

Participatory Variety Selection in paddy farming as an option for adaptation to Climate Change

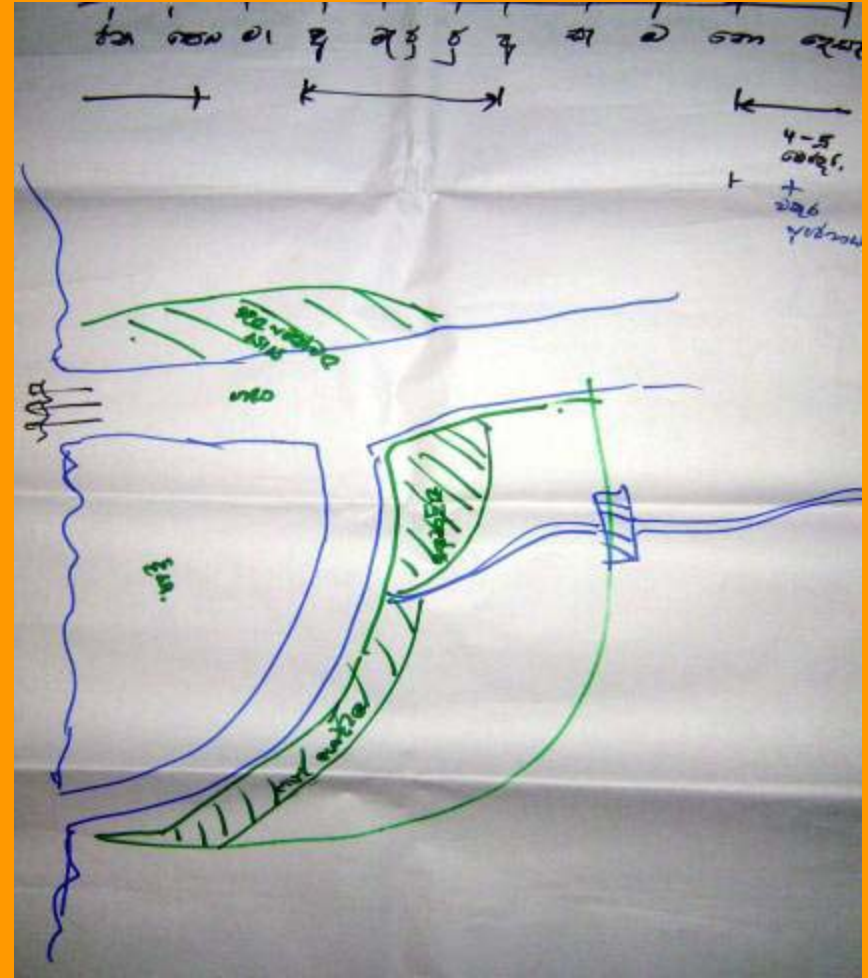
Background

- This work is being carried out as part of a 4-country project implemented by Practical Action, and funded by the UK based Allachy Trust.
- Other presentations in this workshop cover work in Nepal and Pakistan, and the site visit to Gaibandha showed the work in Bangladesh
- In Sri Lanka, awareness about climate change and potential impacts is low at community level, and even at government level
- One issue that will become more serious as sea level rises is salinity of coastal paddy lands
- Rice is the staple food in Sri Lanka and in coastal areas in Hambantota, 30- 40 % yield is currently lost due to salinity in low lying paddy farming

Methodology

- Awareness raising
- Participatory Assessment on the issues and vulnerability
- Review of scientific and local knowledge
- Identification of possible alternatives
- Implementation at ground level
- Capacity building of local institution
- Information sharing for wider dissemination

Vulnerability Assessments



Vulnerabilities are

- Frequent flooding due to bund formation at river mouth
- Poor soil quality due to salinity condition aggravated by sea water intrusion
- Mechanical damages of coastal erosion
- Loss of natural forest due to encroachments reduces access to forest products

Local knowledge

Rainfall Variation

- “Now we are getting lot of rainfall for shorter periods of time”
- “We get rains in unexpected way, we cant predict the rain”

Temperature Variation

- “Temperature is high and we can't sleep at nights sometime”
- “Those days in December and January we used to feel cold in mornings. But now we don't”

Scientific Knowledge

- Sea level rise will occur
- There will be temperature rise
- Rainfall patterns are likely to change
- Saltwater intrusion into the groundwater may limit the availability of freshwater in the coastal areas.
- Sandbar formation, associated with the sea level rise, may lead to stagnant water

Merging of scientific and local knowledge for adaptation to salinity

- Fallow the lands for some seasons and then wash away the saline topsoil during the early monsoon rains.
- Dig deep canals in the field to drain the saline water
- Use of organic matter (rice husks) to improve soil
- Testing traditional paddy varieties that used to be grown in the saline paddy lands

Participatory Variety Selection

- Variety selection by 16 local farmers was conducted in their fields during 2005 using ten traditional varieties
- Two farmers out of sixteen cultivated all 10 varieties while the rest cultivated 3-4 variety based on their preferences.
- The scoring was between 1 to 10 based on farmers preferences. The criteria of selection were the plant height, duration, grain quality, grain color, saline tolerance, and the grain yield.

Farmer to farmer extension and awareness creation



Using heat treated paddy husk as soil conditioner to withstand salinity condition



Results

- Farmers selected the varieties according to the characteristics and their previous knowledge of those varieties.
- Farmers of the other fields that are affected by salinity have gained knowledge from the trial and have started cultivating best performing varieties

Positive findings

- Local knowledge is a good base from which to understand local climatic variations & plan interventions
- Communities that we are working with are becoming more proactive in dealing with their changing environment
- Research organisations are showing willingness
 - to include a community approach
 - to research CC impacts

Constraints to working on CBA in Sri Lanka

- Difficulty in pinpointing how CC specifically is affecting Sri Lanka
- People's resistance to take climate change seriously: it is seen a problem the West has created
- Lack of policies for promoting adaptation
- Limited tested approaches & technologies for climate change adaptation
- Low priority given to climate change by other implementing organisations in their development efforts