

Newsletter Wet Notes

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The monthly newsletter of the Pakistan Wetlands Programme (PWP) is published to inform donors, scientists, academics, researchers, environmentalists and environmentally concerned individuals of all qualifications and ages about the Programme, its projects and upcoming events while giving insights and updates on research, education, and habitat management activities. The PWP's objective is to conserve the globally important wetlands biodiversity in Pakistan while alleviating poverty. It is a progressive initiative of the Federal Ministry of Environment and is being implemented by the World Wide Fund for Nature, Pakistan (WWF P). It is funded by a consortium of national and international donors including, the Global Environment Facility (GEF), United Nations Development Programme (UNDP), the Royal Netherlands Embassy (RNE), WWF - Network and the Pakistan Poverty Alleviation Fund (PPAF).

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Way to beat hunger - Softshell turtle meat

Photo by Uzma Noureen, PWP

Programme Updates

• The challenge of planning and executing the PWP's second recruitment drive, 2007, was successfully completed by the Human Resources and Contracts Unit of the PWP with close coordination and representation from the UNDP, Ministry of Environment and WWF P.

The PWP now has its full compliment of 50 full time professional staff. In addition to these there are also numerous dedicated short-term consultants, researchers and interns, hired on a "need" basis for respective programmes in PWP.

Also one of the highlights during this period has been the establishment of the four PWP regional sites. These are in Saidu Sharif in Swat (North-west Alpine Wetlands Complex), Naushera in Khushab (Salt Range Wetlands Complex), Gawadar (Makran Coastal Wetlands Complex) and Rahim Yar Khan (Central Indus Wetlands Complex).

• The Survey Programme Unit of the PWP

conducted a comprehensive baseline assessment of two Ramsar sites in north-central Pakistan during May, 2007.

The team closely examined different environmental and social aspects of the Tanda Dam Wildlife Sanctuary in the North West Frontier Province and Chashma Barrage Wildlife Sanctuary, in the PWP's Central Indus Wetlands Complex. The assessment covered such eco-areas as ichthyology, ornithology, entomology, herpetology, small and large mammals, limnology and hydrology, GIS and remote sensing, along with terrestrial and aquatic vegetation.

Socio-economic aspects were also covered and interviews were conducted with the representatives of the local communities. This was done in accordance with the PWP's mandate of finding ways to alleviate poverty among communities in the assessment areas. The survey teams were comprised of





Photo by Ghulam Rasool, PWP

Survey Camp at Tanda Dam

professionals from Pakistan Museum of Natural History, Zoological Survey Department, Quaid-i-Azam University, the WWF P and PWP staffers.

• The National Awareness Raising and Communications Programme opened lines of communications with key regional and local government administrators in the PWP's Makran Coastal Wetlands Complex during May, 2007.

Brain storming sessions with the District Nazim Gwadar, Deputy Nazim District Gwadar, Nazim Jiwani, representatives from Gawadar Development Authority

and the Gawadar Port Trust took place to enlist the administrative support and cooperation for future awareness raising activities.

Introductory sessions with the representatives of Gawadar's Directorate of Education were also conducted to receive data of all the government schools in Gawadar and to discuss the prospects of engaging teachers and students in the awareness raising activities of PWP.

Key and potential villages and beaches, including Daran Beach, Gunz Beach, Pasni and Jiwani, were visited to gain an idea of the area's topography along with an understanding of the key wetlands related community problems and issues.

The other wetlands complexes of PWP will be visited to explore such alliances with the local administration and communities in each respective region.

mentalist who led discussions over a wide ranging number of subjects related to climate change and its impacts on biodiversity.

Mr. Ali Tauqeer Sheikh, Chief Executive of LEAD Pakistan where the event took place, encouraged all present to set up a special fund in collaboration with the Ministry of Environment for climate change projects in Pakistan to measure impacts and find ways of combating climate change effects.

Also at the event, Dr. Bashir Ahmed Wani, National Programme Director, PWP stressed that Pakistan, along with most countries around the world, is facing challenges being thrust upon it by climate change. He



PWP Team at Biological Diversity Day 2007

Public Events

Pakistan Already Experiencing Climate Change

Pakistan is already experiencing biodiversity changes because of climate change a noted ornithologist said at this year's International Day for Biological Diversity which was being observed by premier environmental organisations in Islamabad on May 22, 2007. Illustrating this year's theme of "Climate Change and Biodiversity," Mr. Z.B Mirza, country's renowned ornithologist, teaching biodiversity to a wide range of students of different universities in Pakistan, author of several scientific publications including the recently published field guide of the Birds of Pakistan sponsored by PWP, said that already shifts in bird habitat and

migrational patterns were being recorded. He placed the blame for these shifts away from the traditional patterns of habitat and migration on climate change.

The PWP recognised the United Nations Environmental Programme's International Day for Biological Diversity by facilitating a stakeholder forum in conjunction with WWF P, the World Conservation Union (IUCN), and LEAD Pakistan organised by DEVCOM Pakistan.

The Minister of State for Environment, Malik Amin Aslam Khan, was the chief guest at the event. He presided over a panel of distinguished Pakistani environ-

said the PWP is in the forefront of investigating the impacts this may have on some of the country's more sensitive biologically diverse areas.

Mr. Mehmood Akhtar Cheema, head of the IUCN Islamabad gave an intricate power point presentation of graphs and tables detailing statistical evidence for climate change throughout the world.

Meanwhile, the Deputy Director General of the WWF P, Dr. Ejaz Ahmed, delivered a presentation of global facts related to climate change and how Pakistan was effected by these new statistics and climatic conditions. Along with citing effects on mangroves and other ecosystems in the country, Dr. Ejaz also alluded to international statistics showing that since the mid 1800s, the average global temperature has increased by about 0.6 degrees Celsius, impacting the entire world. This means, for example, that the global mean sea level has risen by between 10cm to 20cm and that Arctic ice thickness in late summer and early autumn has decreased by about 40 percent.



Speakers at the International Day for Biological Diversity 2007

These kinds of global statistics and others such as in Africa Mount Kilimanjaro losing 82 per cent of its ice mass, there having been a decrease in the total available water in the large catchments of Niger, Lake Chad, and Senegal have prompted the PWP to become particularly interested in investigating the impact of climate change in five major areas of biodiversity in Pakistan. These are the Indus River Dolphin, Freshwater Turtle, the Mangrove Forest, Shandur Lake, and a recently discovered Coral Reef formation in the Indian Ocean.

During the event, the Minister of State for Environment said that each one of these, in its own way, could be considered an indicator for the possibility of climate change and associated affects. He made special reference to the coral reef which is off the Pakistan coast and 40 km in the Indian Ocean, from Pasni Balochistan.

This formation of coral reef has never before been known to exist in these waters and was found last summer by a PWP supported research team. Measuring the reef's growth pattern and overall health of this mass of living organism can act as an indicator for climatic change and the role it has on biodiversity in a marine environment.

The event served as an effective platform to heighten awareness among principal stakeholders for the need to pay greater attention to the shifting patterns in climates and their effects on biodiversity.

Traveling Wetlands Nature Carnival Voyage Completed

Thousands of visitors were lured to the PWP's Traveling Wetland Nature



Crowd at PWP's Wetlands Pavilion

Carnival as it toured four of the country's major cities casting its net of wetlands awareness and environmental protection.

Throngs of people crowded around numerous displays at the PWP's Wetlands Nature Carnival when it opened in Karachi on February 25th 2007, Lahore on March 4th 2007, Islamabad on April 22nd, 2007 and Faisalabad on May 6th, 2007 for a one day event at each venue. The PWP has completed the round of Travelling Wetlands Carnival for the year 2007.



Crowd at PWP's Wetlands Pavilion

The PWP's Wetlands Nature Carnival is a means of reaching to the public to raise their awareness and understanding for the need to conserve, protect and manage Pakistan's wetlands resources. It stressed the valuable scientific and social roles they occupy within the country and region. It also served as a vehicle for government agencies and the private corporate sector to show their involvement and concern in protecting the wetlands aspects of the country's biodiversity.



Prize Distribution Ceremony at Islamabad Carnival

The corporate partners for the event were Nestle Pakistan, NIDO, Maggie Pakistan and ICI Pakistan. In particular NIDO Pakistan had big multi-participatory presence with wetlands art competitions, wetlands quiz, and speech competition.

Among the distinguished attendees from both the Government, corporate and scientific sectors at these events were the Minister for the Environment, Sindh, Dr. Saghir Ahmed, Conservator Forests Sindh,

Mr. Ghulam Rasool Channa, Mr. Fayaz Rasool, Karachi Port Trust, Dr. Bashir Ahmed Wani, National Programme Director PWP, Mr. Umeed Khalid, Conservator Wildlife NCCW, MoE, Mr. Abdul Qadir Rafiq, Programme Officer, UNDP, Dr. Ejaz Ahmad, Deputy Director General, WWF P and key personnel from ICI and Nestle Pakistan.

It is anticipated that the event will continue to be an annual spring Wetlands Carnival.

Sang & Saved

The Fundraising and Financial Sustainability Department of the Pakistan Wetlands Programme successfully organised a Ghazal Gala event on May 5th, 2007 at the Marriott Hotel, Islamabad which helped to raise awareness among all sectors of the society about the importance to economically uplift those who live in and around wetlands and derive income from them.



Madam Abida Parveen at PWP's Ghazal Gala

The event featured Ghazals sung by the internationally acclaimed singer Madam Abida Parveen and was attended by about 160 people.

A specially commissioned PWP's slide show illustrating aspects of wetlands conservation was shown at the event. Request by guests for it to be transferred to commercially obtainable CDs were made and this suggestion has been acted upon by the PWP with these now available.



Donor Table at PWP's Ghazal Gala

The PWP acknowledges participation in the event by the National Bank of Pakistan, SHV Energy, the Saif Group, Pakistan Tobacco Company and BNP Group

for their financial support. Guests were welcomed to the Gala by the renowned Pakistani television actress Ms. Marina Khan who is the Goodwill Ambassador of the WWF P. Also hosting the event was Ms. Marriyum Aurangzeb, Coordinator National Awareness Raising and Communications, PWP.



Speakers at PWP's Ghazal Gala

Ms. Khan highlighted the importance of the public and private sectors along with donors and NGOs all working together to



Abida Parveen as PWP's Goodwill Ambassador

achieve common wetlands conservation goals. She stressed the importance of exploring windows of opportunity for the economic uplift of wetlands dependent communities through a collaborative and consistent effort at all levels.

In his keynote address, Dr. Bashir Ahmad Wani, the PWP's National Programme Director, stressed the need for conserving the wetlands of this country. He went on to emphasise the importance of stopping environmental degradation of water resources. He expressed his desire, and invited participants especially representatives of the corporate world to explore options for working together for the betterment of the environment and for improving the livelihoods in and around

indigenous people of the wetlands. These introductions were followed by a series of short speeches by donors. Dr. Ejaz Ahmad, Deputy Director General of WWF P spoke of the role his organisation is playing as the implementing agency. He also touched upon other initiatives of the WWF P in conserving natural resources of Pakistan.

Mr. Arif Alauddin, Assistant Resident Representative of Environment and Energy unit at the UNDP said that the need existed to reach out to the poorest of the poor communities, who are solely dependent on the wetlands and its resources.

Mrs. Yasmin Jawed, Programme Officer of the Royal Netherlands Embassy and major donors of the PWP invited the participants to forge partnership for protecting flora and fauna of the wetlands as well as improving sustainable livelihoods among wetlands dependant communities. She also reiterated the unwavering support by The Royal Netherlands Government to the Government of Pakistan for environmental conservation during the last fifty years.

The orientation session was followed by a buffet dinner and Sufi mystic ghazals sung by Madam Abida Parveen. She was designated the Goodwill Ambassador of the Pakistan Wetlands Programme to promote wetlands conservation at home and abroad.

Events

Donors and Partners Visit to High Alpine Wetlands of Pakistan

Photo by Ghulam Rasool, PWP



North-west Alpine Wetlands Complex

Approximately 12 people from four different organisations are going to visit high alpine wetlands of Pakistan from June 9th – 11th, 2007.

The purpose of their field visit is to observe the wetlands of Deosai National Park and to meet with the partners and stakeholders of the

Photo by Ghulam Rasool, PWP



North West Alpine Wetlands Complex

Northern Areas with specific reference to Pakistan Wetlands Programme.

Most of these high alpine wetlands, being along the famous Indus Flyway are ecologically very important as they provide habitat, temporary as well as permanent staging and breeding grounds, for migratory as well as resident waterfowls and other birds throughout the year. Alpine pastures surrounding these wetlands are full of medicinal and aromatic plants.

The fast increasing human population and the resultant changes in resource uses are threatening these wetlands and their ecological set-up in the high mountains of Pakistan.

The Pakistan Wetlands Programme in consultation with all the partners decided to include all these significant wetlands of Northern Pakistan for investment in order to maintain the ecological and social balance.

By **Masood Arshad**, Manager, National Programme, PWP

Announcement:

Journey to the Paradise of the North...

This summer PWP is planning to take members of the public as paying participants to lakes like Karambar, Naltar, Shandur, etc. in Northern Pakistan. Details are being worked out to take about ten members on a week long excursion to visit uninhabited roof of the world and to explore the unique aspects of the nature.

If interested contact, Ahmed Imran Aslam Manager, Fundraising and Financial Sustainability Unit, PWP.

Technical Innovation ("Coolstuff")

Platform Terminal Trans-mitter (Turtle Tracking Device)

The A-1010 Telonics Argos Transmitter is a highly versatile Argos Data Collection and Location Platform designed for research on marine mammals and turtles. This model can be programmed to transmit either a 500 mw or 1 watt Argos uplink. The higher power levels are particularly advantageous in high radio-noise environments such as Europe and Middle East. The lithium battery system employed in this model is "non-hazardous". Therefore, domestic and international shipments can use standard ground and air carriers without restriction.

The A-1010 can be attached to "hard shell" turtles using accepted methods that employ fiberglass strips and an epoxy resin to directly secure the unit to carapace.

According to manufacturers specifications the following details are available.

Sensors and Data Collection Programming

Determines when animal is diving by establishing a qualified dive and suppress transmissions during the duration of the dive.

Calculates dive information during a user-specified time interval.

Provides individual dive durations.

Temperature Sensor measures temperatures between -40 to +70C.

Low Voltage Sensor determines the battery conditions by measuring the battery voltage during transmission.

Activity Sensor determines activity level based on animal movement measured within a specified interval.

Mortality Sensor infers whether or not the animal is dead by comparing the animal activity level to a specified threshold.

How it Works

Each transmitter continually sends short messages which the satellites relay to ground. Processing centers then use the messages to work out the transmitter's location to within a few hundred meters. Messages can also contain up to 32 measure-

ments from any sensors in use.

Satellites relay messages to ground from their altitude of 850 km, the satellites look down on all Argos transmitters within a 5000 km diameter circle. They see each transmitter for an average of ten minutes per pass. The closer the transmitter is to the North or South Pole, the more times a satellite passes over it. At the poles, each satellite sees each transmitter on every pass, a total of up to 56 times a day for four satellites.

As soon as a processing center receives raw Argos data from a ground station, it calculates transmitter locations, processes any sensor data, and makes the results available.

Results arrive via e-mail, fax or a data transmission network. The results can be received at fixed intervals, or as soon as they become available.

Results can be accessed at any time by connecting to an Argos center via the internet, the public telephone network, X.25 or other networks.

World-wide Wetlands

- » Mr. Najam Ul Huda Khan, Coordinator Wetlands Survey Programme attended the International Training of Trainers on Wetlands Management focusing on Multi-stakeholders processes, held at Bogor, Indonesia from March 5-23, 2007.

The training was jointly organised by the Southeast Asian Centre for Tropical Biology (SEAMEO BIOTROP) in cooperation with Wageningen International. Mr. Khan's newly acquired skills and knowledge will have a substantial impact on the ability of the Pakistan Wetlands Programme to more fully carry out its mandate of wetlands management and poverty alleviation.

The primary substance of this was an initiative for the Training of South Asian Association for Regional Corporation (SAARC) representing Wetlands professionals from those seven countries, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka, along with Wageningen International and the Institute of Hydrological Engineering in Delft, Netherlands.

This training is being designed specifically for SAARC countries by professional from these countries and to address those specific wetlands needs found in SAARC

areas. The Royal Netherlands Embassy is helping to facilitate this initiative.

- » At the seventh session of the United Nation Forum on Forests (UNFF7) held in the UN Headquarters in New York from April 16-27, 2007, a non-legally Binding Instrument on all types of forests and adoption of a Multi-year Plan of Work was successfully negotiated after two weeks of hectic discussion.

Mian Muhammad Jamil, Secretary, Ministry of Environment and Dr. Bashir Ahmed Wani, Inspector General Forest and also the National Programme Director of Pakistan Wetlands Programme represented Pakistan at the UN Forum on Forests.

Delegates from Pakistan explicitly stated that developing countries realisation of the Global Objectives on forests depend on additional financial resources. They also stressed that the principles of sustainable forest management cannot be transformed on ground unless adequate financial resources are made available to the developing countries especially countries with low forest cover (LFCC). Pakistan strongly advocated the needs of LFCC's in terms of additional financial resources, capacity building and transfer of cheap technologies to developing countries.

Greening of Shandur Polo Festival



Photograph © Elizabeth Whitney Flew.

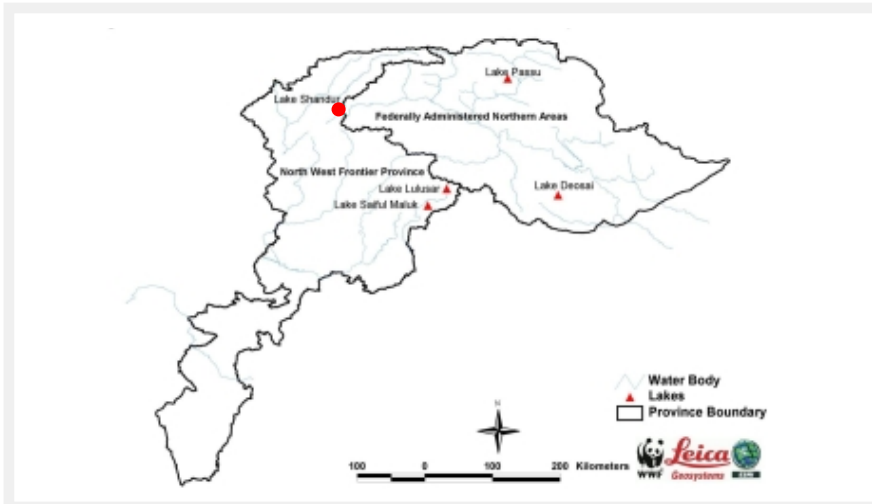
The Shandur Plateau, where the Shandur Polo Festival is held each year between the traditional rival polo teams of Chitral and Gilgit, is located at 3,700m in the Chitral district at the border between the North West Frontier Province and the Northern Areas. A large number of visitors, both national and international, attend this festival which has been taking place in its current form since the 1980's. Shandur is said to be the highest

Shandur Lake and its surrounding areas were under serious stress.

According to the research, the environmental consequences of the Festival are becoming significant. These environmental issues have been caused by the absence of appropriate arrangements for the disposal of waste, washing of clothes and cars, along with the tossing of garbage into the lake and surrounding areas. This is becoming increasingly impossible for Shandur's environment to manage.

The research found that the water and sanitation situation during the festival falls well below even the minimum standards for humanitarian emergencies.

Pollutants travel through natural watercourses from the lake and its



polo ground on the Earth. The first recorded polo tournament played at this ground was in 1936. It has been estimated that as many as 10,000 people now attend the event over the course of one week.

Since its inception the polo festival has been, and continues to be, a boost for tourism in the area but there are problems associated with the Festival as well.

Festival Related

Environmental Concerns

Lake Shandur is fragile and not as tough as people may think. Research conducted in 2006 in conjunction with PWP found that

vicinity having an adverse effect on the fish, wildlife, livestock and human populations further downstream.

Human activities are also causing dense submerged vegetation and decay around the lake. Such an accumulation of vegetative matter can choke off the lake's waters, causing it to slowly become land over time.

All this shows that the lake is potentially at risk of eutrophication – a fancy scientific word for slow death --- that may be caused by those human activities connected with the Festival.

All is not Lost!

No one is advocating ending the Shandur Polo Festival. But the scientific evidence does exist to support the need for environmental sensitivity during the festival---and after. By implementing good and environmentally sound management practices polo players, visitors, local communities, the land and lake can all benefit.



Photograph © David Johnson/PWP.

Simple management practices can make a difference. These are:

1. A comprehensive system for the collection and removal of refuse
2. The establishment of buffer zones around the lake
3. The provision of appropriate ablution facilities

Good management practices also include the establishment of proper camp sites at an appropriate distance from the lake and its streams. In addition, providing proper waste disposal points, adequate numbers of toilets and sanitary facilities, and restricting the washing of clothes, cars and animals in the lake will do a lot to help.

Simple Things You Can Do

Understanding the problems and proactive action to correct and prevent these problems, will ensure a healthy environment for all. You can play a role in saving Shandur.

When visiting the Festival please:

- Don't Litter
- Don't Wash Cars In or Near the Lake
- Don't do Laundry In or Near the Lake
- Use Appropriate Ablution Locations
- Use Appropriate Camping Sites
- Take Responsibility for Your Own Trash (Take Out What YOU Took In)

By Each Person Doing a Bit a Lot Can Be Achieved!

Other News

The Indus Ecoregion Conservation Journey Begins...

Pakistan Wetlands programme is pleased to share with you another exciting initiative being implemented by WWF P.

Again with the generous financial support from the RNE in Pakistan, WWF P has recently initiated a six year long programme titled "Indus for All Programme" which stems out of the ecoregion conservation initiative undertaken internationally by WWF as part of the Global 200 Ecoregions.

The Programme aims to conserve the rich biological diversity of the Indus ecoregion through livelihoods improvement of the local communities by addressing the poverty-environment linkages. The Indus Ecoregion partly or fully covers 18 districts of Sindh Province. Four critical ecosystems in three districts (Thatta, Nawabshah and Sanghar) have been initially selected for the Indus for All Programme's Interventions. These include coastal ecosystem (Keti Bunder), inland forest ecosystem (Pai forest), freshwater wetlands ecosystem (Kinjhar Lake) and desert-wetlands ecosystem (Chotiari reservoir).



The programme is being implemented through four site specific field implementation units supported by a Programme Management Unit based in Karachi. At the apex level, the Programme is supported and monitored by the Indus Ecoregion Steering Committee, established under the chairmanship of Additional Chief Secretary (Development) P&D Department, Government of Sindh. This committee is mandated to provide institutional and strategic support in the implementation of the Indus Ecoregion Conservation Plan.

By: **Zafar Khan**, Manager, Environmental Education and Communications, Indus for All Programme, WWF Pakistan

Killing of Pakistan's Freshwater Turtles

Findings of Pakistan Wetlands Programme's team



Turtle Catching in the Indus River, D.I. Khan

Pakistan has a broad spectrum of biodiversity and 225 important wetlands that cover about 10 percent of the country. Wetlands are generally degrading due to various human induced threats.

The Central Indus Wetlands Complex is one of the four demonstration sites of the PWP, along the main stem of Indus River, between the town of Chashma in the north and city of Sukkur in the south.

Pakistan has eight species of freshwater turtles. Hardshell species include Smith's turtle (*Kachuga smithii*), spotted pond

turtle (*Geoclemys hamiltoni*), crowned river turtle (*Hardella thurjii*), and Indian roofed turtle (*Kachuga tecta*). Softshell species include Ganges softshell turtle (*Aspideretes gangeticus*), peacock softshell turtle (*Aspideretes hurum*), Indus mud turtle (*Lissemys punctata*), and Indian narrow-headed turtle (*Chitra Indica*). The population size of the identified species is yet to be studied.

In Sindh and Punjab all freshwater turtles are protected in wildlife legislation but the situation in NWFP is quite different. There is no



Turtle at the verge of ruthless Killing provision in the NWFP Wildlife Act of 1975 for the protection of freshwater turtles.

A preliminary visit was made by the PWP team to study the status of



Turtle Captured with Net-hook

freshwater turtles found in the Indus River in Dera Ismail Khan, a city in

the North West Frontier Province (NWFP), connecting NWFP with Punjab. The city is situated on the west bank of Indus River and is one of the potential sites for freshwater turtles.

Communities called *Kails* in the local language, *Saraiki*, residing along river sides, were found involved in capturing Ganges softshell turtles (*Aspideretes gangeticus*) and Peacock softshell turtles (*Aspideretes hurum*) that are recorded vulnerable in IUCN red list.



Plastron of Fresh Water Turtle

Abundantly found species of freshwater turtles in the study area of the Indus River are the Ganges softshell turtles, Smith's turtles, Indian roofed turtles, and Indus mud turtles.

Only the softshell turtles are targeted by local communities because parts of these turtles are in demand in the international markets and used in traditional Chinese medicines, while the abundantly found hardshell species are not commercially important for them. Plastron (the bony plates covered with scutes that make up the lower shell of a turtle) and chest pellicle obtained after the killing of softshell turtles, are brought into the international markets through an



Dried Plastron ready for sale

extensive network of local middlemen.

Groups of turtle traders contact these local people and offer them handsome amounts of money in advance to start the business and adopt it as their profession. Traditional techniques and instruments are used for turtle capturing. Local people use spear rods (*Sangola*) and net-hooks (*teend*) baited with chicken intestines because softshell turtles are carnivorous. They also place nets in shallow water and check them for turtles, twice a day; early morning and at evening.

Meat and eggs of softshell turtles are used for eating purposes by some of the locals but others believe that turtles are not *Halal* food.

Thirteen Communities with 429 families in the study area were visited. The average catch is three to five softshell turtles per day by each community, which results in the minimum of 37 turtles caught per day by these communities.

The community is paid a minimum of Rs. 50-60 and a maximum of Rs. 250 by local agents for a pair of plastron and chest pellicle if the size of plastron is 15 cm. The price is reduced to half if the size of plastron is less than 15cm.

The communities in the D.I.Khan area only started selling softshell turtle parts in December, 2006. Immediate steps should be taken to control it at its initial stages before significant impact is made on the

number of turtles. It is unknown how long the trade has been going on in other areas.

Poverty is the cause for trade in turtle parts. Basket weaving and begging are their only other sources of income. The *Kails* people say that they are willing to abandon the turtle hunting business if other, lucrative, means of livelihood are made available to them.

It is recommended that the *Kails* should be approached through community-based conservation initiatives, provided with better livelihood opportunities along with education and awareness programmes in order to enable the local communities to stop the trade in softshelled turtles and protect all the freshwater turtles of Pakistan.

The PWP, in accordance with its mandate of poverty alleviation, is exploring the feasibility of expanding the scope of the freshwater turtle survey to other



Ready to Meet the Hunger

provinces. It is also liaising with proper authorities to put a stop to the trade of freshwater turtle parts.

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