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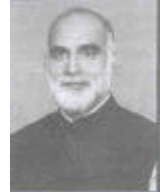
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ZOOLOGICAL SURVEY
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Ministry News

Minister Maj. (R) Tahir Iqbal Inaugurated Monsoon Tree Plantation Campaign.

An official ceremony of Monsoon Tree Plantation campaign held at Fatima Jinnah Park, F-9, Islamabad on Saturday 02 August 2003. The event was jointly organized by Ministry of Environment and CDA. Large number of students and NGO's participated in the colorful tree plantation event.



Maj. (R) Tahir Iqbal, Minister of State (Incharge) for Environment stated that Ministry of Environment is in the process of formulating a project entitled "Aforestation through farmers a package of incentives". The project will be launched all over the country and estimated to cost of Rs. 1150 million during a period of seven years (2003-2010) and an allocation of Rs. 125

million has been made during the year 2003-2004 under this mass Aforestation programme.

Minister further stated that Pakistan has 5% of its area under forest cover and it is too meager to satisfy timber and fuel

The Federal Government has approved a project entitled "Forestry Sector Research and Development" for Providing research back up support to the forestry sector. The total cost of Rs. 193.5 million for a period of five years to be implemented through Pakistan Forest Institute. An allocation of Rs. 56.368 million has been made during the year 2003-2004. He also stated that target set for the monsoon tree plantation campaign 2002-2003 could not be achieved due to prolonged droughts while this year early monsoon rains has

wood needs of growing population of the country. At present, Pakistan imports wood and wooden products mostly pulp paper. To attain self-sufficiency in wood and wood products, Ministry is making efforts through launching various Aforestation projects.

broken the long dry spell all over the country so we should take full advantage of these rains to enhance tree cover in the country. The Minister requested all the people of Pakistan to actively participate in the Monsoon Tree Plantation campaign to make it a success. The Minister, students and other participations planted tree saplings at the end of ceremony. An over all target of 39.525 million plants for the monsoon tree plantation has been fixed for this year.

Departmental

ZSD is Monitoring Impact of Oil Spill Disaster on Marine fauna.

The Tasman Spirit oil spillage was an ecological disaster which resulted in the biggest oil pollution incident that even occurred on our coastline. It was reported that due to the breaking of Tasman Spirit on 14th August a significant quantity of crude oil was spilled out and approximately 27000 tons of cargo had been lost uptill 18th August. The further spillages were reported on 22 August, 29 August and

also on 4th September. It is believed that after the spillage, volatile components were spread by the evaporation, as crude oil is a highly complex compound, evaporation of which depends on temperature, wind velocity, spill size, the length of time that the spill has been exposed to air and the time of spilled. Spillage affected the coastline of Clifton and Sea view, besides being a great hazard to human and marine life.

According to Environmentalists, the residents of affected area as well as workers were exposed to 40 to 170 ppm of volatile organic compounds for at least 15 to 20 days. The residents complaint for suffering from nausea, dizziness, indigestion and vomiting besides having respiratory tract complications. The people having cardiac problems, asthma, etc were more affected.

According to EIEC assessment report oil content in the open sea was 1.35 mg/litre at the point opposite near Tasman Spirit. Crude oil spill caused huge damage to marine life. Coast line along Clifton beach has a good variety of fish including the Sole Fish, Pomphrct, Red Snapper, Rock Salmon, Grouper, Cuttle Fish, Cat Fish, Ribbon Fish etc. Many varieties of prawns, lobsters, crabs, mussels, clams and many species of edible and inedible fish are also found. Porpoise, Sharks and famous Green Turtles are also present. Thousands of dead fishes were collected within fifteen days of spillage including Mulletts, Cat Fishes, Shell Fish and Crabs.

ZSD has been playing important role since the beginning of the Disaster. The periodic field surveys were carried out in coordination with Sindh Wildlife Department and World Wide Fund for Nature Pakistan. Aim of study was to estimate the damage to marine life along the coastal area of Karachi. The team members patrolled from the Rehri upto Cape Monze through Ibrahim Hydri, Korangi Creek, Marina Club, Golf Course, Do Darya, Gizri creek, Clifton Sea View Area, Shireen Jinnah Colony, Kaemari, Manora, Sandspit, Hawks Bay, Buleji, Paradise Point on foot. During

the survey samples of surface water from above stations were collected for analysis and supplied to Hub Power Laboratory. Field observations of various dead specimens of different groups of animals were recorded. The observations showed that crude oil penetrated in sand at Clifton beach in front of Sea View and Shereen Jinnah Colony with the movements of currents and tidal actions. Marine birds like Egrets, Herons, Sandpipers found on feeding on crustaceans in sand and mudflats. They also feed on larval forms of fish, crabs, lobsters and plankton in shallow waters. The feeding behaviour is affected due to fouling of coastal area as result of oil slick. It was observed that waders were not found in the areas affected by oil and they migrated towards the creeks or un-affected areas. Some migratory birds were observed at less oil-polluted area while the Crows, Black Kite were dominant as their food available in the form of dead fish and other garbage along the coastal area at Sea view and Shereen Jinnah Colony.

The crude oil caused choking of respiratory mechanism of fishes, consequently thousands of fishes and other marine life have been badly affected and its long term effects may be more fatal for end users.

As already been known that sea turtle inhabit shallow waters along coast and oil spill has occurred approximately fifteen kilometers away on eastern side of turtle beaches, so the chances to reweave contamination are more. A juvenile dead green turtle was reported at Clifton beach.

Survey of Fresh Water Turtle continue in Southern Punjab

The survey of FWT, for status and distribution, remain continue in this quarter as well. Survey was conducted from 29-06-03 to 07-07-03 and covered the riverine stretch from Taunsa Barrage to Ghazi Ghat and adjoining areas as well.

During this survey 7 species of turtles were recorded. These include *Aspederates gangeticus*, *Chitra indica*, *Kachuga smithi*, *Kachuga tecta*, *Geoclemys hamiltonii* and *Hardella thurgi*. *Aspederates gangeticus*, *Kachuga smithi* and *Kachuga tecta* were seen with relatively higher number.

The objective of the study is to determine the occurrence, distribution and status of FWT in Pakistan and to submit a proposal to Government of Pakistan to take appropriate decision

regarding export of FWT on sustainable basis.

The season (summer) and level of water in the river were both unfavourable for basking of turtle out side the river. Estimation was difficult under such environmental conditions. On the basis of survey it was revealed that density of *Aspederates gangeticus* was high among the other species identified in the area. *Kachuga tecta* was with relatively less in number as compared to *K. smithi*. Other species *Hardella thurgi*, *Lissemys punctata* and *Geoclemys hamiltoni* are recorded in small numbers. This study will continue in future to assertion the status of turtles in Pakistan.

Study on Status and distribution of Butterflies in Sindh

Butterflies have greatest aesthetic, commercial, educational, environmental, scientific and recreational values. They can be both allies and enemies of man. They can interact with agriculture in many ways, like adult butterflies visits flowers for nectar, undoubtedly add in

pollination but their larvae are herbivorous (Pest). At present the habitat is being destroyed rapidly due to urbanization, industrialization deforestation and indiscriminate use of Pesticides. Therefore, it is necessary to update the status and distribution of

butterflies, undertake taxonomic studies, preserve, rear the important and endangered species for future studies and to make suggestion of their conservation. Extensive surveys were conducted during May 2003 and July 2003 by team of ZSD lead by Mr. Arshad Munir, Senior Research Assistant.

Eight sites of Malir district Karachi i.e. Asso Goath, Essa Goath, Jam Goath, Memon Goath, M.H. Agriculture Farm, Murad Memon Farm/Goath, Nusery Karachi University, Malir Nursery, Agri farm were selected to know the status and distribution of Butterflies. Collections were made only of those species whose population was higher.

Thirteen butterflies species were recorded and collected from the above sites at the temperature range 32 – 40°C. *Papilio demolens*, *Papilio polytes*, *Papilio slichins*, were most abundant species on Malir M.H. Farm, Karachi University Nursery, Malir Nursery, Memon Goath, K.D.A. Nursery. *Danans chrysippus*, *Danans genutia*, *Danan limniae* were also found common on Murad Memon Goath, Memon Goath,

Karachi University Nursery, Jam Goath, M.H Agri Farm, Malir Nursery. *Colotis denae* and *Colotis etridae* were less common and found on Karachi University Nursery, Essa Goath, Asso Goath and Jam Goath.

Chilasa clytia was recorded less common at Karachi University Nursery, K.D.A. Nursery, Memon Goath, M.H. Agri Farm and Malir Nursery. *Euploca core* was also found less common at Malir Nursery, Asso Goath, K.U Nursery, Malir Nursery, M. H. Nursery Farm, Murad Memon Goath, Jam Goath.

Valeria valeria another less common species was recorded at Murad Memon Goath, K.U. Nursery, Memon Goath and K.D.A. Nursery.

Pachliopta aristolochiae and *Cotopsilia pomra* both were also less common and found in few localities i.e. Karachi University Nursery, M.H. Agri Farm and Karachi Malir Nursery. The study will continue in future and in spring next survey of lower Sindh will be undertaken.

Pakistan Mammals Conservation Assessment and Management Plan (CAMP) Workshop.

A CAMP workshop was held at Islamabad from 18th – 22nd August 2003 organised by IUCN-Pakistan with the collaboration of ZSD-Pakistan. This was

the first attempt to define the problems and make strategic decisions for management of endangered mammalian species of Pakistan. Workshop was

inaugurated by Inspector General of Forest, Ministry of Environment, Govt. of Pakistan Islamabad. Sallay Walker and Sanjay Malour of Zoo Outreach Organisation, India, were the facilitator for the said workshop. More than 50 experts from all over Pakistan attended the workshop and worked for five days to complete 174 Taxonomic data sheets of mammal of Pakistan. The review process of these taxonomic sheets is underway and hopefully will be completed soon. The preparation of a comprehensive

taxon status report is not possible for one institute or a specialist. CAMP workshop methodology has paved the way for institutions to collaborate with each other to reduce the gaps in informations.

The importance of CAMP as an assessment tool has been successfully proved in India and other countries as well. CAMP process will be helpful in developing our National Biodiversity Strategy.

National Workshop on Combating Desertification

Director ZSD attended National Workshop on Combating desertification and promoting synergistic implementation of interlinked Multilateral Environment Convention which was held in Islamabad, Pakistan, from 18 – 20 September 2003. 60 participants attended the workshop from Government, Research Institutes and Ngo's. Honorable Minister Major (R) Tahir Iqbal, Minister of State for Environment inaugurated the workshop. Mr. Jawid Ali Khan, D.G. Ministry of Environment, Mr. Masanori Kobayashi, Representative of United Nations Convention Combat Desertification (UNCCD) Secretariat and Ms. Lena Lindberg acting Resident Representative of United Nations Development Programme (UNDP) Country Office for Pakistan made opening remarks.

Through intensive discussions the participants formulated the following recommendation.

1. Govt. and Civil society must enhance their efforts to increase the awareness on the magnitude of desertification and its threat to Environment.
2. Ministry of Environment must make available to the public reference to National Action Programme to Combat desertification (NAP) that was adopted in September 2001.
3. Establishment of National fund to Combat Desertification.
4. The National Committee to combat desertification and

National Environment Council explore effective measures for facilitating the implementation of UNCCD and NAP in Pakistan.

5. UNCCD/NAP implementation in Pakistan while seeking technical and financial assistance from UNCCD secretariat and Global Mechanism (GM).

6. Ministry of Environment must initiate a project proposal for funding by GEF in close collaboration with UNDP Pakistan the UNCCD secretariat and the Global Mechanism (GM).

The workshop was concluded on 20th September by the concluding remark of secretary Ministry of Environment, Government of Pakistan.

Sally Walker visited ZSD

Sally Walker of Zoo Outreach Organisation from India visited Zoological Survey Department in the last week of August 2003. She spent whole day at ZSD and visited the main office, library and zoological museum of Zoological Survey Department, Karachi. She showed her keen interest in reserve collection in Zoological Museum especially the herpeto fauna. She also visited the computer section of the department and appreciated the efforts of documentation of data base of vertebrate fauna in the country. She got the print

out of Amphibian and Reptile of Pakistan to compare it with Indian herpeto fauna. As she has experience in zoo establishment and management she showed her keen interest in the on going project of Zoo-cum-Botanical Garden of ZSD and gave very valuable suggestion for its development.

She visited the library of the department and was impressed to see the old and rare collection of books, Journal and Periodicals.

ASSESSMENT OF POPULATION STATUS OF UNGULATES UNDER MACP IS UNDERWAY

Pakistan has rich diversity of wild ungulates. The important group is wild Caprine (Wild Sheep & Goats). There are at least seven Caprine species in Pakistan divided into as many as 12 sub species. Due to fragmentation of habitat populations of these animals are

decreasing day by day. Ministry of Environment, Government of Pakistan has undertaken a project “Mountain Area Conservancy Project” to assess biodiversity of the high lands and take appropriate measure to conserve it.

The surveys for population status of ungulates including blue sheep, Urial Himalayan Ibex and Markhor were conducted by Mountain Area Conservancies Project (MACP) in different valleys of northern area. The data is given below:

Name of Valley	Species of Ungulates	Survey Period	Actual Number Recorded					Un identified
			Kids	Year-lings	Female	Male	Male size trophing	
Kvo & Sh	Blue Sheep	2000-2003	75	84	374	227	133	
Ch, Hu, Ka, Kvo, Sh & Kh	Himalayan Ibex	2001-2003	647	90	1050	557	148	
Ba, Bag, Hco Cb, Ga, Hus Kae, Sha, Me, Hun, Sa, Sha, Kn, Sb, St, Hum, Skb, Ta, Tl, Th, Bi, Ya/Sa	Himalayan Ibex	1995-2003	812	110	1737	1558	508	130
DMT	Himalayan Ibex	1996-2002	14		24	31	2	
Bu	Urial	1997-2002	9	2	47	7	1	
DMT, Bu	Asotre Markhore	1996-2002	64	2	101	91	23	

Shimshal (Sh), Chipura (Ch), Hussaini (Hu), Khuda Abad (Ka), Khyber (Kh), Basho (Ba), Bagich (Bag), Humara (Hum), Chand Bala (Cb), Gayal (Ga), Hushy (Hus), Kachura (Kac), Shagarthang (Sha), Mendi (Me), Hungo (Hum), Sadpara (Sa), Shagri (Sha), Kalan (Kn), Shayri Bala (Sb), Shut (St), Talbu (Ta), Tandal (Tl), Thursay (Th), Bilanik (Bc), Yalbu (Ya) Sabar (Sa), Bunji (Bu).

