Foreword

More than ever before, the web of life is under severe threat.

Tigers - that once roamed freely across Asia - are now confined to very few landscapes in the country. This fate is not restricted to tigers only, but numerous other species such as Gharials, Otters, Dolphins and Lions, as their numbers have drastically reduced in the last few years. The fact that the population of some of these species is below their biological capacity to sustain them, makes the situation grim. Additionally, as most are indicator species, their poor status shows the ill-health of the ecosystems that they belong to.

Increased human settlements, poaching, over-development, strain ecosystems and often bring humans and animals in direct conflict with each other. It is rather ironical that man tends to forget one basic premise - we need the well-being of the environment and the species for the sake of our own survival.

This issue of PANDA newsletter attempts to impress upon our esteemed readers the importance of saving the environment. We attempt to do so by illustrating the plight of some of India's iconic species.

I wish to conclude by reinforcing our message which captures the essence of conservation and the importance of working for the environment - "We shall not save all we should like to, but we shall save a great deal more, than if we had never tried" as remarked by Sir Peter Scott, one of the co-founders of WWF.

With Best Wishes
Ravi Singh
Secretary General & CEO

From the Editor's Desk

Dear Friends,

Thank you for your feedback. It is our sincere effort to put together a newsletter, which would window the conservation work that is being carried across WWF-India. Moving forward, we hope this newsletter will not only give news on WWF-India and International but also on conservation as a cause.

The idea behind having an issue on 'Endangered Species' is to give an understanding of these species and why the survival of each is important. WWF-India's role in ensuring their survival has also been highlighted.

Please continue sending your suggestions. If you do feel strongly on any issue pertaining to conservation you are welcome to write to us at panda@wwfindia.net.

Warm Regards

Moses Pereira
Editor
An Endangered Inheritance

The central theme of this issue of the Panda is on endangered species. As the editorial team began to work with our field staff and wildlife conservationists on this issue of the Panda, we realized the extent by which, we as a human race, have pushed the boundaries of environmental tolerance by our unsustainable development practices.

The front cover of the magazine was carefully designed and selected to convey the interdependence of life and the need to preserve all species for the sake of posterity. The domino effect, as portrayed on the front cover of the newsletter, clearly depicts why we need to coexist with other species to survive. The consequence of our apathy is best left to the imagination.

The idea behind doing an encyclopedic feature was to introduce some of the endangered species that we work with and share the threats and challenges encountered in our efforts to conserve. Lesser known species have been highlighted here, which have reached the brink of extinction, and need our awareness and help to ensure their right to live.

The alarming rate at which we have begun to destroy our forest cover and the extent of pollution of our river systems, is a deeply disturbing trend especially when these are the natural habitats of most species we are trying to conserve. Reports of the decline of our flagship species like the Tiger, Rhino, Gharial and many others have once again alerted us to this grim reality of the extent man has encroached into their habitat.

All living matter, have the right to live and should co-exist in harmony with nature. It is as much the responsibility of governments to ensure protection of the environment, as much as our individual responsibility to ensure that the issues of species survival is addressed.

Our country has been blessed by a varied and rich natural biodiversity, being second to none in the world, but yet we have allowed this inheritance to be destroyed over decades. I do sincerely hope that the efforts to reverse this all pervasive destruction and the attempt to protect all that is valuable in our inheritance will secure the widest possible public and government support.

Every passing generation is but a mere trustee of this grand inheritance of nature and as trustees we are duty-bound to pass this inheritance on to future generations. A strong commitment towards preserving what we have inherited is an important way by which we can ensure that it survives the ravages of time.

I would urge every reader of this Newsletter, to reflect and understand this one reality of human survival. All action has a cause and effect, and the sum total of all human action in the present will define the world we choose to live in. Wildlife is best not left captured in newsletters, books and photographs but conserved and allowed to live free in the wild, where they truly belong. Only our actions will determine that choice for them, for conservation must start from within as the world outside is only a reflection of our needs within.

Moses Pereira
I'm a good luck charm. That's my bad luck.

The Red Panda is rare. It is found in the Eastern Himalaya and in parts of China and Myanmar. Its habitat is under severe threat from deforestation, tourism and development projects. Adult Red Pandas are killed for their fur. Their tails are used as a good luck charm by some. Which is bad luck for the Red Panda.

www.wwfindia.org
Red Panda

Scientific Name: Ailurus fulgens

Habitat and Distribution
Red Panda, live in temperate climates, in deciduous and coniferous forests, usually with an understorey of bamboo and hollow trees. This makes them a key species of these forests and indicators of forest health. They are found in the Himalayan region, in parts of Nepal, Bhutan, and the Indian states of Sikkim, West Bengal, Meghalaya and Arunachal Pradesh. Most of the red pandas of the world occur in China, whereas the majority of the Indian population occur in Arunachal Pradesh.

Unique Characteristics
The adorably cute red panda, also known as cat bear and lesser panda, is largely herbivore and an endangered species. Slightly larger than a domestic cat, an adult red panda in the forest weighs around 4 kg. The lesser panda has retractile claws and, like the Giant Panda, it has a “false thumb” which is really an extension of the wrist bone. Thick fur on the soles offer protection from cold. The pelage is reddish-orange on the body with a long bushy tail. Their ears and areas around the eyes are white with black “tear drops” running from the eyes to the throat. These intricate white markings on the face of a red panda makes it most conspicuous. These species lack sexual dimorphism.

Conservation Challenges
Red pandas are declining over much of their range due to habitat loss and fragmentation. Forests are being cleared for timber extraction, agricultural development and livestock grazing even within national parks and wildlife reserves. This has resulted in the loss of nesting trees and the bamboo understorey on which the species feed. The red panda is also hunted for its pelt, which is used to make traditional hats and clothing in China. Moreover, they are also caught in the wild and kept as pets in certain parts of India and Nepal.

WWF-India’s Involvement
WWF-India is currently working to enumerate the status and distribution of red panda in the Khangchendzonga Landscape-involving the states of Sikkim and northern West Bengal. In process is the field data collection on distribution and status of red panda from Meghalaya and Arunachal Pradesh to identify its potential habitat in the region and enumerate the threats and pressures it faces. Further activities will be to mitigate the threats to the species and its habitat involving different stakeholders such as the government and the local people.

By Ginni Suri

Dr. Dipankar Ghose is WWF-India’s species specialist - in Red Panda. He works as a Senior Programme Coordinator, heading the Khangchendzonga Landscape team of WWF-India. Dipankar has a Ph.D. in Zoology.
dghose@wwfindia.net
Whale Shark

Scientific Name: *Rhincodon typus*

**Estimated Population**
Relatively limited information is available on the population trends for the Whale Shark. The number of Whale Sharks in Ningaloo Marine Park [Western Australia] is estimated to vary between 200 and 400 individuals. In India the catch statistics indicate more than 1000 individuals in the peak season off Gujarat coast.

Catch statistics and anecdotal reports suggest that the status of this unique species is declining.

**Habitat and distribution**
The species is distributed throughout the world’s tropical and warm temperate seas. India is said to have the largest congregation of this species. Most commonly found in a global band around the equator between 30 and 40 latitude, it occurs throughout the Indian Ocean.

**Unique Characteristics**
Whale shark is the largest fish in the world; the head is flattened and the wide mouth, positioned at the tip of the snout, stretches almost as wide as the body. The whale shark is particularly large and its tail has a half moon shape.

Whale Sharks are grayish, bluish or brownish above, with an upper surface pattern of creamy white spots between pale, vertical and horizontal stripes. The belly is white. Average size of the fish is 9-14m (up to 20 m) and weighs approximately 12-15 tons. The largest specimen recorded was caught on November 11, 1997, near the island of Baba, not far from Karachi, Pakistan. It was 12.65m (41.5 ft) long, weighed more than 21.5 tons, and had a girth of 7 m (23 ft). During the WWF/TRAFFIC study the largest specimen caught was of 12 m and the smallest was of 2 m.

**Conservation Challenges**
The Whale Shark is a less abundant species. Because they attain sexual maturity quite late, their population is extremely vulnerable to over fishing. The main threat to the species has been the growth of unregulated and unsustainable fisheries to meet international trade demands for shark fins, liver oil, skin and meat. Other threats come from by-catch in set nets, accidental collision with boats and coastal pollution. Due to the whale shark’s tendency to migrate from one region to another, there has been a decline in the number of seasonal sightings (for example, in South Africa and Thailand). This may also be due to unsustainable fishing in other parts of the whale shark’s range.

**WWF’s Involvement**
WWF-India [2001] carried a detailed assessment of the whale shark trade in Gujarat between 1998 and 2000 and highlighted that the Gujarat fishermen were hunting more than 600 whale sharks annually. Also that the whale shark fishery was unregulated. A growing demand and evidence of local depletion in a few countries [e.g., Taiwan and the Philippines] clearly indicated increasing pressure on India’s whale shark population and the threat to the species by continuation and growth of international trade.

This was the first time that any research on the Whale shark was undertaken in India. Around the world South Africa, Australia and the United States were perhaps the few countries that had begun to study the whale shark. Most countries slowly realised that it was crucial to save the whale. Consequently, several countries, such as the Maldives and the Philippines, passed laws protecting whale sharks and switched over to ecotourism much before even India could protect and think of non-consumptive uses of this species. Finally in July 2001, in a ground breaking decision by the Ministry of Environment and Forests the whale shark was included in Schedule I of Indian wildlife (Protection) Act, 1972 thus giving whale shark the maximum protection and making it the first marine fish to be listed in the Indian Wildlife Act.

*By Giinni Suri*

---

Ms. Fahmeeda Hanfee, Senior Coordinator, WWF-India, is leading the Oceans and Coasts Conservation Programme working for conservation of endangered marine species, issues around bycatch and sustainable fisheries. She is an MPhil in Wildlife Sciences from Aligarh University and has done outstanding contribution to research in Wildlife trade including a detailed assessment of the whale shark trade in Gujarat, highlighting the threat to the species by continuation and growth of the international trade.

fhanfee@wwfindia.net
Rare Indus Dolphins in Harike

WWF-India experts have confirmed the presence of the rare Indus Dolphins in the Harike Barrage, on the Beas-Sutlej River system in Punjab.

A barrage built downstream on the confluence of the Sutlej and Beas rivers near Harikes township for providing irrigation and drinking water to parts of southern Punjab and adjoining Rajasthan, resulted in the creation of Harike Lake. The lake constitutes the main reservoir which is the deeper portion of the wetland just adjoining the barrage, while the marshy islands and shores together with the extensive wetlands stretching beyond the reservoir area, comprise the rest of the wetland characterized by shallow water.

Unconfirmed reports about the presence of the dolphins or “bhuul” as the local fishermen call them – evinced strong interest from conservationists, nature-lovers and wildlife enthusiasts. The endangered mammals were first sighted and reported by Mr Basanta Rajkumar, Divisional Forest Officer and sanctuary in-charge, during a routine visit in early December 2007.

The Forest Department of Punjab approached WWF-India to confirm this rare sighting.

A team of WWF officials led by Dr Sandeep Behera, WWF’s Freshwater Species Coordinator and Mr. Aghar Nawab, expert on aquatic mammals, travelled to the Harike sanctuary and conducted extensive surveys with the support of the Forest Department staff. After three days of extensive river-patrolling in the chilly north Indian winter, the report was confirmed. The Beas-Sutlej River system indeed has Dolphins!

Mr Tikshan Sud, Honble Minister for Forests and Wildlife Preservation, Punjab, expressed immense satisfaction on confirmation by the experts. The rediscovery of the highly endangered Indus dolphin, Platanista minor, at the Harike Wildlife Sanctuary. Addressing a press conference in his office in Chandigarh early January, Mr. Sud thanked WWF-India experts who presented their findings and recommendations with respect to the dolphins for the work done so far and also assured all possible help to the experts in their future endeavours to conserve the dolphins.

Dr. Parkshit Gautam, Head of the Freshwater and Wetlands Conservation Programme of WWF-India, who was overseeing the development from WWF-India Secretariat said, “It is a heartening development for all of us. Indus River Dolphins are purported to be under extreme threat in Pakistan and have been on a decline in most of their habitats there. This sighting in Harike comes as a ray of hope in the conservation efforts for the species”

Dr Sandeep Behera, speaking about the dolphin sighting said, “Although the physical appearance of the dolphins sighted looks like the Indus River Dolphin, confirmation of this species can only be validated after detailed study and investigation. This may be the Indus dolphin found in Pakistan or a sub-species of it, he added.”

River Dolphins swim in some of the world’s mightiest rivers, including the Ganges, Indus, Yangtze and the Amazon. But these river basins are also home to over 15 percent of the world’s population and include some of the most polluted and poorest areas on the earth. Human disturbance have led to a drastic decline in dolphin populations over much of their distribution ranges during the last several decades. Several Asian species are now amongst the most endangered of the mammals.

To ensure the protection of Dolphins in the Beas-Sutlej River System, WWF-India has made the following recommendations to the State Forest Department:

1. For immediate protection and monitoring of the located dolphin population, the Punjab State Forest Department should depute frontline forest staff for patrolling the river stretch of the Beas till a detailed action plan is formulated to conserve the species.
2. Extensive outreach and education programmes for the local people must be initiated at the earliest.
3. A detailed action plan for the long-term conservation of the Dolphins and other freshwater species should be developed.

The Minister assured WWF-India that the State government would give top priority to implement the recommendations.

By Anshuman Atroley
Ganges River Dolphin

Scientific Name: *Platanista gangetica*

**Habitat**
Ganges River Dolphins prefer deep waters, in and around the confluence of two or more rivers. They share their habitat with crocodiles, fresh water turtles and wetland birds.

**Distribution**
The distribution range of the Ganges River Dolphins in India covers seven states namely, Assam, Uttar Pradesh, Madhya Pradesh, Rajasthan, Bihar, Jharkhand and West Bengal. The Upper Ganga River (in Uttar Pradesh), Chambal River (Madhya Pradesh and Uttar Pradesh), Ghaghra and Gandak Rivers (Bihar and Uttar Pradesh), Ganga River, from Varanasi to Patna (Uttar Pradesh and Bihar), Sone and Kosi rivers (Bihar), Brahmaputra from Sadia (foothills of Arunachal Pradesh) up to Dhubri (on the Bangladesh Border) and Kulsi River, a tributary of the Brahmaputra river, form ideal habitats for the Ganges River Dolphin.

**Characteristics**
The Ganges River Dolphin has a sturdy, yet flexible body with large flippers and a low triangular dorsal fin. It weighs up to 150 kg. The calves are chocolate brown at birth and becomes greyish brown in adulthood with a smooth and hairless skin. Females are larger than males. The maximum size of a female is 2.67 m and of a male 2.12 m. Females attain sexual maturity at an age of 10-12 years, while the males mature earlier. The gestation period is 9-11 months and a female gives birth to only one calf, once in 2-3 years.

Dolphins are amongst one of the oldest creatures in the world along with some species of turtles, crocodiles and sharks. The Gangetic Dolphins are generally blind and catch their prey in a unique manner. They emit an ultrasonic sound which reaches the prey. The dolphin then registers this image in its mind and subsequently catches hold of its prey.

**Conservation Challenges**
Once present in tens of thousands of numbers, the Ganges River Dolphin has dwindled abysmally to less than 2000 during the last century owing to direct killing, habitat fragmentation by dams and barrages, indiscriminate fishing and pollution of the rivers.

Listed by IUCN as ‘endangered’ and placed in Schedule-I of the Wildlife (Protection) Act, 1972, the Ganges River Dolphin enjoys high levels of legal protection both nationally and internationally. Yet its numbers continue to decline. The absence of a coordinated conservation plan, lack of awareness and continuing anthropogenic pressure, are posing an incessant threat to the existing dolphin population.

**WWF-India’s Involvement**
WWF-India adopted Ganges River Dolphin as a species of special concern. A Ganges River Dolphin Conservation Programme was initiated in 1997 to build a scientific database of the population status of the species and study the habitat quality of the dolphins’ distribution range.

WWF-India has been working closely with various government departments, specially the State Forest Department, local NGOs, scientists, researchers and universities to ensure the implementation of the action plan through capacity building and carry out conservation awareness and education activities. A River Watch Programme has been initiated to identify hot spots and develop management plans with the help of the Forest Department and create awareness in target areas. WWF-India has been working towards designating an international status like the ‘Ramsar site’ or ‘Community Reserve’ for these hot spots.

**By Ginni Suri**

---

Dr. Sandeep Kumar Behera is working with WWF-India as a Senior Coordinator (Freshwater species). He initiated the National level Ganges River Dolphin Conservation Programme in India in 1996 and has since been actively involved with developing and implementing projects on various aspects of Dolphin conservation. sbehera@wffindia.net
News of the crisis broke on TV on December 10, 2007. Eight large-sized dead gharials were exhumed from their sandy graves in the National Chambal Sanctuary. Death, in this single most important refuge for gharial in the world was not unknown. Dr. Rishikesh Sharma, Research Range Officer of Madhya Pradesh Forest Department, surveyed the gharial population in 2003 and recorded a nearly fifty percent reduction in its population from 1997. The gharial did manage to crawl back from the brink of extinction helped by timely conservation action but, as Dr. Sharma’s surveys showed, its survival was far from secure.

The revelation of the gharial deaths automatically led one to think that protection of the Chambal Sanctuary had yet another beating. In December 2007, the tally rose and within the first week, 31 of these rare reptiles were dead. I had joined WWF-India less than a fortnight ago to work for conservation of gharial in new habitats but instead I had been thrown into the eye of a crisis that would set this back by years. My first assignment was a field tour of the affected areas of the Chambal sanctuary with the Chief Wildlife Warden of Madhya Pradesh Dr. P. B. Gangopadhyaya.

Dr. Sharma reported unusual behaviour in wild gharial and my own observations that day, strongly suggested that some strange disease had overtaken these animals. In spite of the exceptionally cold winter, an adult female was unusually sluggish. She let us approach within five metres of the sand bank on which it basked, long after its other basking companions had fled into the water. Her tail appeared emaciated, a common symptom of young gharial when they fall sick in captivity but in my three decades of experience, disease and death in wild adults was a very, very rare phenomena indeed. But here in the Chambal animals were dying everyday.

A chain of events followed our confirmation of a disease in Gharial. The MPFD issued a web-appeal for international assistance; the Ministry of Environment and Forests, of the Government of India constituted a Crisis Management Group led by Mr. Ravi Singh, Secretary General WWF-India. The Crocodile Specialist Group assigned a team of four expert crocodile veterinarians to collaborate with Indian authorities to find the cause of disease and suggest mitigation methods. WWF-India immediately established a field station at Etawah while the State Forest Department of MP and UP pitched in with everything they had. River patrols were initiated to continually monitor the remaining gharial population and detect any new developments.

On the January 26, 2008, less than two weeks after the crisis group was set up, the first international croc vet expert Dr. Brian Stacey from the University of Florida arrived at Etawah. On expertly opening the animal, Dr. Stacey, found white flakes of uric acid crystals in the joints he cut open, Brian diagnosed the major symptom that had eluded doctors so far.

Uric acid is excreted in the body when kidneys do not function normally. Clearly, painful gout was preventing the gharial from moving freely or to bask and thermoregulate, resulting in their likely debilitation and death.

Microscopic examination of tissue sections revealed that kidneys had sustained damage because of a contaminating toxicant in the river. This virtually eliminated the previous diagnosis such as protozoan parasites of the kidney and liver, liver cirrhosis, gastric ulcers and lung nematodes. Toxic metals like lead and cadmium had also been detected in body tissues of dead gharial but their concentration had been nowhere near lethal.

The deaths of a number of other species of river fauna were also observed, which included a couple of dolphins, a mugger as also some smaller sized gharial. All of these had died from causes other than that killing the larger gharial because the white powdery gout was not seen in their bodies. Everything that could be done was done, and every trail that existed followed up but solving the mystery of the gharial deaths was a tough nut to crack. The specialist vets returned to their home countries passing on the puzzle of a poison in our environment to toxicologists to solve.

Two phenomena glared at the investigators in the face. The first was the proximity of the affected population to the waters of the Yamuna River, which is exposed to industrial and urban pollution at several cities like Delhi, Mathura, Agra, Firozabad and then Etawah. The second was an exotic variety of fish, the Tilapia (Oreochromis) of Africa, which had been long been widely cultured in our country as a food fish but had now escaped into rivers and was spreading like a scourage, possibly killing off indigenous river fishes. It was speculated that these fishes, carrying toxicants with them from the polluted Yamuna, had subsequently been fed upon by the Chambal gharial thus exposing the reptiles to the effects of the toxicant.

Several labs in the country are laboring away with sophisticated techniques to detect the culprit chemical, which is proving as difficult as finding the proverbial needle in the haystack. WWF-India continues to maintain a fully operational field station at Etawah and is monitoring the crisis, until we are certain of its eventual end. The death rate of gharial has drastically fallen but the crisis will continue. That will only be over when we have identified the toxicant and successfully removed it from the environment, which not only threatens the survival of critically endangered species like the gharial but perhaps our own as well.

By Drhuba Jyoti Basu
Gharial

Scientific Name: *Gavialis gangeticus*

Estimated Population
About 1200 gharials survive in the wild in India and less than 100 in Nepal. About 1000 gharials are also being reared in various zoos and captive centres.

Habitat and Distribution
Gharials were once widely distributed in the large rivers that flow in the northern part of the Indian subcontinent. These include the Indus, Ganges, Brahmaputra and the Mahanadi-Brahmani-Baitrani river systems of Bhutan, Bangladesh, India, Nepal and Pakistan. They are also thought to have been found in the Irrawady River of Myanmar. Today, their major population remain in three tributaries of the Ganges River: the Chambal and the Girwa Rivers in India, and the Rapti-Naryani River in Nepal. The gharial reserves of India are located in three States – Uttar Pradesh, Madhya Pradesh and Rajasthan.

Gharials reside exclusively in river habitats with deep, clear, fast-flowing waters and steep, sandy banks. Adult gharials prefer still, deep pools, formed at sharp river-bends and river confluences and use sandy banks for basking and breeding. Young gharials are found in much shallower, rapid flowing stretches in the water.

Unique Characteristics
One of the largest of crocodilians, which can grow to 7 m in length, the gharial has a thick skin covered with smooth epidermal scales that do not overlap. The snout of the gharial is uniquely the thinnest and most elongated among all the crocodilians. In addition, the adult males sport a large bulb at the tip of their snout called the ‘ghara’. It is also the most aquatic of all crocodilians which never moves far from the water. Females lay their eggs in steep, sandy river banks. Unlike other crocodiles, the gharials feed on warm-blooded species and even the largest gharial adults feed exclusively on fish, which they catch between the pointed interlocking teeth of their long jaws.

Conservation Challenges
Less than 400 adults of the critically endangered gharial survive in the world today. Gharials, which once almost became extinct because of hunting for their valuable skins, are today threatened by destruction or intense human pressure on their habitat. In some places their eggs are stolen for eating while many young gharials die every year by accidentally getting trapped in fishermen’s nets.

WWF-India’s Involvement
WWF is spearheading the Riverwatch Movement that aims at conserving the biodiversity and habitat of our rivers. It will work with a variety of departments, agencies and institutions to achieve this by providing them with technical and material support.

Other Challenges
Forest departments, which are primarily responsible for the conservation of wildlife in our country, and similarly the wildlife of our rivers as well, face a severe shortage of financial, human, material and technical resources, preventing the formulation and implementation of effective long-term management of the gharial reserves. The most important of these reserves, the Chambal River – which mainly demarcates the boundaries between the states of Madhya Pradesh, Rajasthan and Uttar Pradesh – prevents coordination between forest authorities of these States, necessary for its proper control and management.

By Ginni Suri

*Dhruba Jyoti Basu* joined Madras Snake Park in 1973 as an artist and field investigator to learn about reptiles and their conservation under Romulus Whitaker. At Snake Park he surveyed rivers throughout north India to locate the last surviving populations of gharial, when the species was on the brink of extinction. He was the first to collect and incubate the eggs of gharial in captivity. He joined Uttar Pradesh Forest Department in 1975 as Surveyor (Crocodiles), where he established the highly successful ex-situ conservation centre for gharial at Kukrail near Lucknow. He has recently joined the Riverwatch Program of WWF-India as Gharial Conservation Coordinator. Basu has also worked on turtles and river dolphins. dbasu@wwfindia.net
Otters are members of the mammalian family called Mustelidae. They are shy and have elusive habits, adapting to a variety of habitats ranging from marine to freshwater environments. Otters are invariably associated with water, with a few exceptions. Aonyx concolor (African clawless Otter) found in Central Equatorial Africa, are least adapted aquatically while Enhydra lutris (Sea Otter), having completely severed their dependence on freshwater, are a totally marine species, so much so that they even give birth in water. Otters are mainly active around dawn and dusk, being, what is known as, crepuscular.

Otters are found the world over, except in Australia, New Zealand, Madagascar, and other oceanic islands. India is home to 3 of the 13 species of otters found worldwide. These are - Eurasian Otter (Lutra lutra); Smooth-coated Otter (Lutra perspicillata) and Small-clawed otter (Aonyx cinereus). The Smooth-coated Otter is distributed throughout the country from the Himalayas southward. But the Common Otter and the Small-clawed Otter are restricted to the Himalayas, to the north of the Ganges and to southern India. The occurrence of all three species has been reported from northeast India and the Western Ghats. In most of their distribution range, otters occur along with gharial (Gavialis gangeticus), crocodile (Crocodylus palustris), Ganges river dolphin (Platanista gangetica), and several species of turtles.

The basic family group consists of the mother and her pups, the father joining the group only occasionally. It appears that otters live a nomadic life between March and August, and settle between September and February to mate, breed and rear their pups. Fish forms the primary food item, although their diet is supplemented with rodents, snakes, amphibians, small mammals, and even young fledgling birds. The typical lifespan of otters in the wild is between 4 and 10 years, although no conclusive studies have been made. A Giant Otter (Pteronura brasiliensis) measures approximately 2m in length and weighs 32 kg while the Small-clawed Otter (Aonyx cinereus) is the smallest, rarely over a metre in overall length, and weighs 2-5 kg.

Humans have had a long, and unique association with otters. In some parts of the world they have been revered as deities, while in others they have been loathed as vermin. There are stone relics depicting otters at the Borobudur Temple (Indonesia), while in Pakistan and Bangladesh, otters have been trained to drive fish towards nets, and have been used as ‘decoys’ for capturing dolphins. Otters, being intelligent, playful and with an appealing appearance, form popular exhibits in zoological parks.

Infrastructural developments coupled with various other forms of disturbances have led to habitat destruction, making otter populations extremely vulnerable, being left isolated and, as a result, the local groups become dangerously inbred. Otters, as high-order carnivores at the top of their small niche eco-systems, metabolise poison slowly, storing it in their fatty tissues until they need to draw on these energy reserves. There is no evidence that chemical poisons kill otters.

For centuries, otters have been mercilessly killed for their fur, which is dense and very durable, so much so that furriers consider it the ‘diamond’ of the fur business. In India, the nomadic hunting tribes such as Gihara, Badiya and Jogis are known to regularly kill otters for their skin and flesh. Illegal trade of otter pelts being rampant in many parts of south Asia, particularly in India, Nepal, and Bangladesh mainly for export to rich markets like China, has actually abetted deliberate trapping. In Tibet, otter skins are used to adorn the traditional costume ‘Chuba’ and head gears are decorated with trophies worn during festivals and sports. According to wildlife trade estimates, an otter skin in Tibet fetches 350 Chinese Yuan and can be sold to leather factories for 90-100 US dollars in Thailand. Its other body parts are believed to possess therapeutic properties. Often seizures of large cache of otter skins have been reported during raids for tiger and leopard skins, though the enforcement agencies have not really been looking for them. There seems to be no attempt at collecting timeline information on otters, and unless the species is consciously monitored, soon enough, there will be very few otters left.

WWF–India strives to look into the future of otter conservation efforts in India, so as to provide a strong basis in helping facilitate future conservation management of this species. The documentation of past, present, and potential future distribution of otters is vital for understanding their population dynamics, and to plan species-oriented conservation programmes. It is important to reinforce a sympathetic attitude towards the plight faced by the otters, stimulating more research and conservation effort for this species. Policy advocacy will be promoted to ensure long-term survival of otters in their natural habitats with support from the Government for their conservation. The main consideration at this time is to start the otter conservation ball rolling in India before it is too late.

By Asghar Nawab

Asghar Nawab has pursued his doctoral program at the Wildlife Institute of India, Dehradun and has submitted his Ph.D on ‘Ecology of Otters In Corbett Tiger Reserve, Uttarakhand, India’. He was awarded the National Level Research Scholarship by the Council of Scientific and Industrial Research, Government of India in 2003 and has participated in various National and International Scientific Conferences. He is presently working as a Senior Project Officer with the Freshwater & Wetlands Programme of WWF-India and is very keen to carry forward otter research and conservation issues at landscape level.

anawab@wwfindia.net
### Smooth-coated Otter (*Lutra perspicillata*)

**Identifying Characteristics**
- **Size**: 65 – 79 cm (Total Body Length)  
  7 – 11 kg
- **Coat texture**: Smooth and velvety
- **Colour**: Dorsal part is dark coloured (blackish-brown) and the ventral side is light coloured (tawny or sandy brown)
- **Rhinarium**: Bare, dusky with peaked upper margin (inverted V shaped) and is slightly squeezed

**Ecology and behaviour:**
- **Habitat**: Freshwater bodies (Large rivers, lakes and swamps)
- **Habit**: Gregarious
- **Breeding**: Mating (August - November)  
  Gestation period (60 - 62 days)  
  Litter size (1 - 5)
- **Diet**: Fish, crab, frogs, birds, rats and insects
- **Life expectancy**: 20 years and 5 months (Captive studies)

**Conservation status:**
- Wildlife (Protection) Act, 1972: Schedule II (Part II)
- IUCN (Red List): Vulnerable (VU)
- CITES: Appendix II

---

### Eurasian Otter (*Lutra lutra*)

**Identifying Characteristics**
- **Size**: 60 – 80 cm (Total Body Length)  
  7 – 11 kg
- **Coat texture**: Coarse
- **Colour**: Dorsal part is dark coloured (dusky-brown) and the ventral side is light coloured (grey or white)
- **Rhinarium**: Hexagon (Shield shaped) with small dips on each side and upper margin is 'W' shaped.

**Ecology and behavior:**
- **Habitat**: Freshwater bodies (Highland & lowland rivers, streams & lakes, swamps, marshes, rice fields, and coastal areas)
- **Habit**: Solitary
- **Breeding**: Mating (August - November)  
  Gestation period (65 days)  
  Litter size (1 - 5)
- **Diet**: Fish, crab, frogs, snakes, birds, rats and insects
- **Life expectancy**: 17 years (Captive studies)

**Conservation status:**
- Wildlife (Protection) Act, 1972: Schedule II (Part II)
- IUCN (Red List): Near Threatened (NT)
- CITES: Appendix I

---

### Small-clawed Otter (*Aonyx cinereus*)

**Identifying Characteristics**
- **Size**: 45 – 55 cm (Total Body Length)  
  3 – 6 kg
- **Coat texture**: Smooth
- **Colour**: Dorsal part is dark-brown and the ventral side is light coloured
- **Rhinarium**: Naked, pink or dusky, 'trapezoid' shaped with upper border convex

**Ecology and Behavior:**
- **Habitat**: Freshwater bodies (Peat swamp forests, rice fields, lakes, streams, reservoirs, rice paddies, mangroves, along coastline & mountainous areas). It usually occurs sympatrically with Eurasian and Smooth-coated otters.
- **Habit**: Gregarious
- **Breeding**: Mating (August - November);  
  Gestation period (60 days);  
  Litter size (2 - 7)
- **Diet**: Fish, crab, frogs, birds, and insects

**Conservation Status**
- Wildlife (Protection) Act, 1972: Schedule I (Part I)
- IUCN (Red List): Near Threatened (NT) approaching Vulnerable
- CITES: Appendix II
Rhinos Targeted - Kaziranga National Park

Kaziranga National Park in Assam has one of the most successful rhinoceros conservation histories in the world. Despite numerous problems, the Forest Department has been able to revive the population of the Great Indian Rhinoceros from a handful in the 1920s to about 1850 today. However, this success has been threatened by the sudden spate of poaching in the year 2007. Official records indicate that 16 rhinos have been poached in Kaziranga National Park for their horns during 2007.

![Bar chart showing rhinos poached over years](chart.png)

The Great Indian Rhinoceros, Rhinoceros unicornis is one of the five species of rhinos found in the world. It is poached for its horn which is used in traditional medicines in China, Taiwan, South Korea and Japan. In Yemen, the horn is also carved into ceremonial dagger handles known as jambiyas. The horns are usually traded as a single piece and can fetch 5-10 times the price of an African rhino horn. The major trade centers for this in India are Siliguri in West Bengal and Dimapur in Nagaland from where the rhino horns are smuggled out to Nepal and Bhutan, and Myanmar respectively. The contraband finally finds its way to south east Asian countries.

Tariq Aziz, Associate Director, Species Conservation Programme, WWF-India says: "The poaching of rhinos in Assam is alarming and a cause of serious concern. Kaziranga may be able to absorb this loss but if a similar spurt of killings takes place in the neighbouring Pobitora or Orang it could be disastrous for the already struggling rhino populations in these areas."

Samir Sinha, Head-TRAFFIC India, said "It is interesting to note the cyclic nature of the poaching trend between India and Nepal. In the year 2006, Nepal lost a large number of rhinos while India faced the brunt in the year 2007. The pattern of killings and the methods used is suggestive that the same nexus of poachers and traders is operating in both India and Nepal. Therefore, there is a need to undertake strong co-ordinated efforts by both countries to curb rhino poaching in this region."

TRAFFIC India has committed its support to curb rhino poaching in this region and is working with the Assam Forest Department on this.

Looking at the poaching status over the last two decades, it is clear that its hunting has gone down significantly. However, over the last three years there has been an upward swing in this trend. This can be very damaging for the species, given the circumstances and the history of poaching in the region. A similar situation prevailed in Nepal in the year 2006 where a large number of Rhinos were poached in both Bardia and Chitwan National Parks.

![Rhino poached](image.png)

A Rhino after it has been poached
Great Asian One-Horned Rhino

**Scientific Name:** *Rhinoceros unicornis*

**Estimated Population:** About 2500

**Habitat and Distribution**
The preferred habitats of an Indian Rhinoceros is alluvial flood plains and areas containing tall grasslands along the foothills of the Himalayas. Formerly, extensively distributed in the Gangetic plains, today the species is restricted to small habitats in Indo-Nepal terai and North Bengal, and Assam. In India rhinos are found in Kaziranga, Orang, Pobitora, Jaldapara, and Dudhwa.

**Unique Characteristics**
The largest of the Asian Rhinoceros is the Indian Rhinoceros. Considered to be the most amphibious of all the rhino species, the Indian Rhino is an excellent swimmer. It can run at speeds of up to 55 km/hr for short periods of time. Blessed with an excellent sense of hearing and smell, the animal has relatively poor eyesight. The average height is about 5 ft. 8 in. (170cm) with a girth of 11 ft (335cm). While a fully grown male rhino weighs around 2000 - 2500 kg, a female weighs around 1600 kg. Also referred to the Great One-Horned Rhino, the Indian rhino has a single horn, which is present in both males as well as females. The animal is solitary as a rule, though several may occupy the same patch of forest or water hole. Breeding takes place at all times of the year. The period of gestation is about 16 months and the young at birth in length is around 105 cm and weighs up to 60 kg. The female attains sexual maturity in 5 years and the male between 7 - 10 years old.

**Conservation Challenges**
For years, rhinos have been widely slaughtered for their horn, a prized ingredient in traditional Asian medicines. Destruction of their habitat over the years, has brought the rhinos to the brink of extinction. These animals are among the world’s most endangered species. The great one-horned rhino could once be found from Pakistan all the way through India, Nepal, Bangladesh, Bhutan and Myanmar. By the turn of the century, this species had vanished from much of its range, and today only about 2500 survive in India and Nepal. Throughout their range, their habitat continues to dwindle fast due to conversion of grassland habitats into agricultural fields and other human pressures. The threat of poaching continues to be ever-present.

**WWF-India’s Involvement**
Conserving the rhinos and their habitat is imperative. WWF has been working on rhino conservation for over four decades. The biggest programme initiated by WWF is the Indian Rhino Vision 2020 (IRV 2020). The vision of the programme is to increase the total rhino population in Assam to about 3000 by the year 2020 and just as significantly ensure that these rhinos are distributed over at least seven protected areas to provide long-term viability of an Assam metapopulation of the species. This will be achieved by translocating the rhinos from two-source populations (Kaziranga and Pobitora) into 3 or 4 target protected areas (Manas, Laokhowa, Burachapori, Kochpura, Dibrusaikhowa and, possibly, Orang).

**Other Challenges**
The Forest Department faces a major challenge as lack of equipment, finance, political will and shortage of staff makes it difficult to implement conservation work at the grassroots level. Two serious on the ground problems include, containing poaching and loss of habitat to encroachments.

*By Ginni Suri*

Tariq Aziz is a well-known persona in the field of conservation. He joined WWF-India in 1992. An M.Phil holder under the Junior Research Fellowship of Wildlife Institute of India, Tariq has continued to actively use his domain knowledge for furthering the cause of wildlife. He is greatly admired for his knowledge of fieldwork, capacity to develop a project and give the project a shape to address all issues easily. As Associate Director Species, with WWF-India, Tariq is handling the project AREAS (Asian Rhino and Elephant Action Strategy). For his dedicated work, Tariq received an award for outstanding service from WWF International in the year 2005.

taziz@wwfindia.net
Snow Leopard

Scientific Name: *Uncia uncia*

**Estimated Population:** 100 to 200 individuals

**Distribution**
The strikingly beautiful snow leopard remains one of the most mysterious cats in the world. This roving, high altitude cat is rarely sighted by local people. Because it is so elusive, accurate population numbers are hard to come by, although estimates range from 100 to 200 individuals. Snow leopards live in the mountain regions of central Asia. In India their geographical cover encompasses a large part of the Western Himalaya including the states of Himachal Pradesh, J&K and Uttarakhand with a sizable population in Ladakh, Sikkim, Arunachal Pradesh in Eastern Himalaya in addition to Nepal, Bhutan and parts of China.

**Habitat**
Snow Leopards prefer steep, rugged terrains with rocky outcrops and ravines. This type of habitat provides good cover and clear view to help them sneak up on their prey. They are found at high elevations of 3000-4500 meters (9800 ft to 14800 ft), and even higher in the Himalayas. The snowy peaks act as a camouflage for the animal.

**Characteristics**
Snow Leopards are considered medium-sized cats, standing about 24 inches at the shoulder and weighing around 30-55kg. Their exquisite smoky-gray fur patterned with dark-gray to black rosettes, camouflage them against rocky slopes. Snow Leopards are shy and elusive and inhabit a definite home range. The species usually mate between January and March, a time when both sexes mark intensively, leaving signs such as scrapes, feces, urine and scent-spray in prominent locations along their travel routes. The animal is most active at dawn and dusk. Like most species of cats, Snow Leopards are solitary animals, though sometimes male and female pairs might be seen together during mating season.

**Conservation Challenges:**
**Poaching**
What comes as a major challenge for the protection of this species, is poaching. Snow Leopards are poached illegally for their pelts, which have a huge market in Tibet. Their bones and other body parts are also in huge demand for use in traditional Asian medicines.

**Retribution Killings**
Due to continuous interference and intrusions by humans and domestic cattle, snow leopards at times stray from their habitat to enter the human territory to prey on domestic livestock. Herders in these areas live a precarious economic life and loss of even a single sheep, causes a real economic hardship. This has caused several cases of retaliatory killing of Snow Leopards in the past.

**Habitat and Prey loss**
As humans continue to push further into the mountainous areas with their livestock, the Snow Leopards’ habitat is getting boxed-in by increasing human intrusion. As humans push further into the mountainous areas with their livestock, the snow leopard’s habitat is getting degraded and fragmented. Overgrazing has damaged the fragile grasslands, leaving less food for the wild sheep and goats that are the Snow Leopard’s main prey.

**Other challenges**
Much of the Snow Leopards’ habitat is extremely difficult to access. Found at very high altitude, studying the species and its current status and distribution is an extremely arduous task.

**WWF’s involvement**
WWF has been working in collaboration with the forest department to map habitat and distribution pattern of the Snow Leopard and its prey. The habitat and seasonal pattern of ungulates in the Tsholhamo Plateau in Sikkim and Lasher valley is being monitored to identify important corridors and formulate strategies for the conservation of the Snow Leopards.

**Status:** The Snow Leopard is listed as endangered on the IUCN World Conservation Union's Red List of the Threatened Species. In addition, the Snow Leopard, like all big cats, is listed on Appendix I of the Convention on International Trade of Endangered Species (CITES), which makes trading of animal body parts (i.e., fur, bones and meat) illegal in signatory countries. It is also protected by several national laws in its range country.

By Ginni Suri

Dwajayan Banerjee works as a Programme Officer with the Khangchendzonga Landscape team of WWF-India, based in Gangtok. He has a Masters degree in Forestry from the Forest Research Institute, Dehradun. He is WWF-India’s specialist on snow leopard.
deeplives1983@gmail.com
India Inc. discloses its Carbon Emissions

'Society will demand early solutions to the climate change issue from the corporate, especially from those who are bigger consumer or generator of energy and in turn responsible for GHG emissions. Consumption pattern, which is considered as non sustainable within the framework of socio-economic context will be challenged.'....

Dr Reddy's Laboratories

Results of the first-ever voluntary disclosure of the carbon footprint of Indian corporate were recently released by WWF-India at a select gathering of industry representatives, government officials, NGOs and the press in Mumbai. This exercise of voluntary disclosure of carbon emissions of 110 corporates was carried out by WWF-India in partnership with The Carbon Disclosure Project (CDP) and CII-ITC Centre of Excellence for Sustainable Development.

Carbon Disclosure Project (CDP) is an independent not-for-profit organization that was established in 2000 to facilitate dialogue between companies and investors, supported by quality information, from which a rational response to climate change will emerge. CDP has been working for over five years to help investors and corporations better understand the risks and opportunities from climate change. As a result, investors are increasingly viewing good carbon management as a sign of good corporate governance. Given the increasing importance of India in the global economy, expansion of CDP’s work to India has been a relevant development.

Given that this was the first CDP survey in India, the results were positive, with companies such as Bharti Airtel, Essar Oil, Infosys, JSW Steel, NTPC and Tata Steel being among those who responded comprehensively. 35 percent of the companies responded to the questionnaire, of which 33 percent of the responding companies have set Greenhouse Gas (GHG) emission
reduction targets for themselves and have taken steps towards voluntarily offsetting these emissions. However, the depth and quality of responses was mixed with some companies displaying leadership qualities.

The CDP information request solicited companies’ response and preparedness on opportunities and risks from climate change, direct and indirect GHG emissions, emission-reduction strategies and corporate-level climate change management and governance from these companies.

The results from the first CDP India project represent a positive start to the work of Indian corporations measuring, reporting and managing greenhouse gas emissions. Some companies are already engaged with this important work and are well prepared, which is noteworthy, given an absence of regulation in India and the fact that this was the first time Indian companies have received a request for measurement and disclosure from their investors. However, no response from 65% (71) companies to the CDP5 questionnaire makes it clear that an enormous amount of work still needs to be done by Indian companies to catch up with their global peers. Of concern for investors is the fact that climate change is clearly going to affect some of the non-responding companies and it may be that these companies do not have adequate risk management strategies in place or are missing significant opportunities to benefit from the shift to a low carbon economy. This assumes a greater role because 79% (31) of responding Indian companies perceive commercial risks arising from climate change.

`We are working towards becoming carbon neutral’.....

Infosys

The first CDP survey in India of companies from diverse sectors is more indicative of Indian companies’ appreciation of the commercial potential that the CDM offers rather than the depth with which they have engaged with the climate change challenge. 85% (33) of responding Indian companies perceive commercial opportunities around climate change. Clearly, there is greater appreciation of opportunities offered by climate change than the various risks that the companies are exposed to. 74% (29) of responding Indian companies claim to have devised strategies to manage the emerging opportunities and risks. This could be because most climate change impacts are perceived to be beyond the planning horizons of companies. Importantly, respondents did not identify the time frames or detailed the likely financial implications of the climate change risk. However, 38% (15) of the responding companies have allocated board or upper management level responsibilities for climate change issues.

‘Management within the organisation has set the target to reduce the energy consumption by 20% on an annual basis’.... LG Electronics.

Notably, the responses of some of the high impact sector companies demonstrate an appreciation of climate change challenges. This is evidenced from the fact that nearly 33% (13 including 6 from the high impact sector) of all the responding companies, reported their emissions, have set GHG emission reduction targets for themselves and have taken steps towards voluntarily offsetting these emissions.

The responses of financial institutions are critical as they have a crucial role in encouraging businesses to move towards a low carbon economy through their investment choices. While the financial companies revealed an understanding of climate change risks, they are yet to integrate climate change risk assessment into their project appraisals and investment decisions.

The survey findings provide a case for efforts towards awareness building and training on GHG accounting (deploying available approaches such as the GHG Protocol) for Indian companies. Indian companies could benefit from sharing of international experiences especially with focus on benefits derived by companies that undertake GHG accounting.

Indian Corporate sector shift towards “energy/climate smart” has already begun. While more and more Indian companies and investors are now paying attention to risks and opportunities related to climate change, several Indian companies are a long way from integrating the net climate risk exposure of their assets systematically into actual investment strategies and decisions.

Ravi Singh, Secretary General and CEO, WWF-India, speaking at the release noted, "The results from this first-ever CDP India project represent a positive start. This is a contribution of a conservation organization to bring to fore accounting of GHG emission and voluntary disclosure thereof by the Indian Business and Industry".

By Shirish Sinha/Anshuman Atroley

To download the full CDP report, please visit: www.wwfindia.org/climate
Polar Regions And their Significance
An Educational Campaign

(From L-R: Dr. Rasik Ravindra,Director NCAOR; Ms. Rashmi Asthana, Sr. Programme Officer, WWF; Ms. Purva Sinha of Amity International School, Dr. P. S. Goel, Secretary Ministry of Earth Sciences, Ms. Rash Goel of Sadhu Vaswani School, Master Duksha Burman of Carmel Convent School and Dr. Manish Tiwari, Scientist NCAOR.)

The Polar regions are an integral part of the Earth system as they play a crucial role in creating climatic conditions which are specific to the earth. Interplay of ocean atmosphere and the cryosphere in the Polar regions play a key role in producing rapid climate change. Along with this, the ice sediments and rocks represent a unique repository of plant history. It is also home to unique organisms which give an in-depth understanding of the study of evolution and other biological and ecological mysteries.

There have been a number of international scientific initiatives on the Polar regions since 1982-83. Such initiatives have involved an intense period of interdisciplinary research, collection of a broad range of data that provide a snapshot on the status of the Polar regions.

The 4th International Polar Year 2007-08 affords an opportunity to engage the new generation of Young Earth System Scientists.

The Poles witness major challenges due to social and environment changes as direct impact of anthropogenic pressures. Thus it was deeply essential to assimilate scientific findings and generate awareness of the receding ice and impacts on people and culture.

The National Centre for Antarctica and Ocean Research (NCAOR) Goa, Ministry of Earth Sciences and World Wide Fund for Nature-India collaborated in March 2007 to celebrate the 4th International Polar Year 2007-2008 in India. The main features/value addition to this year is the Education Outreach activities which have been initiated by WWF-India in coordination with NCAOR Goa for March 2007 – April 2008.

As an outreach activity, the IPY 2007-08 programme initiated a series of guest lectures and screening of films on the receding polar ice, climate change & melting glaciers in the Himalayan context for schools and colleges in various part of the country.

The campaign was successful in igniting the young to voice their concern on the state of the Polar region, which they did through a series of competitions held across the country. Entries for the poster competition Save the Poles, model competition on ice caps and penguins and project competition called Measure Your Footprints On Polar Ice was received from 15 different states 2007. The activities culminated with an exhibition of the award winning entries at the WWF-India secretariat on December 2007.

The 1st prize winners, under each category-Ms Rashi Goel of Sadhu Vaswani School, Ms Purva Sinha of Amity International, Gurgaon and Mr Duksha Burman of Carmel Convent School were also taken to witness the 27th National Ship Expedition Launch, on 4th December 2007. It was a great learning experience for the champions as they had the opportunity to witness and interact with the members of the ship expedition, listen to their experience, visit the Emerald Sea deck and the labs at -20 degrees temperature where research on the ice brought from Antarctica is done.

The year 2008
The year 2008 will have a large number of educational activities scheduled under the IPY project. We are committed to reach out not only to school students but the college students as well, by means of guest lecture series, screening of the films and competitions at various levels to bring about attitudinal changes. WWF-India is committed towards environment education initiatives to sensitize the young individuals about their role in conserving the environment.

By Rashmi Asthana
We live on a planet flooded by synthetic products and market-driven consumeristic lifestyle. Charming packaged, with stunning advertisements in the media, these synthetic stuff always beckon people from the shelves of malls, bazaars and stores, and they treacherously enter our lives. A large percentage of these are things we use at home daily. They may be a cause for cancer and also globally contribute to climate change. All this adds to solid waste management problems as well. In the past, many of these daily use items were made at home using locally available, plant, animal or mineral extracts.

Increasing industrialization and urbanization has made us replace home-made products by factory-produced, chemically-intensive products. As a result of indiscriminate use of chemicals and energy, there have been serious health and environmental impacts.

As an alternative to this, WWF-India, (Kerala) has come up with the display and sale of eco-friendly products. The outlet is named Nature Gallery and it has on display a wide variety of eco-products like coffee mugs, bags, pen stands, mobile holders, lamp shades and even corporate ties—all made from paper, bamboo, cotton, jute, and linen, dyed in natural colours. WWF has also tied up with similar NGOs like Uravu for their bamboo products and the Dry Flower People for their floral arrangements.

This also helps WWF to raise ‘capital for conservation’ education and promote awareness programmes for saving specific species and habitats.

Mr. V.S. Varghese, IFS, CCF (Wildlife) & Chief Wildlife Warden, Kerala Forests and Wildlife Department inaugurated WWF-India’s Nature Gallery on 19th of December 2007. Purchase of these eco-products lead to carbon offsets, thus minimizing their carbon footprint. By buying such eco-friendly products, you contribute to the great cause of nature conservation which ensures that Planet Earth remains a living one for this generation and for those to come.

By Renjan Mathew Varghese
Children's Expression

WWF-India Secretariat was host to the exhibition-Children's Expression. This exhibition, was organized on the third and fourth of December, 2007 with the objective to create awareness on the International Polar Year. The two-day event attempted to educate the viewer on the importance of conserving the Polar regions and their biodiversity.

The award-winning entries created by children during competitions held across India were showcased at the exhibition. These competitions were held as a part of WWF-India's awareness campaign on the International Polar Year 2007. Speaking on the occasion, Mr Ravi Singh, Secretary General & CEO, WWF-India, said that “It is imperative the younger generation understands the consequences of how our excessive consumption patterns are destroying some of the most important ecosystems”. Welcoming the Chief Guest, Mr Ajay Saxena (Director, Ministry of Earth Sciences), Mr Singh said that “It is only with government support that such initiatives can be carried out”. Mr. Saxena then went on to make a presentation on the same topic, after which he opened the event for public participation and viewing.

An interactive skit named ‘Save The Poles’, enacted on this occasion was highly appreciated by the audience, young and old alike. The skit focused on how every individual can make a contribution to combat the impact of climate change. The exhibition also had an area marked as the Fun Zone which offered a number of activities for the students. Approximately, 1126 students across Delhi visited this exhibition and were appreciative of the exhibits. A unique feature of these exhibits was the fact that the base material used was economical, biodegradable and from recycled stuff. Exhibit boards and flexes were not used.

The highlights of the second day of the event was a guest lecture on “Effect of Climate Change on Glaciers in Himalayan context” by Dr. D.P. Dobhal, Glaciologist from Wadia Institute for Himalayan Ecology, Dehradun. This lecture was extended to graduate and post-graduate college students. The two-day event was successful in focusing attention on the importance of the Polar Regions and the need to protect their delicate ecosystem.
We Are A Part Of Your World

Guess Our Name

1. Bird
2. Tapir
3. Coconut Palm
4. Lemur

K kids
Animal Crossword

ACROSS
1. How now brown___________.
4. Predatory carnivorous canine mammals that usually hunt in packs.
7. Bugs Bunny is one.
8. Animal that can fly; lays eggs.
11. Primate with short or no tail.
12. Small golden or orange-red freshwater fish found in a pond or aquarium.
14. This very large animal may be spotted at The circus

DOWN
1. A quarrelsome grouch
2. A kind of arboreal rodent having a long bushy tail.
3. Large northern deer with enormous antlers in the male.
5. The _____ is commonly dissected in biology class.
6. Large rodent that builds dams.
9. A young cat
10. Woolly mammal related to the goat.
13. Carnivorous mammal with pointed muzzle and ears and a bushy tail.

APE  BEAVER  BIRD  COW  CRAB  ELEPHANT  FOX  FROG  GOLDFISH  KITTEN  MOOSE  RABBIT  SHEEP  SQUIRREL  WOLF

Courtesy: www.cybersleuth-kids.com
International Polar Year
Painting and Model Competition Entries

[Images of various paintings and models related to polar themes, each with a caption or title]
EU economies living beyond ecological means

The growing economic strength of the European Union has doubled the ecological pressure on the planet in the past 30 years, according to a WWF report. In the report — Europe 2007: Gross Domestic Product and Ecological Footprint — WWF compares the performance of EU countries in three key areas since 1971: economic growth measured by Gross Domestic Product, pressure on natural resources measured by Ecological Footprint, and human development, measured by the UN's Human Development Index. Despite technological advances, environmental pressure has been growing at a faster rate than the European population, creating a deficit of natural resources for the rest of the world. "Just a generation ago much of Europe was an ecological creditor, using fewer resources than it had," said Tony Long, Director of WWF's European Policy Office. "But today Europe lives beyond its means. If the world's citizens lived as Europeans, we would need 2.6 planets to provide the necessary resources and absorb the waste."

Black Rhinos successfully translocated

Black rhinos find new home on community land in South Africa

Eleven black rhinos have been successfully released into a community-owned game reserve in northern Kwa Zulu-Natal, a move seen by environmentalists as a boost to conserving this endangered species. The release took place in the Somkhanda Game Reserve, which is owned by the Gumbi community. This is the first community land to be involved with the Black Expansion Project-KZN Wildlife, that works to increase suitable land available for a viable black rhino population. One of the most numerous rhino species in the world today, there are only an estimated 3,700 left in the wild.

In January 2008, WWF celebrated the 10th anniversary of the African Rhino programme, which provides technical and financial support to a number of rhino conservation projects across Africa.
African nations boost gorilla protection

Paris, France – A new agreement endorsed by nine African countries to better protect gorillas is a major conservation achievement, said WWF and TRAFFIC, the wildlife trade monitoring network. New agreement endorsed by nine African countries to better protect gorillas is a major conservation achievement, said WWF and TRAFFIC, the wildlife trade monitoring network.

This is the first time that countries, where great ape species are found in the wild are to be legally obligated to act in a coordinated manner against threats to these animals.

The agreement, finalised today at a meeting hosted by the government of France and the UN’s Convention on Migratory Species, specifies efforts that governments need to undertake and to collaborate on, including combating poaching, supporting law enforcement and building capacity in the legal and judicial areas.

The agreement will be legally binding, unlike previous declarations from the range countries, such as the GrASP Kinshasa Declaration in 2005.

“This new agreement is a powerful tool because it has the potential to reshape the way gorilla conservation is conducted,” said Dr Susan Lieberman, Director of WWF’s Global Species Programme.

“It will promote collaboration and political will to secure habitat, and stop escalating threats such as poaching and Ebola outbreaks, all threats to the future of the world’s gorillas.”

Central African Republic, Uganda, Democratic Republic of Congo, Republic of Congo, Nigeria, Equatorial Guinea, Angola, Cameroon and Gabon participated in the talks, while Rwanda was unable to attend WWF and TRAFFIC, who are active in gorilla conservation in most of the range countries, were heavily engaged in the negotiation process and final text.

“The priority now is to make sure that the agreement’s recommendations can be turned into conservation action as soon as possible,” said Roland Mellisch, TRAFFIC’s Global Programme Coordinator.

“Only then will we see an upturn in the fortunes of these magnificent animals.”

END NOTES:
Six countries signed what is called the “final act” of meeting which outlines and endorses the agreement.

Great apes comprise gorillas, bonobo, chimpanzees and orangutans. Like all great apes, eastern and western gorillas are endangered with extinction in the wild. The two gorilla species inhabit the shrinking habitat of equatorial Africa. There are two subspecies of western gorilla: western lowland gorilla (Gorilla gorilla gorilla), and the more recently discovered Cross River gorilla (G. g. diehl). The two eastern gorilla subspecies, mountain gorilla (G. b. beringei) and eastern lowland or Grauer’s gorilla (G. b. graueri), inhabit the upland and mountain forests of eastern Central Africa.

GrASP is the UN’s Great Ape Survival Project. It is an innovative and ambitious partnership between the United Nations Environment Programme and the United Nations Educational, Scientific and Cultural Organization.

Other agreements and conventions encompass great apes, such as CITES, but are not specifically targeting these species.
Wonders of the Indian Wilderness is a three book volume which showcases myriad colours of India's natural treasures and its bio-diversity. This series covers the entire spectrum of conservation from an Indian perspective with an insight into the history of conservation in India and the touching saga of how our rich natural heritage is slowly becoming history.

The first volume—"Nature of Biodiversity in India"—describes the plant and animal species of India and its varied eco-systems bringing out the growing threat to wilderness. This book contains a series of spectacular eight page foldouts. Richly illustrated with over 1100 photographs of plant, insects, amphibians, reptiles, birds and mammals, this book is a kaleidoscope of the unique natural treasure that belongs to India.

The second volume—"National Parks and Wildlife Sanctuaries"—provides a comprehensive survey of well known places like Gir National Park, Periyar tiger reserve as well as the lesser known ones like the Kukenal Wildlife Sanctuary and the Chanthang Cold Desert Sanctuary. It comprises of 900 images spread across 81 locations across India.

The third volume—"A History of Nature Conservation in India"—provides a historical background of the discovery of the diversity of India's plants and animals. Important milestones in biodiversity conservation have been highlighted. Erach Bharucha's accounts are an exciting narration of a time that is rapidly slipping away.

Wonders of Indian Wilderness are the most authoritative and one of the best illustrated references ever published on the biodiversity of India. Erach Bharucha has been studying and photographing the country's forests and wildlife for more than 30 years. Bharucha is a well known wildlife photographer who has travelled extensively across India. He has been a member of leading conservation organisations. His major interest in research has been the fields of bio-diversity, conservation, people wildlife conflict resolution, eco restoration and environment education.

Bharucha's 3 volume magnum opus is an immense resource for conservationist, naturalists and policy makers. This series would definitely make an interesting reading and along with its captivating images it will ensure that the nature enthusiast would stay glued to the book to the very end.

---

Kudos To The Freshwater And Wetland Team

The Freshwater and Wetland team has been working with various flagship species such as Gharials, Dolphins and Otters. In the past two months, the team has been in news for two divergent reasons.

The first and more positive news is the sighting of the rare Indus River Dolphin at Harike in Punjab. Dr Sandeep Behra and Dr Asghar Nawab’s inputs in validating the existence of this rare species at Harike, was highly valued by the Punjab Government.

The second issue involving the Freshwater and Wetland team was the mass deaths of the Gharials found on the Chambal river in Madhya Pradesh. Mr Dhruba Jyoti Basu, our very own Gharial specialist, has been working tirelessly in this area for the past few months to resolve the crises. Dr Prakshil Gautam, Director Freshwater and Wetlands has been ensuring that WWF-India provides a platform for government agencies and other worldwide gharial specialists to unravel the mystery of these mass deaths.

WWF-India is proud of the hands-on effort put by the Wetlands team for the survival of both these flagship species.
Donor Form

You have the power to leave your children a Living Planet.

YES, I WANT TO CARE FOR NATURE WITH WWF-INDIA

I am:  
- New Registration  
- Renewal*, my affiliation no. is:  
- Mr.  
- Mrs.  
- Ms.  
- Other (Please specify):  

Donor’s Name:  
- First  
- Middle  
- Last  

Sex:  
- Male  
- Female  

Marital Status:  
- Single  
- Married  

Date of Birth:  

Occupation:  
- Salaried  
- Self Employed  

Residence Address:  

Road/Area Name:  

City:  

Organization Name:  

Office Address:  

Road/Area Name:  

City:  

Residence Tel.:  

Office Tel.:  

E-mail:  

From where did you hear about us:  

Preferred mode of communication:  
- Online  
- Offline  
- Printed copy  
- E-format  

I would like the newsletter to be sent as  

I would like my mailing address to be  
- my  
- Residence  
- Office  

I would like to avail 50% tax exemption  
- Yes  
- No  

I would like regular information from WWF India  
- Yes  
- No  

Please register me as:  

- SUBSCRIBER: Make a contribution of Rs.500 per annum and get tax exemption u/s 80-G. Also get WWF-India newsletters, a personalised subscriber card, a car sticker and 15% discount on WWF-India merchandise.  
- ENTHUSIAST: Make a contribution of Rs.1,000 per annum and get tax exemption u/s 80-G. Also get WWF-India newsletters, a personalised enthusiast card, a car sticker, a toy Panda and 15% discount on WWF-India merchandise.  
- SUPPORTER: Make a contribution of Rs.2,000 per annum and get tax exemption u/s 80-G. Also get WWF-India newsletters, a personalised supporter card, a car sticker, a wrist watch and 15% discount on WWF-India merchandise.  
- FRIEND: Make a contribution of Rs.3,000 per annum and get tax exemption u/s 80-G. Also get WWF-India newsletters, a personalised friend card, a car sticker, an exclusive WWF-India mug and 15% discount on WWF-India merchandise.  
- DONOR: Make a contribution of more than Rs.3,000 per annum and get tax exemption u/s 80-G. Also get WWF-India newsletters, a personalised donor card, a car sticker, an exclusive WWF-India lapel pin and 15% discount on WWF-India merchandise.  

Please make your cheque / draft in favour of WWF-India.  

- I wish to pay by cheque / draft:  
- Cheque / draft no:  
- Dated:  
- Amount:  
- Drawn on:  
- I wish to pay by credit card:  
- Credit card number:  
- Card Type:  
- Master  
- VISA  
- Diners Club  
- Issuing bank name:  
- Cardholder’s date of birth:  
- Card expiry date:  
- Your signature:  

Declaration: This donation is made on behalf of self/  

my……………………………………………… (relationship). (Please note, the receipt will be issued to the actual donor).

Areas of interest (Please ✔ as many as you like)  

- Overall Species Conservation  
- Fresh Water/High Altitude Wetlands  
- Lesser known species  
- Policy/Legal Interventions  
- Tiger Conservation  
- Forests & Biodiversity  
- Elephant Conservation  
- Oceans/Coasts  
- Birds  
- WWF Events  
- Rhino Conservation  
- Turtles  
- Educational Material  

Affiliate with WWF-India  

- Enthusiast: Rs.1000  
- Supporter: Rs.2000  
- Friend: Rs.3000  
- Donor: any amount above Rs.3000  

Get:  
- A Personalised Enthusiast Card  
- A toy panda  
- 15% discount on WWF-India merchandise  
- WWF-India newsletters  
- A car sticker  

Get:  
- A Personalised Supporter Card  
- A toy panda  
- 15% discount on WWF-India merchandise  
- WWF-India newsletters  
- A car sticker  
- A wrist watch  

Get:  
- A Personalised Friend Card  
- A toy panda  
- 15% discount on WWF-India merchandise  
- WWF-India newsletters  
- A car sticker  
- An Exclusive WWF-India mug  

Get:  
- A Personalised Donor Card  
- A toy panda  
- An Exclusive WWF-India lapel pin 15% discount on WWF-India merchandise  
- WWF-India newsletters  
- A car sticker  

Please indicate by marking [x] against gifts that you would not like to receive.

# Renewal means continuation of the previous year’s registration. Only a change in category will be treated as new registration and additional gifts sent accordingly.
WONDERLAND

I live in a land called Wonderland
Where
The earth, the sky and the seas
Belong to birds, animals and trees
As they do to human-beings

Weeping willow trees shelter me
Creatures weaker than me
Are my responsibility

If you visit the land called Wonderland
We'll greet each day with a shout
And mountains will shout back at us

We'll lick vanilla glaciers
Nibble cherries on trees
And suck on honeycombs

We'll ride on the back of a dolphin
And dive to the bottom of the ocean
Or we'll cling to the wings of an eagle
And soar high up in the sky

We'll tear off our clothes
And roll down grassy slopes
Sink our toes in chocolate mud
Shower in foaming waterfalls

We'll listen to the rustling of leaves
And the chattering of birds
We'll race with the wind in our hair
The smell of lemon trees in the air

We'll watch how ants build their nests
And how a spider spins her web
We'll swing from the trunk of an elephant
Rub cheeks with bunny rabbits
And chase after butterflies

At the end of each day,
We'll lie on a beach
And waves will lull us to sleep

Do come to my land called Wonderland
Where
No one's punished
No one cries
Where each day is a new day
You'll never want to go away

- By Sonya Singh
A Coffee Table Book with a Difference

Someone once said that the universe is made of stories and we'd like to believe that's true. This book features incredible tales of wildlife photographers and their passion to capture some of nature's most beautiful creatures. Behind each stunning photograph in this book, is a story of fearlessness, patience and adventure. Sometimes one could spend hours discovering new techniques to get the perfect shot, yet in the end some of the most brilliant pictures happen unexpectedly without planning.

What makes this book special is that, the proceeds go towards the WWF-India Emergency Relief Work. WWF-India works much beyond wildlife and these proceeds support environmental protection and nature conservation efforts caused by natural and otherwise unforeseen calamities.

This magnificent collection documents a photographer’s journey as a silent guest on seasoned wildlife turf. These photographs are personal accounts of relentless thrill seekers, looking for nature encounters of the wildest kind.

Experience these wild stories where the camera meets nature at its best.

For further queries, please contact:
Aparna Mitter - panda@wwfindia.net
“Look deep into nature, and then you will understand everything better.”

Albert Einstein

www.wwfindia.org