the ASWGFi for Climate Change, we also present initial plans to start forming an ASEAN fisheries climate change initiative.

Background

Climate Change, as defined by the United Nations Convention on Climate Change, is rapid change of climate of which can be attributed directly to anthropogenic causes. It is the alteration of global atmospheric components in addition to natural changes observed through time. Climate change is a threat to the society's fundamental way of life, to biodiversity, economy, food security and to human life, The effects of climate change are evident all throughout the world. Unfortunately, Southeast Asian countries are most economically vulnerable to climate change because they highly depend on fishery resources for livelihood and their population has low levels of capacity to adapt to stressors or threats.

The development and progress of the Philippines, a Southeast Asian nation, is critically hinged to our preparedness with emerging effects of climate change. Its fisheries sector, which has consistently contributed to the country's economy, is a sector that is predicted to be one of the sectors to be adversely affected. This is compounded by the fact that its major coastal and marine resources are in declining and degraded state, and is the hottest of hotspots in the world in terms of marine biodiversity conservation. It is the 8th top fish producing country and 10th in aquaculture production, is highly dependent on fishery resources of which 70% of protein diet of about 1.6 million Filipinos. It also yields an approximately 2.2% (143 B) of GDP and exports about 570 million dollars. On the socio-economic perspective, our coastal areas are home to the marginal sector in the country or about 70% of communities, almost all of which depend largely on the coastal resources for their livelihood. In the fisheries sector in the Philippines, various impacts of climate change in the different fisheries sub-sectors such as for capture, aquaculture, post-harvest and socio-economic sectors and its corresponding potential adaptation measures have been proposed in response to potential CC impacts.

Issues

In strategizing to adapt to climate change, many things are needed, many of which are non-existent. For example, climate change is a new issue and only few or almost none have experienced such transition in temperature for the last century. Hence, there is generally a lack of expertise on this specific field that adds to the slow progress of climate change studies. Aside from financial constrains, knowledge of this phenomenon, its effects, risks, and mechanism, is still insufficient to formulate an effective adaptation strategy.

Conclusions and Recommendations

As mentioned, various reports have already identified specific recommendations for Climate change adaptation strategies for Philippine fisheries. A number of these strategies are currently being implemented at various levels, which can be divided into 5 namely; Policy, Biophysical, Socio-economic, Research and Development and Mainstreaming:

Policy: A strategy for Climate Change Adaptation has been passed by the Philippine Congress last 2010.
Biophysical: This includes the increase focused on establishment of protected zones *e.g.* fishery reserves, fish sanctuaries, marine protected areas, and *refugias*; putting up of environment friendly mariculture parks; sustainable capture fisheries, and climate change – ready infrastructures.
Socio-Economic: This involves vulnerability assessment and monitoring, education, decrease demographic pressure, and role of women.
Research and Development: Some of the researchable areas include data collection and monitoring, modeling and prediction (GIS), database development and climate proofing through traditional knowledge.
Mainstreaming: Awareness and understanding climate change and its impacts are needed to be implemented at all levels from international up to the individual as it affects everyone. Some of the regional offices of BFAR have already started doing consultations relative to climate change (Table 6).

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