The February Dialogues 2011

An annual event of the Meeting Rivers programme of Pipal Tree, Bangalore and Dialogues en Humanité, Lyon

Values and Practices that Promote Food Sovereignty in the Context of Climate Change

16 - 19 February 2011, Fireflies Inter-religious Ashram, Bangalore, India

This conference will serve to integrate traditional knowledge with modern scientific practices to face the challenge of climate change in the area of food security and food sovereignty*. Insights will also be drawn from cultural and religious traditions to motivate communities to act with a sense of urgency.

The impact of climate change in rural areas

Climate change in India will mean increase in surface temperature, changes in rainfall patterns, increase in the frequency of floods and droughts, the melting of the Himalayan glaciers and rise in sea-levels. Changes in rainfall patterns and temperature will affect local water availability, disturbing the optimal cultivation period available for particular crops. According to some estimates, almost 40% of the agricultural production potential in some developing countries could be lost. Those most seriously affected will be farmers in dry-land regions where agriculture is rain-fed, and only one crop is grown per year.

Cereal production potential will decrease substantially in many developing countries. Rice production in India will decrease by almost a tonne/hectare if the temperature goes up 2^{o}C. By 2050, about half of India's prime wheat production area could get heat-stressed, with the cultivation window becoming smaller, affecting productivity. For each 1^{o}C rise in mean temperature, wheat yield losses in India are likely to be around 7 million tonnes per year, or around US $ 1.5 billion at current prices. Similar figures could apply to many countries in Africa and Asia. The emphasis on growing rice and wheat and the neglect of millets will have to be drastically corrected in the interests of food security and food sovereignty.

The current preoccupation in the international discourses on climate change is, however, on mitigation of Green House Gas (GHG) emissions. There is very little official discourse on how the affected communities need to adapt to face the consequences of climate change.

The need to integrate peoples' traditional values, practices and religious insights in a holistic manner to meet the challenge of food security cannot be overstressed.

Existing understanding of desirable adaptation strategies in rural areas

A huge challenge lies before farmers in the years ahead. To deal with the challenge of climate change farmers might find it useful to follow an ecosystem approach.

The ecosystem approach integrates traditional and modern agricultural practices. It involves crop rotations, bio-organic fertilisers and biological pest control. This approach improves soil health and water retention, increases fertile top soil, reduces soil erosion and maintains productivity over the long term. This was more or less how most farmers cultivated before the green revolution changed the trend.

Agricultural biodiversity is central to an agro-ecosystem approach to food production. The more diverse the agro-ecosystem, the more efficient the network of insects and micro-organisms, that control pests and disease. Building resilience in agro ecosystems and farming communities, improving adaptive capacity and mitigating greenhouse gas emissions is the way to cope.

A knowledge-intensive rather than input-intensive approach should be adopted to develop adaptation strategies. A special package for adaptation should be developed for rainfed areas based on minimising risk. Some of the elements that need to be emphasised in this package are:

- Millets constitute the food of the future since it does not need irrigation and can grow in dryland with just a few rains. Millets are also far superior to rice as far as nutritional values are concerned. Millets are the answer to water shortages for agriculture and rising temperatures. Finger millet can also grow in saline conditions, while pearl millet is right for sandy soils. (There are already campaigns going on urging the government to include millets in the public distribution system. It is a scandal that this has not been done).

- Traditional knowledge can play a significant role in adapting to climate change. Drought and flood resistant seed varieties must be identified, documented and promoted. The need to conserve the genetic diversity of crops in collaboration with local communities cannot be overstressed.

- Around 3000 to 5000 litres of water is needed to produce 1 Kg of rice in the traditional method. SRI use 30% less water. If the SRI method is practised about 8,42,000 litres of water can be saved for each acre. This method can also reduce flooding induced methane emissions.

- Kitchen gardens need to be popularised to compensate for shortfalls in food and nutrition from climate-related yield losses.

- About 60% of our cultivated area comes under the semi-arid rainfed category. Farm ponds, fertiliser trees and biogas plants must be actively promoted in such areas.

- Extreme weather conditions can lead to droughts and floods. There is a need to look at the restoration and renovation of traditional water storage units. But fresh innovations are also needed to deal with water supply reliability, flood risk, drought and agriculture.

- Farmers should be given adequate information about new pests and diseases. Mechanisms should be put in place to evolve integrated pest management strategies at the local level, keeping in mind the advance of climate change.

- Given that there are 13 major and 127 micro agro-climatic zones in the country there is a need to have information relevant to local conditions. Basic agromet stations should be put in place in each agro-climatic zone. This is vital to develop local adaptive strategies. (The India Meteorological Department claims to provide district level advisories to farmers through the Agrometeorological Advisory Service. It claims that farmers who use this agromet service have made a net gain of around 10 per cent. This needs to be checked out).

- A rat-free national grid of grain storages needs to be put in place. In addition household and community bins/grain banks to modern silos at the district level must be established to ensure local food security and stabilise prices.

- Agricultural credit and insurance systems must be made more comprehensive and responsive to the needs of small farmers.

- For some years now various NGOs have been promoting fuel efficient stoves that will offset the high GHG emitting stoves. It is estimated that about 86% of the rural households depend on biomass for their primary energy source. The ordinary stoves create air pollution and use too much wood. The improved stoves will be saving about 500 kg of fuel wood per family per annum. The destruction of forests for fuel wood will also be reduced.

- Energy from bio-gas must be promoted. This will have the added effect of preventing methane release from cattle dung. Unfortunately bio-gas production has not become popular in rural areas despite efforts to promote it.

The February Dialogues will begin at 3pm on 16th February and end by 3pm on 19th afternoon. The all-night music festival begins on 19th February evening.

<u>The conference will cover the following areas:</u>

- Exploring the potential of religions and spiritualities to motivate people to combat climate change and understand the challenges posed to food security and sovereignty.

- Rural adaptation options available at the local level.

- The experiences of civil society organisations and farmers who promote integration of climate-resilient strategies in regular development activities.

- Strategies to mainstream community based adaptation experiences into national and international development policies.

Participants:

Participants will come from all over the world. They will be chosen from agricultural, cultural and religious backgrounds. Those invited will include NGOs and activist-intellectuals. **If you wish to participate kindly write to us immediately.** We will take care of your board and lodging while you are with us. We hope you can take care of your travel costs since we are unable to provide the same.

Follow-up:

The results of this programme will be disseminated through a book, website, email bulletins, and through meetings of the **GRAIN**[**] **network** and other networks.

Music festival: The participants to the February Dialogues will be treated to a spectacular all-night music festival which will start on 19th evening. About 3000 people are expected at this festival where the theme of food security and sovereignty will be promoted.

[*]*While food security implies the ability of a country to provide food for all its citizens food sovereignty emphasises the importance of peasants being able to feed themselves independent of the public distribution system or the market.*

[**]***GRAIN stands for "Global Rural Adaptation Initiatives".*** *It is a network of farmers, rural community organisations, agricultural experts and media. The objective of this programme is to evolve and implement rural adaptation strategies in the context of climate change.*

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