

Area Description

Situated in the Indus delta at about 200 km Southeast of Karachi, Keti Bunder Taluka stretches over 60,969 ha. It consists of a total of 42 Dehs (settlements) of which 28 have already been engulfed by the intruding sea. According to an estimate, the Taluka has a population of 28,000^{*}, of which 90 per cent is illiterate and lives well below the poverty line. Local communities depend heavily on natural resources such as fish, mangroves and pastures. Those living in inland areas also rely on subsistence farming and other marginal enterprises including poultry farming, betel leaf and banana orchards. Hence, poverty and environment are intricately linked in this coastal area that relies on the River Indus and its distributaries for sustenance.

The local communities use mangroves for fodder, fuel wood and hut-making while fishing constitutes the principal source of livelihoods. There are four major creeks in the area viz. Chann, Hajamro, Khobar and Kangri. Most of the population in Taluka Keti Bunder resides in makeshift houses mainly made of bamboos and mud. The population living inside creek areas resides in thatched huts which are ill-suited to withstand the vagaries of weather.

Keti Bunder and surrounding coastal areas are ecologically very rich. These coastal mangrove forests support a variety of marine and terrestrial fauna and a rich diversity of avifauna, reptiles and amphibians. Due to its ecological significance, the Government of Sindh declared the Northern and Southern areas of Keti Bunder to be Wildlife Sanctuaries in 1977.

^{*}The exact human population is yet to be confirmed



KETI BUNNDAR
DISASTER, RESCUE AND REHABILITATION

recent storm

Destruction due to recent storm

Starting in 22 June 2007, a strong monsoon weather system (deep depression) over the North Arabian Sea swept over the Sindh coastal areas. The weather system then converted into a tropical cyclone (Yemyin No. 03B). Under its influence, heavy rainfall, strong wind and extremely rough southwesterly waves destroyed many homes and shelters thus devastating the lives of coastal communities including inland and remote creek inhabitants of Keti Bunder. Initial estimates show that 5,220 families became homeless in Keti Bunder town alone with 200 improvised thatched huts destroyed and 4,200 partially damaged. Additionally 135 boats were damaged as were half of all poultry farms and betel leaf sheds. Half of all crops on 500 acres of agricultural land destroyed (WWF - P Assessment Report, 28.6.07). A more recent WWF - P damage assessment report is summarized in Table 1:



Although Yemyin struck Balochistan province the hardest, it left behind intense rain-storms and flooding in Keti Bunder leaving fishermen families' homeless and depriving them of boats – their only source of livelihood. Another post-cyclone effect was the spread of malaria and water-borne diseases such as diarrhoea. Fortunately, few human lives were lost (three dead in boat sinking incidents).

Table1. Extent of Damage Caused in Keti Bunder and two adjacent Talukas (30.6.07)

Description	Creeks	Inland	Total
Affected Household	822	2000	2822
Affected population	6424	16000	22424
Destroyed Houses	400	350	750
Damaged Houses	200	850	1050
Destroyed Boats	17	9	26
Damaged Boats	127	47	174
Deaths	0	3	3
Injured	7	5	12

Creek inhabitants were not the only ones to suffer losses. Inhabitants of inland areas saw their homes damaged and livelihoods destroyed due to extensive damage to banana and betel leaf farms. The scale of destruction in inland areas may be ascertained from the fact that 90 electric poles in Keti Bunder Taluka alone collapsed in the face of the intense storm.

WWF-Pakistan's Response - Relief and Rehabilitation Efforts

As WWF - Pakistan's Indus For All Programme has a fully equipped Site Office in Keti Bunder, it was able to respond rapidly and provide rescue and relief and gauge the demand for rehabilitation among those affected. Apart from the aforementioned efforts, the Programme undertook the following major steps to mitigate short term suffering:



- During the night of cyclone, the WWF Keti Bunder team provided transport to evacuate people from Keti Bunder and surrounding areas.
- Water purification drops were provided to the affected.
- Boat fuel was provided to Supreme Master Ching Hai International Association to support their distribution of 822 bags of relief goods to the cyclone affected communities of Keti Bunder town and nearby creek areas.
- In collaboration with partners like the Union Council, Hajamro Mahol Dost Committee and the Aga Khan Planning and Building Services, a rapid assessment of the damages to Keti Bunder and surrounding villages in creeks was conducted.
- In coordination with the partners like the Union Council, Hajamro Mahol Dost Committee and the Aga Khan Planning and Building Services, developed and submitted a project proposal worth PKR 3.0 million. The proposal will access the Indus for All Programme-Partnership Fund for the rehabilitation of livelihoods. The proposal includes such interventions as the repair of boats, re-construction of damaged houses, provision of boat water tanker and water tanks, provision of fish cold storage, and installation of two wind energy units of 500 Watts each. The Proposal is pending approval by the Royal Netherlands Embassy.

Qarshi Industries Pakistan generously donated 6,300 bottles of "Aab-e-Nuqra". This product is used for purification of water.



Fishermen who moved their boats inside the mangrove forest just before the cyclone retrieved their boats undamaged. Once again Mother Nature revealed care for those inclined to respect her.

Lesson learning and the future outlook

In the wake of changing climatic patterns on regional scales, cyclones and sea-storms have now become common phenomena in the Arabian Sea. The coastal communities are more vulnerable to devastation from such climatic variations owing to their resource constraints. It seems that such natural disasters will occur more frequently in the future. To assist local communities with whom WWF - Pakistan is engaged in conservation and livelihood programmes the following short and long term plans are envisaged in consultation with partner organizations:

1. Short-term plans

- Development of a disaster preparedness plan in consultation with the relevant government and non-government organizations such as the Coastal Development Authority, Local Government, The Aga Khan Planning and Building Services, and Pakistan Poverty Alleviation Fund.
- Construction of an Elevated Rescue Platform such as that commonly used in Bangladesh for rescue purposes during cyclones. Efforts are underway to construct at least one such platform for demonstration and testing.



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Long-term plans

2. Long-term plans

- Now that local people regard mangroves as their guardians against cyclones and sea storms. WWF - Pakistan's Indus for All Programme is already attempting to increase mangrove forest cover through community participation for developing a natural shield against cyclones and sea-storms.
- In coordination with the district government, the Indus for All Programme will develop a land-use plan for the coastal areas in general and for the Indus delta in particular. Such a plan is required not only to obtain maximum economic returns from our land resources but also to sustain its ecology in a healthy state for the well-being of dependent communities. The plan will be complemented by detailed ecological and socio-economic assessments covering the area that are presently being prepared by the Indus For All Programme. The assessments will ultimately feed into a GIS based Decision Support System for the respective District Government.
- Furthermore, WWF - Pakistan aims to establish wind energy unit(s) in Keti Bunder Town as an alternative energy source.
- Construction of a small jetty is envisaged. This will facilitate the timely and safe transfer of fish catch. WWF - Pakistan cannot meet these challenges alone; therefore, it will collaborate with the fish-dependent communities themselves as well as partners to inculcate a positive change in the lives of local communities.
- WWF - Pakistan also plans to provide fish cold storage facilities. In the absence of storage, fishermen are obliged to rush catch to buyers within the day to avoid deterioration and incur high transportation and opportunity costs. Fish cold storage will give fishermen 2-3 days to build their catch, reduce transportation costs, and strengthen their bargaining position vis-à-vis buyers.
- Besides the above, WWF - Pakistan also intends to embark upon other initiatives in the Keti Bunder area focusing on natural resource conservation and improved livelihoods.

Indus For All Programme
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