Combating climate change

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June 5 was 'World Environment Day'. The theme for 2009 was: 'Your planet needs you — unites to combat climate change'. This year's theme reflected the urgency for nations to come together to agree on a new deal at the crucial climate change conference to be held later this year in Copenhagen.

The UN conference on climate change in December will mark a turning point in our history — if we can all agree on cutting down carbon emissions and combating greenhouse gas emissions. For all those sceptics out there: climate change is real, it is happening and its consequences are devastating. Nowhere is this more obvious than in the Indus Delta which lies in southern Sindh.

Climate change experts say that sea-levels are rising — and thanks to declining levels of fresh water in the Indus River, the sea has intruded 54km upstream along the main course of the Indus into Sindh. Thousands of hectares of fertile land have been destroyed and underground water channels contaminated. The Indus Delta once used to be home to thick mangrove forests stretching from Karachi to the Rann of Kutch. Today, only some pockets of mangrove forest remain. Before the deterioration of the mangroves began, Pakistan was one of the largest mangrove countries in the world, and they provided rich breeding grounds for fish and shrimp (in addition to protecting the coast from storms and tsunamis). Now the remaining mangroves are under extreme pressure due to continuous sea water intrusion, lack of fresh water in the delta, pollution, cutting for fuel wood and grazing by camels.

The Indus Delta consists of several creeks, including those located in Keti Bunder, a small fishing town located in Thatta district. The area around Keti Bunder used to contain one of the largest tracts of arid zone mangrove forests during the 1980s. Keti Bunder Taluka stretches over 60,969 hectares and consists of 42 Dehs (settlements) of which 28 have been engulfed by the intruding sea. There are four major creeks: Chann, Hajamro, Turshan and Khobar.

The total population of the area is 28,000 and more than 90 per cent of the population is illiterate and lives well below the poverty line. The local communities depend heavily on natural resources such as the fish and mangroves. I first visited the area five years ago and still remember the boat ride along the creeks — there was not a spot of greenery — just the relentless sea-water, the gulls above us and bare mud flats. We could even see sand dune formation on the banks of the creeks. We all agreed it was an 'ecological cemetery' and the grinding poverty and despair of the local people overwhelmed us. "There is no fresh water, how are we going to survive?" they asked us. "They must release more water below the Kotri Barrage (the last barrage on the Indus)."

They lived without electricity and piped water, in small wooden shacks, completely dependent on fishing for their survival. WWF-Pakistan was working in the area (they had an office in Keti Bunder town) and we all (a bunch of journalists and development specialists) promised to write about the situation in the papers.

What a surprise then, to re-visit the area this year and discover that the work done by WWF-Pakistan has actually transformed the lives of the local people living in Keti Bunder. On this year's boat ride, we noted new plantations of mangroves in and around the villages in the creeks — some right next to the wooden homes of the villagers. Where there was once nothing but mud, we saw mangrove saplings re-emerging! We noted wind turbines generating electricity and water tanks in most of the villages. Above all, the people looked happier and healthier. "We have cold storage facilities now and we can store our fish and it won't get spoilt. We have drinking water now and the wind turbines are good because they give us free electricity," they told us as we toured one of the villages in the Hajamro creek.

WWF-Pakistan is now working in the area as part of the Indus for All Programme, which is being implemented by them. Hajamro and Chann creeks, which are shallow water channels with small settlements, are part of the Indus for All Programme's priority site in Keti Bunder. After the last cyclone hit the area in June 2007 (Yemyin), several rehabilitation interventions were carried out by the Programme: one boat water tanker given to the community, four fixed potable water tanks installed in various locations, 30 thatched hut houses built for local communities and 20 fully damaged boats belonging to fishermen repaired.

A community based organisation in Keti Bunder town is now running the water tanker boat service which distributes 4,000 litres of water to each village in the area twice a month. The Programme has also helped install solar energy units and the wind turbines which generate electricity (for energy saver bulbs) in villages where electricity is not available.

Recently, a large festival was organised on an environmental theme and over 5,000 people living in the Keti Bunder area attended the festival. The Programme has also held a resource users workshop for all the CBOs they have organised in the area. In a nursery located in the garden of their site office, the project staff is experimenting with growing bio-fuels like Castor and Jatropha. These crops can grow easily in dry, arid conditions like those of Keti Bunder and the project staff hopes to introduce these crops in the local agricultural economy, since they will become important when the demand for bio-fuel goes up in Pakistan. With most countries developing alternate fuels, this is a timely project and it can easily be replicated on a larger scale. A significant area of degraded land can be brought back into production by these crops.

In this coastal area, climate change is real and affecting the communities directly. With the help of WWF-Pakistan, the people of Keti Bunder are already uniting to combat climate change.