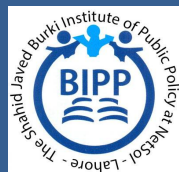


# BIPP

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## Adapting to Climate Change and Ensuring Food Security

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Climate change and food security are inextricably inter-connected. Significant changes in climatic conditions affect food security through their impact on all components of global, national and local food systems. More frequent and more intense extreme weather events, droughts, desertification and soil erosion, recurrent floods, rising sea levels, and increasing irregularities in the patterns of rainy season are already having immediate impacts on food production and food distribution infrastructure. Food shortages, vulnerability of the livelihood assets and the deleterious effects on human health, in both rural and urban areas, find recurrent expression especially in the already food deficit, least developed and the developing countries.

The twin phenomenon of rapidity and severity of the climate poses a major challenge which directly affects millions of small-scale farmers, fishermen and forest-dependent people. Close to 800 million undernourished people in the world, bulk of whom live in rural areas and earn their living from the agricultural sector are the most susceptible and vulnerable to climate change. This situation is further exacerbated due to expansion in the demand for bio-fuel at the cost of food crops and ever increasing food prices.

A recent report of the UN's Intergovernmental Panel on Climate Change (Nov 2015) unequivocally states that climate change is already having real time effects as demonstrated by melting ice and thawing permafrost in the Arctic, denudation of coral reefs in the oceans, heat waves, heavy rains and mega disasters. This presents a grave threat to food security and human security all around the globe. Already, between 2003 and 2013, 1.9 billion people were affected by the natural disaster engendered by the climate change causing revenue losses of around \$1 trillion in the developing countries.

At present, around 794 million people in the world suffer from hunger, food insecurity and malnutrition (FAO, WFP, IFAD June 2015 joint report on the State of Food Insecurity in the world of 2015). This in itself is indicative of the challenge which the humanity confronts in the wake of the cumulative impact of the troika of climate change, inflationary food prices and bio-fuel crop substitution.

Pakistan ranks 16th most vulnerable country to the impact of climate change (Maplecroft ranking). Experts estimate that the country incurs financial losses of \$5.2 billion annually as a result of environmental degradation ( Daily Times of 27 Nov). On top, the number of undernourished which was 28.7 million in 1990-92 period is likely to increase to 41.4

million in 2014-2016 while the pace of progress in meeting the WFS target of reducing the number of hungry people is very slow compared even to Bangladesh and Nepal (2015 Joint report FAO, WFP, IFAD). This speaks of the apathy of the policy makers to this burgeoning problem being accentuated by the weather extremity and climate change.

In order to deal with the challenges, elsewhere in the world, major commitments have already been made by the regions and countries: the hunger free Latin America and the Caribbean Initiative; Africa's new partnership to end hunger by 2025; the zero hunger initiative for West Africa; the Asia Pacific zero hunger challenge; and pilot initiatives of Bangladesh, Laos, Myanmar, Nepal and Timor Leste.

In Pakistan, the policy and decision makers need to be sensitised and stirred up to action since they do not seem inclined to take serious cognisance of the enormity of the development challenges posed by the climate change. The ostrich like attitude conveniently shying away from the reality of the magnitude of problem unfortunately seems to pervasively prevail within the state apparatus. Beyond political rhetoric, there is hardly any visible effort or serious intervention to espouse climate change sensitive development paradigm. The potentially devastating impact on the poor and marginalized segments especially those living in already fragile eco-systems will be colossal. The problem has both intra generational and inter generational dimension with all the probability of perpetually relegating the poor and their posterity to a state of indescribable indigence, deprivation and dependence.

There is, therefore, an urgent need to formulate robust policy, institutional frameworks and fully budgeted national action plans to adapt to climate change and mitigate its impact. The poor, who are the most affected must be at the centre of these frame works and action plans. They have to be fully involved in articulating and designing the response mechanisms to ensure that their needs are adequately addressed.

In terms of specifics, some of the important measures that should be undertaken as a matter of priority, should be:

- At the policy level, the policies and development programs especially relating to agriculture, fisheries, forestry and rural development should be climate change

sensitive with emphasis on introduction and propagating sustainable and ecological farming practices;

- Inclusive economic growth which provides opportunities to augment the livelihood assets (social, financial, physical and natural resources) and increase the productivity and skills of the poor, and at the same time targeted social protection systems are key to enabling the fragile communities to absorb the short term impact of the climate change and formulate coping mechanisms;
- Agriculture, which both drives and is affected by global warming, should contribute to reducing greenhouse gas emissions through such measures as reduction of deforestation, improved forest conservation and management, agro-forestry for food or energy, soil carbon sequestration, restoring land through controlled grazing, improving nutrition for ruminant livestock like cattle, more efficient management of livestock waste including biogas recovery.
- Specific strategies that conserve soil and water should be formulated to improve quality, availability and efficiency of use of these resources.
- State interventions must be tailored based on the nature and gravity of the potential impact of climate change to a particular eco-production-system (small farmers, fishing communities and forest dwellers); one-size-fit-all programs will not yield the desired results and instead lead to wastage of resources and add to the complexity of the problem.
- At the institutional level, strengthening capacity of the disaster management agency in terms of its HR capacity for policy, planning and operations; ex-ante financing to be able to put in place preventive and mitigating measures as well as first response actions is sine qua non for mitigating the impact.
- Establishing a robust early warning systems to identify in advance the areas and regions likely to be affected is extremely important to institute disaster preparedness and risk management measures.
- As for investment, the focus should be on priority areas to reduce effects of climate variability on food security, through crop insurance and incentives that encourage farmers to adopt better agricultural and land use practices.
- Towards ensuring food security and responding to climate challenges in the long run, it is important that an inclusive and collective effort encompassing government, research institutes, academia, private sector and civil society is undertaken with

government ministry entrusted with climate change adaptation and mitigation mandate in the lead.

- It is equally important to raise the profile of the climate change, the right to food and the right to be free from hunger by enhancing public awareness, creating and training a core of experts, professionals and policy makers.

In conclusion, it must be underscored that to better adapt to the impact of climate change, the pursuit of inter-disciplinary approach, strategies and action plans is absolute imperative which should encompass: climate and climatic impact modeling on farming and forestry, diversification of livelihoods of the poor especially in the fragile ecosystems, weather and climate forecasting, institution of Early Warning and Risk Management Systems, land use planning, food security programs for the poor, responsible fisheries development and sustainable management of forestry resources. This may entail a paradigm change in the policy formulation and adjustments to ensure full integration of dictates of climate change as well as inclusiveness of these processes.