Technological Response to Africa’s Horn Drought: Green Revolution as Policy Instrument

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Since April 2011, the international news media has zoomed in to the Horn of Africa to warn an impending drought and a possibility of massive scale catastrophe if there is a delay in international responses. Larger parts of Somalia, some parts of Ethiopia, Kenya and Djibouti have been hit by worst drought which has not been seen, both in scale and nature, in the past 60 years. It is reported that more than 10 million people are thought to be affected across the region. Thousands of refugees are flooding to camps in search for food and water. Failure of rains since late 2010 has killed livestock and destroyed food crops in the regions.

Drought is a type of natural catastrophe belonging to a metrological event. It is a consequence of extreme variability of rainfall in arid and semi-arid areas where soil has poor capacity of retaining moisture. The negative social and economic consequences of drought depend on the intensity and duration of the event. At worst it causes famine and social disintegration. “Droughts often result in heavy crop damage and livestock losses, disrupt energy production and hurt ecosystems. They cover wide areas of land and often affect several neighboring regions or countries simultaneously. Droughts can lead to famines, loss of life, mass migration and conflict. Hence, droughts can wipe out development gains and accumulated wealth in developing countries, especially for the poorest”. See Department of Economic and Social Affairs of the United Nations (2008).
The traditional approach to drought risk and crisis management has been mainly nonagricultural responses. This includes drought insurance, economic planning, early warning systems, metrological forecasting, etc (see World Bank 1998). Since drought has proved to be recurrent phenomena on the Horn of Africa, I am of the opinion that the approach has to go beyond drought mitigation and preparedness strategies. It is now high time to address issues related to agricultural productivity and level of food stocks in the drought stricken regions. The long term solution to drought problems of Horn of Africa requires a technological response in the form of Green Revolution.

In India the severe drought in the mid-1960s was one of the major driving force for the introduction of green revolution in the sub-continent. The introduction of new high yielding varieties of wheat, rice and maize, application of fertilizer, substantial use of pesticides, use of tube wells and canals as sources of irrigation water resulted in increased crop production and reduced dependency on food aid.

Early warnings to mitigate the impact of drought prior to its onset and large scale relief operations as an emergency response can minimize the human costs. But to avoid the long term social, physical and economic wide consequences of drought, green revolution should be taken as an instrument of aid and policy. International donors use various mechanisms to finance drought and this may include financial aid, budgetary support program, emergency financial aid, bilateral project aid, etc.

If one considers the emergency relief money and extra money allocated for managing the aftermath of the drought crisis, the investment for green revolution may not exceed the total scale of financial problem created by the drought crisis. For instance, the overall costs of relief operation in southern Africa in 1992 amounted to at least US$ 4 Billion. Comparatively, the total cost of the green revolution program in Asia was approximately US$100 million by 1990. The direct costs of green revolution program in drought affected areas can constitute a small percentage of the total financial investment used for drought mitigation and management.

For the current drought UK and USA have pledged £52.25m and $68m respectively. Since other members of the international community will undertake similar measures, I advice the Ethiopian government to come up with a program of green revolution which can be used as technical co-operation framework with donors. For example, it is possible to design large-
scale irrigation development project along the Wabi Shebele river basin to resettle drought affected and vulnerable households.

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