



Newsletter Wet Notes

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The quarterly 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 Embassy of Kingdom of Netherlands (EKN) and WWF Global Network.

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Pakistan Wet Notes is compiled by Nasir Iqbal Malik, Coordinator, National Awareness-raising and Communications, PWP, Taseer Ali Mirza, Communication Officer, Graphic Design by Basharat Hussain.

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Programme updates

» Installation of signboards

The Pakistan Wetlands Programme, or PWP has installed seven visibility boards at the Salt Range Wetlands Complex, or SRWC – one each in Jhallar, Pail Chowk, Kallar Kahar, Uchhali, Manawah Mor and two in Khabbeki, one for biogas plant and one for wetlands vocational training centre. The two boards at Kallar Kahar and Uchhali carry messages and Dos and Don'ts for visitors.

» Establishment of vocational training center at Khabbeki

In collaboration with Sher Welfare Society and Khabbeki Women Wetlands Committee, a vocational training centre for women was established in Khabbeki. A total of 22 students have started their six-month certificate course in the first shift and the second shift will soon be started. A committee consisting of representatives of

the local community, Sher Welfare Society, and Pakistan Wetlands Programme has been constituted for the management of the centre. A joint account for the centre has also been opened where fee collected from students will be deposited. The centre will be gradually handed over to the Women Wetlands Committee Khabbeki. The centre will not only diversify livelihood of the local women through skill development, it will help keep the wetlands committee at Khabbeki functional.

» Plantation of indigenous plants

A total of 1,500 plants including kikar, phulai, ber, and iple iple were planted on barren land to improve forest cover in Soon Valley. A ToP was signed with farmers with plantation responsibilities of PWP and the farmers.

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» **Establishment of olive orchard**

An olive orchard has been established at Khabbeki with a total of 90 plants on demonstration basis as intercropping in the agricultural field to improve income of the local people

» **Meeting with religious leaders**

A meeting was held with religious leaders from Soon Valley in the SRWC office Naushera, aimed at seeking their support to promote the programme in the valley. They were briefed about the objectives and interventions of the project. They ensured their full support in spreading the message of the programme and delivering lectures in mosques and madrassahs on the importance of wetlands and wildlife in the area.

» **Meeting with journalists**

A meeting was held with representatives from print and electronic media to disseminate the message of PWP to the general public on a large scale. They were briefed about the activities of the programme in Salt Range. They also held a meeting with the wetlands conservation committee at Khabbeki and visited the biogas plant installed by the Pakistan Wetlands Programme as an alternative energy option. The initiative of the Programme was shown on Express TV.



» **Balochi embroidery training program for members of female WVCCs.**



PWP's MCWC site office organised a fifteen day training programme on Balochi embroidery for women members of the Wetlands Village Conservation Committee at Gwadar. The training was arranged with coordination and support from Executive District Officer Community Development, District Government, Gwadar. In this training, eighteen women community members participated from Kallag, Gwadar, Jiwani, Peshukan and Pasni. MCWC provided them transportation charges from their town and villages to Gwadar where they stayed with relatives. The site team also arranged pick and drop facility for the participants.

The Site Manager Makran Coastal Wetlands Complex, Mr. Abdul Rahim and EDO Community Development Mr. Mohammad Aslam Baloch were chief guests at the opening ceremony of embroidery training at the Social Welfare Office on May

17th, 2010.

During the training, the trainer, Miss Bilqees Baloch, trained the trainees in new fashionable embroidery with ribbon and stitching work on Balochi shawls. She trained the participants in cutting cloth, drawing designs on it, and embroidery with ribbons and thread. During the training, every two days the site team visited the training centre for monitoring purposes. In the certificate distribution ceremony at the training venue on May 29th, 2010, the Chief Guest was Mr. Pasand Khan Buledi, the Deputy Commissioner Gwadar. The other guests were Mr. Maqbool Hassan EDO Balochistan Forest and Wildlife Department, Mrs Tahira Khursheed, Chair person SHADOW and Mr. Abdul Rahim, Site Manager MCWC. The Deputy Commissioner applauded PWP efforts in increasing skill level of communities like Kallage.

At the end of ceremony, DC along with EDO and Tahira Khursheed distributed certificates among training participants.

» **Roadside plantation at rain fed ponds at coastal highway with support of Balochistan Forest and Wildlife Department.**



Pakistan Wetland Programme's MCWC site office, Gwadar, with collaboration of Balochistan Forest and Wildlife Department conducted roadside plantation at rain fed ponds on the Makran coastal highway. The forestation was conducted with support of technical expertise from Balochistan Forest and Wildlife Department. Indigenous tree plants Spp of *Acacia arabica* and *Acacia niluitca*, common in nature, were planted.

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The basic aim of forestation is to raise maximum forest in the region which automatically helps other biodiversity and can appear as a good source for carbon sequestration. Forests also play a vital role in balancing atmospheric temperature and regulate the toxic gases produced by human activity. The rain fed ponds dug by FWO have a good source of fresh water which usually stays in the ponds for up to a year, which helps the trees as well.

More than six hundred container plants were planted and sowed ten kilogram mature seeds. The plantation were carried out more than ten ponds started from Kappar area up to the Pasni airport and plantation distance were five to ten feet each row to column.

» Training workshop on Fish Quality Assurance for fishermen and factory owners in Gwadar

PWP-MCWC site office conducted a training workshop on fish quality assurance for fishermen and factory owners in Gwadar. The venue was Mir Sea Food Factory in Gwadar. A total of 20 factory workers and fishermen participated.

The main objectives of the workshop were to enhance participants' knowledge about quality assurance of fishery products, and value addition for packing/processing in seafood products. They were also given information on shelf life of marine products like fish and shrimps. This is primary education regarding the Hazard Analyses Critical Control Point or HACCP (a mandatory procedure in food packing industries).

The local communities of the Makran coast mainly depend on fishery or fish related businesses. Most fishermen have no appropriate fishing gears or storage systems. The wooden boats' storage areas are prone to hazards and are unhygienic. The fishing trips depend on the nature of catch and sometimes fisherfolk spend whole days in search of fish. The shelf life of the fish may decrease in extreme temperatures, so factory owners have to lower the prices of the fish.

This training elaborates the best mechanism to keep the fishery catch fresh and healthy. The overall objective of the training to introduce sustainable fishery and proper handling of fish.

» New Year mangrove plantation and nursery raising at Kawari village

PWP, MCWC site office, has started New Year mangrove plantation and nursery raising in Kawari area. The mangrove plantations are continuation plantations from 2008 started by site office Gwader for the rehabilitation of existing mangroves at Kalmat lagoon.

Kalmat lagoon has naturally growing mangroves species *Avicenia marina*. In the western part of the lagoon, the natural plantation is thick and flourishing due to continued mixing of river water from Kalmat river. On the eastern side, there are fewer mangroves due to the fact that there is less freshwater in flux in the area.

The intertidal mangrove forests serve humanity in a myriad of ways ranging from ecosystem services to fuel and fodder provision. Mangroves are highly valued by fisherfolk, as they are spawning grounds for a variety of commercially important fish and shrimp species. Mangroves are living barriers against natural disasters such as coastal storms and even tsunamis, as was clearly demonstrated during the devastating Southeast Asian Tsunami in June, 2004. In addition to

providing essential habitat, they stabilise near shore sediments and help to mitigate coastal erosion. They also retard freshwater discharge and serve as sinks for organic and inorganic materials as well as pollutants. This increased recognition of values of mangrove forests has encouraged coastal communities to protect existing mangrove stands and proactively raise new ones.

MCWC site office raised thirty thousand plants in the mangrove nursery at Kawari. The programme also procured 448,500 mangrove seeds from Kalmat community. Three hundred and seventy-five acres were covered. Plantation mechanisms were direct broadcasting, seed sowing, and plantation of container plants. The local community actively participated in the project. The Kawari Wetlands Village Conservation Committee took the leading role and provided land space for mangrove plantation.

» Ten day field training programme for school children

PWP, MCWC site office, organised a ten day field training programme for fourteen school children at the National Children Mountain Conservation Meet 2010 in Islamabad. The district government, as the main local partners, supported ten of the children. The other four were funded by PWP. Section of the children was done by the District



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Government, Education Department, head masters of selected schools and PWP - MCWC site team. Each student appeared in an interview and test competition for the final selection.

The training programme was organised by the Adventure Foundation, which organises this training programme each year. They select one hundred children from all over Pakistan. Schoolchildren from four provinces get to gather in one training programme and learn about environment / mountains. This programme also teaches them about the ecosystem, and provides a chance for them to widen their circle of friends.

» **Demonstration model on drip Irrigation made at Zarin bug village, Dasht**

Pakistan Wetlands Programme, MCWC site office, Gwader has established a demonstration model on drip irrigation (two acres) with fruit plants for the conservation and sustainable use of freshwater at Zarin bug village, Dasht. The main objective of the demonstration is to conserve freshwater in the region and help recharge the ground water near Dasht river.

» **Alternate energy system installed at Chatti village.**



The PWP MCWC site office successfully installed a model on alternate energy (wind and solar) at Chatti village, Gwader.

When neighbouring villagers saw the advantages Chatti was deriving from the energy model, they expressed interest in installing it in their villages as well.

The PWP team is planning to educate the other village to promote this technology, develop coordination between the vendors

of solar and wind energy apparatus introducethis clean energy.

» **Training on seashell craft making for WVCCs in Gwader**

Pakistan Wetlands Program, MCWC site office, Gwader organised a fifteen day training programme on seashell craft making and its proper utilization for the Women Wetlands Village Conservation Committee (WVCCs) at Gwader. The training programme's aim was to enhance skills among women and provide an opportunity for alternate livelihood programmes for them.

Seashells are a common commodity in coastal areas. Shells are different in colour, appearance and shape. They can be used for a variety of ornamental products.

Participants at the training were from local community of Gwader.

» **Broghil National Park notified:**

The Pakistan Wetlands Programme proposed the area of the Northern Alpine Wetlands Complex to the custodian Khyber-Pakhtunkhwa Wildlife Department for an appropriate protected status. The joint efforts of the Khyber-Pakhtunkhwa Wildlife Department, the Pakistan Wetlands Programme and the custodian community organisation (Chiantar Welfare Society Broghil), Broghil Valley received protected status as a National Park under the Khyber-Pakhtunkhwa Wildlife Act, 1975. The final notification was circulated on August 25th, 2010 to all the concerned departments/ organisations from the office of the Environment Department, Government of Khyber-Pakhtunkhwa.

This National Park will be managed by the Wildlife Department, KPK, with the participation of the Broghil Valley community in Chitral district. After the Chitral Gol National Park, this is the second National Park in Chitral district. This designation of the area will also serve as a benchmark for the transboundary protected status initiatives for the connected wetlands resources found towards Ishkoman

valley of Gilgit-Baltistan at the national level, and the bordering Wakhan corridor in Afghanistan at the international level.

» **“Broghil” documentary telecast**

A joint venture of the Pakistan Wetlands Programme and Geo TV to reach the snowbound community of Broghil has resulted in a documentary detailing the harsh climate of Broghil valley, the miseries, standard of living, and the rich culture of the Wakhi communities living there. The documentary also recorded the unique ecotourism opportunities of the valley. This 45 minute documentary was telecast on Geo News under its Geomentry programme in September 2010.

» **Training and capacity building**

Since 2006 the Pakistan Wetlands Programme has been engaged in offering a variety of training courses to fulfill the capacity building needs of departments, organisations and individuals. It has offered more than 100 training courses in which more than 8,000 professional and non-professional staff have participated from various departments and organisations. PWP has conducted its training courses in all parts of the country.

In this quarter thirteen training courses were conducted by the training and capacity building section in which 1,147 participants were trained. A wide range of training courses were offered which included Community Empowerment for Sustainable Wetlands Management, Basic Training for GIS Managers, Training Needs Assessment for Capacity Building, Wildlife Management and Wetlands Conservation, Bird Identification Techniques and Natural Resource Management. Participants from various developmental and non-developmental sector organisations participated. Training and capacity building support for the teams of experts was provided through national consultants.

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» Freshwater fish pen culturing demonstration at Billar Dam, Kullanch

PWP - MCWC site office organised a demonstration model on freshwater fish pen culturing with Billar community, Kullanch. The model design was adapted from the Indus for All Programme. WWF trained personnel from Sindh also helped in technical feasibility and implementation of the demonstration. The demonstration was organised as per the demand of local community for the sake of their alternate livelihood sources.

The site team also assessed the socio-economic condition of the community. MCWC had established a model of drip irrigation system for wise use of freshwater. Four thousand, two hundred fish were introduced into the fishpen.

» Nurture over Nature Programme at Shandur Polo Festival

PWP's Training and Capacity Building Component organised a three day awareness raising and training programme in the Chitral Scouts Camp. It is heartening to note that despite their heavy commitments to provide security protection to the entire tented village, established during the festival, the senior management and personnel of Chitral Scouts participated whole heartedly in the event.

The first day was devoted to presentations on different NRM topics. On the second day, scouts and local volunteers were afforded an opportunity to learn the basics of solid waste management. Subsequently, they all participated in a trash collection exercise. Each participant was provided with polythene gloves and two polypropylene bags to collect biodegradable and non-biodegradable waste separately. Later, all trash collected was taken to a central collection point established by PWP for final eco-friendly disposal.

At the end of the activity Commandant Chitral Scouts, in his closing remarks, appreciated and

Public events

thanked PWP team for arranging the programme for the scouts.

» Exhibition on Alternate Energy



According to the Ministry of Finance, in Pakistan the cumulative effect of the energy crisis on country's economy is estimated at upwards of 2 percent of GDP during 2009-10 alone.

Renewable energy is an alternative form generated by natural sources such as wind, rain, sunlight etc. It is not only economical but also environment friendly.

In order to boost awareness about such alternate energy sources WWF-Pakistan arranged an exhibition on Renewable Energy Technologies at Nathiagali.

Including different commercial companies, the Pakistan Wetlands Programme's team also participated in this event.

The Pakistan Wetlands Programme has installed biogas plants and solar-wind hybrid systems at different sites in the country in collaboration with Dairy Pakistan and Pakistan

Council of Renewable Energy Technologies. PWP has brought innovation to the bio-gas technology by introducing "Fiberglass accumulator" in collaboration with Mehcon International

» International Biodiversity Day

May 22nd has been declared as the International Day for Biological Diversity by the United Nations to increase understanding and awareness of biodiversity issues. The United Nations announced 2010 as the International Year of Biodiversity and people from Pakistan as well as from all over the world gathered at different places to highlight the importance of this issue.

The Pakistan Wetlands Programme celebrated this important day in diverse places emphasised by range of activities with different and important stakeholders. One campaign was organised with Sargodha University. The activities included different competitions among students, and an advocacy walk to raise awareness and dissemination of educational material in the university. Ms. Timmer Robinson highlighted the role of biodiversity and threats to the species in her presentation. Vice Chancellor M. Akram Chaudhry appreciated Pakistan Wetlands Programme's efforts of conservation. Masood Arshad introduced the



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Pakistan Wetlands Programme's initiatives about wetlands and biodiversity. He also sensitized the participants about significance of biodiversity in general with special focus on Pakistan, its threats and future measures.

The same kind of event was organised at Fatima Jinnah Women University Rawalpindi where the chief guest was Mr. Hameed Ullah Jan Afridi, the Federal Minister for Environment. The minister visited various stalls and appreciated the art work and 3-D models prepared by the students of Fatima Jinnah Women's University. Different performances related to Biodiversity Day were also presented. In order to create awareness about this day Pakistan Wetlands Programme has disseminate awareness material. Celebration of International Biodiversity Day was also held in District Chitral where Northern Alpine Wetlands Complex, in collaboration with the Wildlife Department, Chitral, organised an advocacy walk, exposure trip to Tooshi Community Game Reserve. There were relevant radio broadcasts as well.

Cholistan Institute of Desert Studies, Islamia University of Bhawalpur also collaborated with Pakistan Wetlands Programme to observe this day.

» Clean-up Gilgit mountain resort

Staff members of Pakistan Wetlands Programme took the opportunity to go to one of the most beautiful mountain resorts in Pakistan to spread the message of environmental responsibility. On Sunday, 11th July, 2010, Nasir

Malik, Coordinator Communications and Awareness Raising, and Dr. Humaira Khan, Wetlands Specialist based in Gilgit went up to Naltar, a stunningly beautiful mountain village and resort about an hour's drive from Gilgit. Their mission was to conduct a clean-up campaign there and impart environmental awareness to the people.

Because of its proximity to Gilgit, this place high up in the Karakoram mountains has become a weekend getaway for an urban and increasingly prosperous population. Specifically in summer, when temperatures hit their highest in Gilgit, Naltar becomes over-crowded on weekends.

When the PWP staff reached Naltar on this particular Sunday, they found many people from Gilgit milling about and enjoying themselves on the huge, grassy slopes in the middle of the resort area. Litter was everywhere, marring the beautiful greenery. Without wasting any time, the staff set about mobilising people on the spot, asking them to join them in picking up litter.

Some of the people showed reluctance in engaging in this activity but many others joined PWP in garbage collection. The staff and these volunteers combed the entire area, picking up wrappers, paper and plastic wherever they found them. By setting an example personally, they motivated others to do the same.

Within an hour, these intrepid environmental warriors had cleaned up the entire slope and all those wrappers shining in the sun were there no more.

Along with garbage pickup, PWP staff

engaged in conversation with parties of picnickers and requested them to take care of the gorgeous landscape around them by not littering. Many of them were responsive and said that they would pass along this message to others.

At the end of the campaign, PWP brought back the filled bags and disposed of them properly in the solid waste disposal system of Gilgit city.

» World Environment Day



World Environment Day, held on 5th June is a day that stimulates awareness of the environment and enhances political attention and public action. It was the day that the United Nations Conference on the Human Environment began.

This year's theme is 'Many Species. One Planet. One Future.' This message focuses on the central importance to humanity of the globe's wealth of species and ecosystems. The theme also supports this year's UN International Year of Biodiversity.

Pakistan Wetlands Programme WWF has carried out array of activities all over Pakistan. It organised walks, school children's visits, speeches, art competitions, a promo, fisherfolk's debate, media journalists' visits, religious leaders' outreach, disaster awareness on Hunza lake, awareness on turtle killings, dolphins, migratory birds, and reports in media.

These activities were mostly took place in the wetlands communities like Gwader Balochistan, Chitral, Khybar-Phakhtoonkha; Hunza lake, Gilgit-Baltistan; Kalar Kahar, Salt Range; Kotadu, Central Indus Wetlands Centre, and Pakistan National Council of Arts, Islamabad. In Islamabad the Minister for Environment attended and enjoyed the whole event and UNDP representative Abdul Qadir Rafiq

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conveyed the UN Secretary General's message.



World Environment Day is dedicated to raise awareness regarding environment among the common masses. We, the common people can do our little bit in order to save our earth from the effects of global warming.

These are a few small things we can do this World Environment Day to make a big difference:

- ◆ We should avoid shopping for things those are not required;
- ◆ We should make use of car pools. It is even better if we use public transport more often;
- ◆ We should prevent water wastage;
- ◆ The use of air conditioners should be decreased;
- ◆ We should follow the three Rs: recycle, reuse and reduce;
- ◆ We should prefer eco-friendly things;
- ◆ We should switch off the lights, fans and other electric device when not in use;
- ◆ We should plant more and more trees;
- ◆ We should avoid littering and use dustbins;
- ◆ We should say no to using polythene bags;
- ◆ We should be a part of an anti global warming drive in our respective city, town or even block.

World Migratory Bird Day

World Migratory Bird Day is a global initiative to raise awareness for the need to conserve all migratory birds. Events range from bird festivals, education programmes and bird watching trips to watch bird migration in action.

Every year it focuses on a different topic. This year's theme 'Save

migratory birds in crisis - every species counts!' - is raising awareness about Globally Threatened migratory birds, with a particular focus on those on the very edge of extinction - the Critically Endangered.

"International collaboration is the only way to conserve migratory birds as they pass along their flyways" — Dr. Marco Lambertini, BirdLife's Chief Executive.

Ministry of Environment's Pakistan Wetlands Programme also observed this day with school children to raise awareness about migratory birds and especially the theme of the World Migratory Bird Day 2010 'Save migratory birds in crisis - every species counts!'

Children showed a great interest in this event. The activities were included bird watching, art competition in the school, poster on Rawal Lake's birds, involving school children and media environment journalists forum. Environment song with pictures were also showed which they liked and this really sensitised them.

Another interesting event on this day was organised in Broghill Valley, almost twelve thousands above sea level where different competitions were held among enthusiastic local students along with advocacy walk and orientation sessions to raise awareness about migratory birds.

Migration is a natural process, whereby different birds fly over

distances of hundreds to thousands of kilometers in order to find the best ecological conditions and habitats for feeding, breeding and raising their young. For instance, when the conditions in the breeding grounds become very difficult due to low temperatures migratory birds would fly to a region where conditions are less rough. There are many different migration patterns. Most birds migrate from northern breeding areas in the summer, to southern wintering grounds. The Central Asian Flyway covers the areas used by species of birds with the main migratory routes through Central Asia. The flyway area extends through 21 countries from the Arctic Ocean in the north to the Indian Ocean in the south. It overlaps with both the African-Eurasian flyways in the west and the East Asian Australasian flyways in the East. This famous route from Siberia to various destinations in Pakistan over Karakorum, Hindu Kush and Suleiman Ranges along Indus River down to the delta is known as International Migratory Bird Route number 4. It is also called as the "Green Route" or more commonly "Indus Flyway". The birds from north spend winters in different wetlands and deserts of Pakistan, which are distributed almost throughout the country from the high Himalayas to coastal mangroves and mud flats in the Indus delta. And, after winters they go back to their native habitats.



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» National Tree Plantation Day 2010

Pakistan Wetlands Programme observed the National Tree Planting Day, 2010 with plantation of a sapling by CDA Chairman Imtiaz Inayat Elahi along 12th Avenue in Sector H-12, Islamabad.

A large number of schoolchildren, government employees, different NGOs and environmentalists attended the ceremony of the Tree Planting Campaign.

» National Tree Plantation Day celebrated with schoolchildren in Gwadar

PWP organised the National Tree Plantation Day with schoolchildren at Gwadar. On 18th August 2010 MCWC site team celebrated World Plantation Day with support of the local school. Along with PWP Staff, District Executive Officer Agriculture Mr. Mehraj Mohammad Khan, Ex EDO Education Gwader Mr. Khuda Bakhsh Baloch, School Management Committee's Chairman Abdullah Usman, General Secretary Mr. Faiz Nigori, school teaching staff and about three hundred schoolchildren participated. The schoolchildren also attended brief introductions about tree plantation delivered by the guests and the site management team of PWP-MCWC

site office. The children also took part the interactive session with speakers and asked queries about the positive role of a tree.

After the speeches, children played a tree game used to highlight the importance of tree plantation among participants.

The children planted more than hundred trees on school premises. More than fifty trees were distributed to schoolchildren for plantation at home.

» "Save Shandur" Campaign 2010

The famous Shandur Polo Festival takes place annually at the top of Shandur plateau located at an altitude of above 12,000 feet, at the boundary line between Ghizer and

Chitral districts of Gilgit-Baltistan and Khyber-Pakhtunkhwa in Pakistan.

The area receives a steady number of visitors most of the year in the form of local travelers between Gilgit and Chitral and tourists in summer. But the Shandur Polo Festival in July each year brings almost 10,000-12,000 people within three days and exerts a great anti environmental pressure on the fragile wetlands ecosystem of the area, which include lakes, source points, peatlands and associated biodiversity.

Keeping in view the past experience for model campaign during the Shandur Polo Festivals, the Pakistan Wetlands Programme - Northern Alpine Wetlands Complex, along with other partner organisations, launched a clean-up and awareness raising campaign under the slogan 'Save Shandur' / 'Shandur Bachao.' The purpose of the campaign was to reduce the impact of imposed pollution load in the wetlands and their surrounding ecosystem and to raise awareness in the public about solid waste management during the festival.

More than 2,300 kg of solid waste in four days were collected through the active participation of more than 50 volunteers from organisations including SEED, EvK2CNR, Wildlife Department KPK, Chitral Association for Mountain Areas Tourism, Snow Leopard Trust / WWF - Pakistan, Snow Leopard Foundation, Shandur Area



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Development Conservation and Welfare Organization, Youth Advocacy Forum Laspur, Citizen Community Board Chitral and Chiantar Welfare Society Broghil. Additionally, the waste was segregated into biodegradable and non-biodegradable items and disposed off accordingly, while adopting the scientific measures. Awareness raising activities included banner display, eco checkpost establishment, brochure distribution, public announcements, personal interaction with visitors and shopkeepers, awareness talk with local women and a grand awareness walk during the final polo match were held. Also, evening training sessions for the Chitral Scouts were conducted on topics related to the issues of wetlands, biodiversity and their due role in conservation and management of the natural resources.



» Celebration of Broghil Festival 2010

After a lapse of almost two years, the Broghil Festival was reactivated through the joint efforts of Chiantar Welfare Society Broghil, the Pakistan Wetlands Programme and the Chitral Association for Mountain Areas Tourism. These partner organisations made strong efforts to lift the ban and to get the permission and organize Broghil Festival 2010. The aim behind this was to promote ecotourism in the area and hence supplement the limited income generation options in the valley.

In the past tourists, both national and international, along with media teams from various agencies participated in the events of Broghil Festival. Despite the uncertain administrative and natural circumstances, this year a good number of local and national tourists visited the Broghil valley for the event. Media coverage was provided by Geo TV and Pakistan Television Peshawar.

This year the festival venue was set at Teridast, situated at an altitude of almost 12,400 feet above sea level. The Wakhi community included activities like yak polo, yak race, horse polo, horse race, the traditional Buz Kashi game, cultural musical shows, traditional food display by Wakhi women, donkey

race and polo, mountain marathon, tug of war along with football for the visitors. This is a local festival where the people of Broghil perform their sportsmanship and other skills in their traditional way of life. Teams from the adjoining Ishkoman valley of Ghizer District participated in the horse polo.

The prize distribution was held in Lashkargaz in front of a huge gathering at the village. Mr. Hasnain from Sarhad Tourism Corporation presided over the ceremony while Mr. Ahmad Said, Site Manager, Pakistan Wetlands Programme was the chief guest. The event was recorded by the media team from Geo TV, PTV Peshawar and by Sarhad Tourism Corporation. On behalf of Pakistan Wetlands Programme Mr. Ahmad Said distributed a cash prize to the winner and runner up. At the end a cultural show was organised by the Wakhi community.

The Broghil festival has a positive impact on the economy of Wakhis by providing an opportunity to every household to earn during the festival period. Local means of transportation including horses, donkeys, yaks, porters' services are utilised for trekking and carrying luggage. The visitors buy goats, sheep and yaks for meat and hire porters. Along with this they use local Wakhi mud houses on daily payment basis as a village guesthouse. According to an estimate on the income to the Wakhis during the festival 2010, the figure reaches approximately Rs 400,000 despite the limited number of visitors due to heavy rainfall, landslides, road blockages and the two year gap in the annual festival.

The concerned authorities/organisations need to take action in the promotion of the Broghil festival which is held annually on the 'gateway' to Central Asia, where people from Tajikistan, Wakhan and Pamirs could participate and turn the festival into an international event.

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Awareness raising programmes for MCWC site office, Gwader

» School Tree plantation with school children



PWP-MCWC site team, with help from awareness raising and communication component of PWP has conducted a tree plantation activity in Jadeed School, Gwadar. Children from different schools participated. The first tree was planted by school Headmaster Mr. Yaqoob Nashad, followed by Site Manager, PWP. The children planted 45 plants.

» FM Radio Talk Show



Pakistan Wetlands Program, MCWC site office, Gwadar organised two FM talk shows on various issues like sustainable fishing, by-catch and solid waste management. Mr. Nasir Iqbal Malik, Coordinator Awareness Raising and Communication briefly described the programme and discussed the issues and Mr. Abdul Rahim Site Manager, MCWC site office, Gwadar also contributed his point of view in both programmes. Social Organiser Miss. Zaitoon Abdullah organised two awareness talk show programs on FM Radio Pakistan Gwadar. Radio Pakistan Gwadar has schedules for both Urdu and Balochi language shows and organises programmes for various fisherfolk, labourers and farmers. The frequency is strong and covers the whole area of Makran coast including nearby areas of Iran and Oman.

» Religious leader Awareness raising programme in MCWC



PWP, MCWC site office, Gwadar and the awareness raising and communication unit Islamabad have organised an awareness raising programme with religious leaders at Gwadar. The programme was organised at a local madrassah and more than fifty people participated. The participants were various Islamic scholars, ulema and students.

The religious leader programme's aim is to involve people for the conservation of coastal wetlands and disseminate the WWF book on Islam and conservation. Religious leaders are reputable persons in the society and most of the followers believe what they say.

Maulana Riaz Ahmed, focal person of PWP for the religious leaders, spoke about water and conservation in the light of Quranic verses. He said that every living organism originated from water and needs water to live. It is thus very important to keep our water/wetlands clean. Maulana Abdul Haleem, an Islamic scholar, spoke of the use of freshwater and wetlands. Meanwhile Mr. Nasir Iqbal Malik, Coordinator, Awareness Raising and Communication introduced the PWP programme and also highlighted other wetlands issues. Mr. Abdul Rahim, site

manager, MCWC site office, Gwadar spoke on coastal wetlands and their issues. He requested the ulema to raise these issues in their Friday sermons and try to convey the message of PWP for healthy and safe wetlands.

» Awareness raising programme on sustainable fishing in Gwadar

PWP-MCWC site team conducted a one day awareness raising seminar on Sustainable Fishing with fisherfolk, fish processing companies, stakeholders, fisherfolk organisations and other key partners. More than 50 people participated. This workshop was conducted by the coordinator Awareness Raising and Communication, PWP, Mr. Nasir Iqbal Malik. The other presenters were site manager MCWC, Mr. Abdul Rahim and Director of Fisheries, Mr. Hafeez Jamali as well as some seniors c. This workshop's aim was to create awareness about sustainable fishing mechanism to the fisherfolk community on how to fish in a sustainable way.

Other problems like oil pollution due to oil smuggling from Iran, trawler issues, by-catch issues with marine turtle and cetaceans, solid waste dumping in coastal areas and use of plastic nets were also discussed.

» Media Press Conference

An awareness raising programme was held with local journalists to raise wetland issues in local print and electronic media. This activity was conducted by the Coordinator Awareness Raising and Communication, PWP, Site Manager of PWP (MCWC) and the social organisation team.



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Intern Corner



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Articles

» Bacteriological water quality of Salt Range Wetlands Complex, Punjab



This study focused on analyzing the water of different potential lakes, hand pumps and open dug wells in Salt Range Wetlands Complex, Punjab Province. Majority of freshwater lakes and their surrounding wetlands in Pakistan are mainly surrounded by agricultural, industrial and residential areas. Wastewater treatment is not widely practiced in rural and suburban area of Pakistan, which leads to the discharge of wastewater into water bodies. The practices of discharging untreated wastewater into water bodies and livestock grazing around water resources may pose a serious danger to the water quality. Water in lakes is used for drinking by both humans and livestock, for bathing, cleaning and irrigation purposes. These uses, with no regulatory or water treatment facilities, may have deteriorated water quality and contaminated the water by pathogens. Fecal coliforms (FC) have conventionally been regarded as indicators of microbial contamination of water resource. They used as an indicator for microbiological analysis of water quality. Pathogens still pose a threat to

human health, despite development in the field of microbiology. Most of these pathogens are transmitted by the fecal-to-oral route in which people are exposed to the pathogens when they ingest or come into contact with water contaminated by human or animal feces, although attention and management efforts by the Pakistan Wetlands Programme have focused on treating water to prevent microbial contamination. Human activities and advancements in technology continue to contribute directly and indirectly to contamination of surface and groundwater with microbial pathogens. Salt Range Wetlands complex (soon valley) have nearby agricultural fields, the irrigation of which increases agricultural production but the water returned to these lakes after agricultural practices is often contaminated with nutrients and pathogens. In order to manage microbial contamination, continuous microbiological monitoring of water is essential to ensure compliance with quality standards and to protect public health. The quantity of coliforms and halophiles bacteria is too high in selected water sources, far beyond the standards of WHO. Contamination of lakes and well water has been caused by unsustainable human interference like irrigation, household use, laundry, septic tanks and direct effluents from settlements. Livestock have been noticed grazing, walking and drinking around the lakes. Farmers consolidate their livestock dung in vicinity of lakes, where when it raining the water directly flows into the lakes, which is a major source of providing a growing medium for coliforms bacteria. In light of results, the presence of high numbers of fecal coliforms and halophiles bacteria in selected water resources indicates that this water is not suitable for drinking purposes and other non-consumptive uses as per WHO recommendations. High rate

of halophiles bacteria in the wetlands is not suitable for fish as it causes de-oxygenation in water. While I was doing my field investigation at Khabbeki Lake, huge numbers of dead fish were recorded in the lake. Later on my hypothetical statement was proved correct by the Fisheries Department; they claim that the accident happened because of de-oxygenation of lake water. The Fisheries Department further added that actually the culprit was red blooms algae which caused de-oxygenation in lake water and eventually oxygen deficiency occurred which led the epidemic. In support of their statement, I am further elaborating the mechanism how Algaefication could cause de-oxygenation in lake water. Algaefication is not directly linked with de-oxygenation but it stimulates bacterial growth eventually, which consumes all the available dissolved oxygen in water and hence oxygen deficiency occurs. Second expected phenomenon is dehydration, which happens when the halophiles bacteria enters the gills of a fish, and causes de-hydration by ex-osmosis. The fish can't get dissolved oxygen and hence extreme deficiency of oxygen causes such epidemics. All these practices of local community due to ignorance of wetlands significance and irrational utilization of water resources are potential threats to wetlands and public health and, if proper measures are not taken, could turn water into an elixir of disease.

Imran Ullah
Research Assistant, PWP
Supervised by Ahmad Khan

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» Facts about Climate Change

- ◆ Average global temperatures increased by about 1 degree over the last century;
- ◆ The US contains only 5 percent of the world's population, but contributes 22 percent of the world's carbon emissions;
- ◆ Between 20 and 25 percent of carbon emissions come from deforestation and land use change;
- ◆ The golden toad is thought to be the first species to go extinct because of climate change;
- ◆ Personal cars and trucks discharge most carbon emissions;
- ◆ Air conditioning and heating usage consumes more energy;
- ◆ Climate change is linked to stronger hurricanes, more drought and increased coral death from bleaching;
- ◆ Climate change is linked to an increase in disease-carrying pests that lead to the increased spread of diseases such as dengue fever, malaria etc.

Universal tips to help our climate:

- ◆ Travel light. Walk or bike instead of driving a car. Cars and trucks run on fossil fuels, which release carbon dioxide into the atmosphere. Walk or bike and we can save carbon for every mile we travel;
- ◆ Use energy savers. Use energy-efficient bulbs which help fight climate change because they reduce the amount of fossil fuels that utilities burn. We can save money and carbon by replacing tube lights and regular bulbs;
- ◆ Recycle and use recycled products. Products made from recycled paper, glass, metal

and plastic reduce carbon emissions because they use less energy to manufacture than products made from completely new materials. Recycling paper also saves trees and lets them continue to reduce climate change naturally as they remain in the forest, where they remove carbon from the atmosphere;

- ◆ Plant native trees. Trees absorb carbon dioxide from the air and use it as their energy source, producing oxygen for us to breathe. A tree can remove and store lot of carbon over its lifetime. A tree that shades a house can reduce the energy required to run the air conditioner and save an additional amount of carbon over its existence;
- ◆ Turn down the heat. Heating and air conditioning draw more than half of the energy that a home uses. Turn down the heat or air conditioning when you leave the house or go to bed. You can easily install a programmable thermostat that can save money and carbon;
- ◆ Say no to plastic bags. Plastic bags are causing lot of damage to our environment especially to our wetlands and their biodiversity;
- ◆ Accept renewable energy.
- ◆ Electricity generation produces carbon emissions; we should now accept and adopt new renewable energy sources.
- ◆ Growing number of utilities generate electricity from renewable energy sources with solar panels, windmills and other technologies;
- ◆ Think globally, act locally. Richard Garstang of the Pakistan Wetlands Programme says it all the time.

Top ten facts about wetlands

- ? Wetlands are found all over the world;
- ? Wetlands keep our water clean;

- ◆ Wetlands are valuable wildlife habitats;
- ◆ Wetlands can help to reduce flooding;
- ◆ Wetlands are great places to have fun;
- ◆ Wetlands can help treat wastewater;
- ◆ Wetlands make great outdoor classrooms;
- ◆ Wetlands help to replenish groundwater;
- ◆ Wetlands help to guard against erosion;
- ◆ Wetlands increases scenic beauty.

Nasir Iqbal Malik
Coordinator,
National Awareness-raising
and Communications, PWP,
nimalik@wwf.org.pk



The Pakistan Wetlands Programme's Site Offices

Salt Range Wetlands Complex
Conservation & Information Center,
Khabbeki
Soon Valley, District Khushab.
Tel: 0454 209100

Central Indus Wetlands Complex *
Nizami House # 02, Bhukki Road
near KAPCO Power Plant Kot Adu,
District Muzaffar Garh.
Tel: 06622 39553

Central Indus Wetlands Complex
Indus River Dolphin Conservation Centre
Lab E Mehran, Near Madrissa
Faiz Ul Uloom, Bandar Road, Sukkur.
Tel: 071-5630687

Makran Coastal Wetlands Complex
Bungalow # M-74 Phase-1,
New Town Housing Project,
Gwadar.
Tel: 086 4211500

Northern Alpine Wetlands Complex
NLI Colony, Near Imamia Eid Gah,
Shahrae Quaid-e-Azam,
Jutail, Gilgit.
Tel: 05811 55658, 55688