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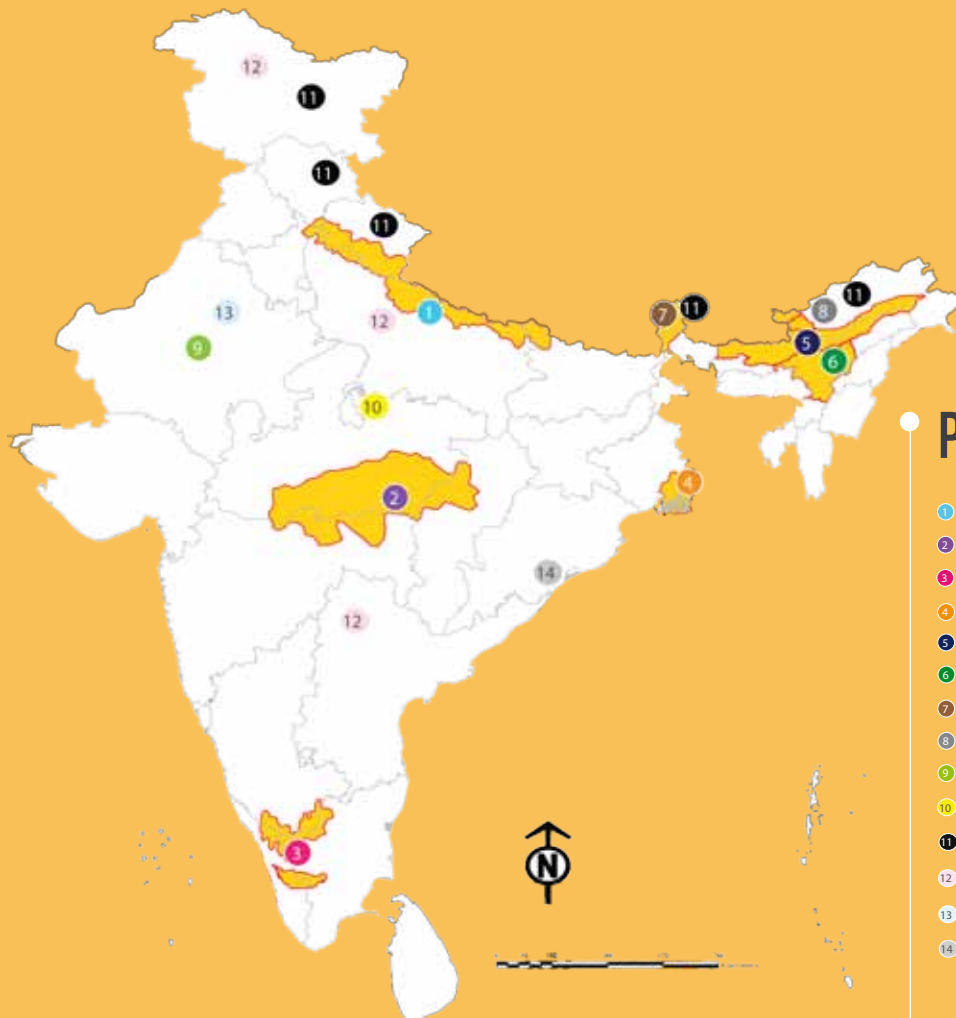
REPORT

IND



Annual Report 2011

# WWF-India Network



## Priority Areas

- 1 TERAI ARC LANDSCAPE
- 2 SATPUDA MAIKAL LANDSCAPE
- 3 WESTERN GHATS-NILGIRIS LANDSCAPE
- 4 SUNDARBANS
- 5 NORTH BANK LANDSCAPE
- 6 KAZIRANGA - KARBI ANGLONG LANDSCAPE
- 7 KHANGCHENDZONGA LANDSCAPE
- 8 WESTERN ARUNACHAL LANDSCAPE
- 9 RANTHAMBORE TIGER RESERVE
- 10 PANNA TIGER RESERVE
- 11 HIGH ALTITUDE WETLANDS
- 12 THE INDUS, GANGA AND GODAVARI RIVER BASINS
- 13 BHARATPUR
- 14 RUSHIKULYA

## Priority Species

-  ASIAN ELEPHANT
-  ROYAL BENGAL TIGER
-  ONE HORNED RHINO
-  NILGIRI TAHR
-  RED PANDA
-  SNOW LEOPARD
-  SMOOTH COATED OTTER
-  MARINE TURTLES
-  GANGETIC DOLPHIN
-  GHARIAL
-  BLACK-NECKED CRANE

WWF-India family comprises 326 members working across India through a network of 16 state/divisional offices and 25 field offices. Our on-ground projects are spread across 14 priority areas addressing conservation issues in these landscapes, with a focus on 11 priority species.

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# President's Note

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“Every year, WWF-India continues to achieve significant milestones in environment conservation despite the many challenges at every step.”

In a world where human well-being is often seen in isolation from the preservation of the natural environment, working towards environmental conservation poses challenges at every step. However, every year, WWF-India and its field teams work tirelessly to protect our natural resources and address humanity's ecological footprint.

This year's Annual Report showcases achievements of focused conservation strategies addressing key environmental issues across different geographical regions. These successes are an outcome of combining scientific research, involving local communities in conservation initiatives, and building political and public support for conservation.

My best wishes to the team, and I am sure the organization will remain dedicated and motivated to deliver solutions for the country's growing environmental problems.

**Divyabhanusinh Chavda**

President, WWF-India



# From the SG & CEO

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Our report shares WWF-India's efforts and achievements for 2011. These achievements are the result of the dedication and hard work of our field teams and offices who work together with various conservation partners, communities, governments, NGOs and businesses towards the goal of conserving our natural environment and wildlife. The report carries coverage of key aspects of our work and is by no way comprehensive, for the efforts of the organization are a daily effort, carried out in some areas of the country on a concerted basis.

India faces increasingly, development related pressures on the environment in her economic progress. WWF India teams encounter such pressures in all our areas of work – both geographic and thematic. In understanding the processes of such change and to work towards solutions are the challenges that our team face continuously and increasingly. Nevertheless, where government and communities work together, positive conservation impacts are not only apparent in our long term work, they bear a degree of long term embedment.

Secondly, despite the impacts of urbanization in our society, we see citizens of India responding to positive actions for making some change, albeit small, to their surroundings. The examples of Earth Hour, Forests for Life and the environment awareness programmes that we carry out indicate such; this gives encouragement to pursue our work with increased zest, and to signify the positive in the process. In this, we see individuals across different generations respond to calls for conservation action, more of which are needed in our future work.

Going forward, partnerships for conservation with communities, individuals and regional groups will be key to achieving change for the betterment of our environment and security of India's natural heritage. Together with partnerships, the need for Indian citizens to venture out to discover their country's bio-diversity, to see the relationship of people and nature and to learn from the culture of conservation that is woven into India's daily life, is an imperative, for of the frontiers of knowledge that we seek, this is a significant one. And with it lies the ecological basis and security of India.

We bring you our work on our contributions to conservation in this report, filled by and based on the tremendous dedication of our teams. With their unison and the support of our well-wishers, we continue to work for India and for a better planet.

**Ravi Singh**  
SG & CEO, WWF-India



**“WWF-India's achievements are the result of the dedication and hard work of our field teams and offices who work together with various conservation partners, communities, governments, NGOs and businesses towards the goal of conserving our natural environment and wildlife.”**





# An Interconnected World

We live in a world of interconnectedness, where few things exist in isolation or independent of another. This is most evident in the natural world, where the existence of the smallest to the largest creature is interlinked. In order to address the environmental issues our natural world is facing today, it is important to understand this interconnectedness and develop conservation strategies accordingly. For example, conservation of tigers cannot be viewed separately from habitat degradation, dependence of local communities on forest resources, increasing illegal wildlife trade and the economic development trajectory of the country.

WWF-India works across different geographical regions in the country to implement focused conservation strategies on environmental issues like conservation of key wildlife species, protection of habitats, management of rivers, wetlands and their ecosystems, climate change mitigation, sustainable livelihood alternatives for local communities, water and carbon footprint reduction in industries, and combating illegal wildlife trade. Interventions towards each of these issues are aimed to achieve one common long term goal, that of conserving natural resources and habitats for the survival of wildlife and local communities depending on them. In the Annual Report 2011, through stories from across the country, we highlight how our conservation interventions on different environmental issues complement one another.



**Biodiversity Conservation**



**Footprint Reduction**



**Community Engagement**



**Education**



**Geospatial mapping**



**Research/Surveys**







# Securing the future of the Sundarbans



The Sundarbans delta in India is a priority region for WWF-India due to its unique biodiversity. While it supports a sizeable population of wild tigers, it is also an ecologically fragile and climatically vulnerable region that is home to over 4.5 million people. Securing the future of the Sundarbans, its biodiversity and people requires a long term vision that can integrate climate adaptation and conservation strategies along with shorter term interventions such as ensuring sustainable livelihoods, access to clean and sustainable energy and managing human-wildlife conflict. WWF-India works on all of these strategies in the Sundarbans while trying to promote a longer term vision for the delta as a whole.

Access to clean and sustainable energy is a key strategy for ensuring better livelihoods, enabling climate adaptation and reducing dependence on natural resources as well as conflict with wildlife. Adjoining the Sajnekhali Wildlife Sanctuary, at Rajat Jubilee on Satjelia Island, WWF-India and CAT Projects Australia set up a micro solar power station which was operationalised in March 2011. The Bushlight model on which this is based involves comprehensive community engagement and energy education of the user community. The station, with a generation capacity of 9.63 KWp, currently provides uninterrupted power to 50 households, 6 local businesses and 3 community buildings. The station is owned and managed by a consumer cooperative society.

In its on-going efforts to further reduce human wildlife conflict in the fringe villages of Sundarbans, WWF-India installed solar street lights in 24 Parganas (South) Forest Division in May 2011. A home light connection to individual households has been set up in conjunction with each of the street lights,

ensuring the beneficiary is accountable for the maintenance of the entire system. Since these installations, there have been no cases of wildlife straying into the villages at these locations.

**The station, with a generation capacity of 9.63 KWp, currently provides uninterrupted power to 50 households, 6 local businesses and 3 community buildings.**

In March 2011, WWF-India released the Indian Sundarbans Delta: A Vision. This unique document was the result of a year-long effort and engagement with academics and policy makers cutting across sectors, to deliberate on a future vision for the region. One of the key recommendations of the vision document was the creation of a special Sundarbans District. As part of its integrated strategy towards working in the Sundarbans, WWF-India also helped set up the Sundarbans Pavilion, a web-based portal for information on the Delta.

Work on sustainable aquaculture and promotion of farming practices that can withstand the impacts of salinity and sea level rise also continues. WWF India plans to expand its work on energy access in the Sundarbans through working on electrification of van rickshaws, setting up solar charging stations, and possibly expanding the Bushlight model to other islands.



The micro solar power station set up at Satjelia Islands adjoining Sajnekhali Wildlife Sanctuary © A. Manna/WWF-India



A farmer selling rice cultivated from a variety of salt tolerant paddy. © A. Manna/WWF-India



# Keeping the Ganga and its ecosystems alive



The Ganga river basin is one of the most densely populated and fertile basins in the world, supporting about 500 million people over an area of approximately 800,000 sq. km. The river and its tributaries support several iconic and important freshwater and terrestrial species as they flow through the Terai Arc Landscape where WWF-India has been working for over a decade for the conservation of species and ecosystems.

## Bioremediation, resulted in the treatment of about 1,200 million litres of sewage from Kanpur and Allahabad that is discharged into the Ganga.

WWF India's Living Ganga Programme, which entered its fourth year in 2011, has a holistic approach to developing solutions for the many problems that the river faces, including unsustainable hydropower development, reduced environmental flows, pollution, loss of biodiversity and impacts of climate change. This year, the project focused on piloting climate adaptation strategies in the basin, working with industries to address pollution, handing over the "watergy" programme to the Kanpur Nagar Nigam (KNN) and completing the environmental flows study.

Pilot projects on climate adaptation were initiated in eight villages of Kanpur and Hardoi districts in Uttar Pradesh, reaching out to over 650 villagers. Farmers are adopting sustainable agricultural practices like organic fertilizers and pesticides along with efficient water and irrigation management techniques,

better soil and land management practices, and approaches to address the groundwater and energy nexus.

In partnership with FICCI, WWF-India worked with the paper & pulp and the sugar industry, to improve production processes for reducing water consumption and pollution. This resulted in the reduction of water consumption by 30-40% leading to a significant reduction in wastewater generation. WWF-India continued its work on the alternate sewage treatment technology—bioremediation, treating about 1,200 million litres of sewage from Kanpur and Allahabad that is discharged into the Ganga.

WWF-India's "Watergy Programme" in partnership with the Kanpur Nagar Nigam facilitated energy audits of water and sewage pumping stations which highlighted low, medium and high cost interventions to improve 'watergy' (the amount of energy consumed to pump unit amount of water). Based on this, business plans for improving watergy have been handed over to the Uttar Pradesh Jal Nigam and Kanpur Nagar Nigam.

Freshwater biodiversity conservation initiatives included the ongoing work with communities and researchers on the conservation of the Gangetic dolphin and freshwater turtles. Under the gharial rehabilitation program in Hastinapur Wildlife Sanctuary, 500 captive bred gharials have been released into the Ganga. Regular monitoring shows the gharials have adapted well in the wild.



A farmer practicing sustainable agriculture by using bio-fertilizers organic fertilizers and pesticides in his field.

© A. Atroley/ WWF-India



10,000 freshwater turtle hatchlings were released in the Ganga after the eggs were conserved in a hatchery made by local farmers. © N. Srivastav/WWF-India







# Protecting the biodiversity of the Western Ghats



The Nilgiris-Western Ghats Landscape Complex supports the single largest population of Asiatic elephants and tigers in the world. Conserving these forests is critical for the long term survival of these species. However, large scale developmental activities have resulted in habitat fragmentation, and increase in human wildlife conflict. WWF-India has a holistic conservation strategy for this landscape that addresses human-wildlife conflict, enhanced protection and enforcement, management of key wildlife corridors, monitoring of tigers and elephant populations, and building support of key stakeholders like the local communities, civil society and the state government.

WWF-India, with the Karnataka Forest Department, has radio collared five crop raiding elephants, four males and one female to understand their behavior and develop long term conflict management strategies. Three males were translocated to the Bandipur Tiger Reserve and the Cauvery Wildlife Sanctuary, and are monitored regularly. At three locations, anti-depredation squads have also been set up to drive away the crop raiding elephants from fields and human settlements. In 2011, a female crop raiding elephant, also the leader of her herd, was radio collared in the Coimbatore Forest Division. Monitoring this elephant revealed that the herd was traveling 2-3 km. from the forest to reach agricultural land. Based on this a trench was erected along the periphery to stop the herd from leaving the forest area. A low cost electric fence for reducing the human elephant conflict has also been designed.

WWF-India is also conducting camera trapping exercises in the landscape to monitor tigers and co-predators. The results



WWF-India field team radio collaring a crop raiding elephant. Five elephants were radio-collared to understand their behaviour and monitor their movement. © WWF-India



Rapid urbanization of Coimbatore city has severely fragmented the corridors used by elephants, leading to human wildlife conflict. © K. Rajashekariah/WWF-India

are revealing healthy tiger and leopard populations both within and outside Tiger Reserves. To strengthen protection in these forests, WWF-India regularly conducts training for the frontline staff on tiger monitoring and prey base estimation, effective patrolling, use of handheld GPS, map reading and application of GIS in the field. To improve communication between frontline staff, a wireless network has been set up covering more than 60% of the Sathyamangalam Wildlife Sactuary and Forest Division, Coimbatore Forest Division, Kollegal Forest Division, and Nilgiris North and South Forest Division.

## WWF-India, with the local Forest Department, have radio collared several crop raiding elephants.

As part of a study to assess the environmental impact of urbanization of cities situated near biodiversity rich areas, the ecological footprint of Coimbatore city was assessed. The study revealed that Coimbatore has grown five-fold in less than four decades, resulting in a significant increase in the city's ecological footprint, as well as large scale conversion of forests. The study further revealed that infrastructure projects in the area had severely fragmented the corridors used by elephants, leading to accidents on highways and rail tracks, and an increase in human-animal conflict. WWF-India will present this study to the Coimbatore City Corporation, and encourage the development of urban planning that takes into account aspects of biodiversity including human animal conflict, ecosystem services and long term sustainability of nature-society relations.







# Corridor conservation in Central India



Central India is home to some of the country's best known Protected Areas (PAs) that support approximately 18% of the wild tiger population in the world, as well as more than 45 indigenous groups. These PAs are connected by forest corridors that allow the movement of wild animals from one forest to another. However, these corridors are facing fragmentation threat due to mining, infrastructure development and pressures from human settlements. WWF-India is working to maintain and restore the functionality of three main corridors, Kanha-Pench, Pench-Satpuda and Kanha-Achanakmar by managing human tiger conflict, monitoring tiger and wildlife movement, developing alternatives with local communities, studying impacts of developmental pressures and building political support for conservation. WWF-India's Indira Gandhi Conservation Monitoring Centre (IGCMC) is providing crucial support in analysis and mapping of these corridors.

**In the Kanha Pench corridor, WWF-India's report helped to avoid diversion of approximately 70 hectares of forest land.**

In the corridors of Central India, WWF-India is deploying camera traps on cattle kills made by tigers and leopards to identify the predators and their dispersal routes. This also prevents the carcass from being poisoned, after an immediate interim compensation has been paid to the owner of the livestock killed. The results of the camera trapping

exercise have shown the presence of tiger and co-predator movement in the corridors, and have helped to build support towards protecting these corridors. Particularly in the Kanha-Pench corridor, these initiatives helped to avoid diversion of approximately 70 hectares of forest land to convert the Nainpur-Balaghat narrow gauge rail into broad gauge which would have affected wildlife movement. Along the Kanha-Pench corridor, 12 villages were identified that are located on key linkages and studies were conducted to understand the use of forest resources. Three villages were introduced to fuel efficient stoves to reduce the use of fuel wood.

Among the indigenous tribes settled in Central India are the traditional hunting tribe Pardhis, who have a strong presence around the Satpuda, Pench and Panna Tiger Reserves. WWF-India, in partnership with the Madhya Pradesh state Forest Department around the Panna Tiger Reserve, provides environment education to the children of this community, and vocational training to the adults, to enable them to take up livelihoods other than hunting. In 2011, WWF-India imparted training in the production of bead and jute products to 120 Pardhi families and a number of young students, towards building their capacity to adopt alternative livelihoods.

Education for Sustainable Development (ESD) is an important approach that builds understanding towards the long term survival of biodiversity along with human well-being. WWF-India is working with four schools in Madhya Pradesh and Chattisgarh to build them into model ESD schools.



Construction of roads and highways within and around wildlife corridors has resulted in fragmentation of critical wildlife habitat. © J. Jena/WWF-India



Members of a local community attending a conservation programme. © S. Worah/WWF-India







# Promoting sustainable agricultural practices



Cotton cultivation is a very important part of the Indian agrarian landscape, and the industry provides livelihoods to an estimated 5.8 million farmers and to over 40-50 million people engaged in its processing and trade. However, the cultivation relies heavily on the use of chemicals and water, and unsustainable use of such inputs causes environment degradation through soil and water pollution, water over-abstraction and carbon emissions. WWF-India is working in different agro climatic regions of cotton cultivation, i.e. Punjab, Maharashtra and Andhra Pradesh, to promote sustainability in cotton production. The aim is to reduce the ecological footprint in the entire cotton chain, from production to retail, ultimately demonstrating positive impacts on key ecosystems and river basins.

The Warangal district of Andhra Pradesh is one of the main cotton growing areas in the country. In partnership with Modern Architects for Rural India (MARI), WWF-India has encouraged more than 6,000 farmers in 65 villages of this district to adopt Better Management Practices (BMPs) in cotton cultivation. BMPs have resulted in the reduction of fertilizer use by 25%, chemical pesticide use by 37%, and water usage by 15%. This has improved the gross margin of farmers by 34%, with over 15,421 tons of Better Cotton being produced. In the third phase of this initiative, WWF-India aims to further build the capacity of farmers to produce Better Cotton, calculate the impact of the BMPs by developing an ecological sustainability index, and understand the status of water vulnerability and future hydrological risks associated with cotton cultivation in this region.

In partnership with IKEA, WWF-India has begun work on setting up a functional national Knowledge Resource Centre which will act as a single knowledge window delivery system and provide information, training and technical services on sustainable cotton production. The cotton produced under BMPs is procured by the local suppliers of global brands and retailers such as IKEA and Marks & Spencer. Thus, a supply chain is ensured, focusing on production and uptake of Better Cotton.

**More than 6000 farmers in 65 villages of Warangal district in Andhra Pradesh have adopted Better Management Practices (BMPs) in cotton cultivation.**

In 2011, WWF-India commissioned a biodiversity survey in a cotton cultivation field in the Warangal district, and the study led to the discovery of a new species of scorpion, indicating a healthy ecosystem with the ability to support biodiversity. The species, from the genus *Heterometrus Ehremberg*, has been named *Heterometrus Telanganaensis*, after the region Telangana, where the district is located.



Adoption of BMPs has increased the production of cotton while reducing the use of water and chemical fertilizers.

© WWF-India



A new species of scorpion '*Heterometrus Telanganaensis*' discovered in a cotton field in Warangal district. © WWF-India





# Rejuvenating the mountain springs of Sikkim



The Khangchendzonga landscape comprises the entire state of Sikkim and Darjeeling district of West Bengal. Nestled in the Himalaya Biodiversity Hotspot, it has more than 220 glacial fed high altitude wetlands, which form the main source for two prominent rivers flowing in this landscape, Teesta and Rangeet along with numerous springs, which are critical water sources for the local communities and the wildlife in the area. The wildlife habitats in this landscape support a number of threatened species including the elusive red panda and snow leopard.

**Within a year, by March 2011, some springs recorded an increase in discharge of more than 100%.**

The freshwater springs which are the main source of drinking water for 80% of rural households in Sikkim have been drying up of late due to a number of anthropogenic factors including climate change. WWF-India partnered with the Rural Management and Development Department (RMDD), Government of Sikkim, for implementing the Springshed Development (Dhara Vikas) Programme with the aim of increasing discharge from springs over the long-term. After a detailed study of the springs in the most drought prone areas, pilot implementation to restore the springshed was taken up for six springs and the discharge was regularly monitored. Within a year, by March 2011, some springs recorded an increase in discharge of more than 100% and one recorded an



A villager collecting drinking water from a rejuvenated spring in Sikkim. © P. Shrestha/WWF-India



Sikkim is one of the four states in India where the endangered red panda is found in the wild. © D. Ghose/WWF-India

increase of upto 400%. Encouraged by these results, similar interventions are being implemented by the State Government on larger catchment areas. This initiative also demonstrated an effective partnership between the Government of Sikkim, local communities and NGOs like WWF-India, People's Science Institute and ACWADAM.

As part of its High Altitude Wetlands Conservation Program, WWF-India partnered with the Lachen Tourism Development Committee to implement conservation initiatives in Gurudongmar lake, a sacred high altitude lake in northern Sikkim. Involving the local communities directly benefiting from the lake, a cleanliness drive was conducted around the lake and Lachen village. Following this, Dzumsa, the local governing body of Lachen announced a complete ban on the use of plastic bottles, and has prohibited tourists from carrying them up to the lake.

Field teams of WWF-India conducted intensive studies on the red panda at the Pangolakha Wildlife Sanctuary and Barsey Rhododendron Sanctuary, to assess its habitat and population status. Fuel wood collection by villagers emerged as a major threat to the red panda habitat. To address this, WWF-India introduced the villagers to alternate sources of energy like use of bio-briquettes, made from mud and coal. Similar bio-briquettes were also promoted in Darjeeling where WWF-India has been working with the local communities for protecting the environment through the project Save the Environment and Regenerate Vital Employment (SERVE).







# Conserving the biodiversity of North East India



In the states of Assam and Arunachal Pradesh, WWF-India focuses its conservation efforts in three landscapes, the North Bank, Kaziranga Karbi-Anglong and Western Arunachal. As part of its conservation strategy, WWF-India is working towards monitoring tigers and important wildlife corridors, mitigating human wildlife conflict, reducing poaching and illegal wildlife trade, expanding the distribution of rhinos within Assam, promoting community based conservation, and securing transboundary cooperation with Bhutan.

**Under the Indian Rhino Vision (IRV) 2020 programme, four rhinos were translocated from Pobitora Wildlife Sanctuary to Manas National Park, bringing the count to a total of eight translocated rhinos.**

In partnership with the state Forest Departments and local NGOs, WWF-India is conducting camera trapping exercises in Manas and Kaziranga Tiger Reserves in Assam, and Pakke Tiger Reserve in Arunachal to estimate and monitor the population of tigers, co-predators and prey base. The camera trapping exercise conducted in the Transboundary Manas Conservation Area (TRAMCA), spread between the Manas National Park (MNP) in India, and Royal Manas National Park (RMNP) in Bhutan revealed that of the fourteen tigers photo captured, five different individuals were captured separately in both MNP and RMNP, whilst four individuals were common to both the areas.



Camera trap image of the clouded leopard captured from North bank landscape. © WWF-India



Local communities provided with search lights to drive away crop raiding elephants from their agricultural fields.

© H. Baishya/WWF-India

The Kanchanjhuri wildlife corridor is an important corridor connecting the Kaziranga National Park with the foothills of Karbi Anglong. Camera trapping exercise conducted in this corridor revealed the presence of tigers, melanistic common leopard, and other wildlife. WWF-India has been engaging with the local communities around this corridor to promote community based tourism. People of Enjai village, located by this corridor, have also demarcated community land to be designated as Community Conserved Area that will help in animal movement through the corridor.

Under the Indian Rhino Vision (IRV) 2020 programme, four rhinos were translocated from Pobitora Wildlife Sanctuary to Manas National Park, bringing the count to a total of eight translocated rhinos. They are being monitored regularly, and have adapted well in the wild. For the first time, two rhinos were tranquilized for change and removal of radio collars. Out of 70 families affected by rhino depredation, 55 families were provided free crop seeds. To build community support towards conservation, a number of village level awareness programs were organized by the field team of WWF-India.

Continuing efforts to mitigate human elephant conflict, WWF-India in partnership with the state Forest Department created 95 Anti Depredation Squads (ADS) from the local community in the Sonitpur and Udalguri districts of Assam. The ADS are provided search lights, fire crackers and training in driving away crop raiding elephants from human settlements.





# Safeguarding the high altitude wetlands of Ladakh



Ladakh, in India's northern most state of Jammu and Kashmir, has a number of high altitude wetlands that support a unique assemblage of flora and fauna, and are of critical importance to local communities. WWF-India works with communities in this region to conserve the wetlands that are threatened by unsustainable tourism, overgrazing, unsustainable resource extraction and infrastructure impacts. This is done through a combination of research, participatory assessments, community based tourism and advocacy.

This region, especially the Kargil district, is poorly studied in terms of its biodiversity and potential impacts of climate change on the wetlands and local communities in the area. One wetland in Ladakh was studied to assess the risk and vulnerability of local communities to climate change. WWF-India, in collaboration with the San Diego State University conducted field surveys at Tsomoriri to measure physical parameters like water quality and depth of the lake in selected zones and temperature. The study aims to provide practical guidance on methods and information needs for assessing ecological change, and to identify management and adaptation responses to maintain the ecological character of the wetlands. In 2011, WWF-India initiated a project to develop present and future land cover maps of high altitude wetlands in Ladakh which have high dependence from local communities. These maps will help create integrated resource-wetland-wildlife management plans that will meet the interest of local communities and wildlife conservation.

Ladakh is also one of the breeding grounds of the black-necked crane (*Grus nigricollis*), a Vulnerable species which is also found in China and Bhutan. To bring the three range countries on one platform, a regional workshop 'Cranes Calling' was organised in collaboration with the Ministry of Environment and Forests, Bombay Natural History Society and Indian Bird Conservation Network. The key objectives of the workshop were to facilitate knowledge-sharing and information exchange among conservation experts from India, China and Bhutan and to explore the opportunities of community exchange programmes between these countries. Following this, during the 10th COP of the Convention on Conservation of Migratory Species (CMS) held in Bergen, Norway, a side event on 'Regional Cooperation for Conservation of the black-necked crane' was organised.

## For the first time, camera trap images of the snow leopard were obtained from Kargil district in Ladakh.

WWF-India's camera trapping exercise to assess the presence of the snow leopard in Ladakh revealed exciting results in 2011. For the first time, camera trap images of the leopard were obtained from Kargil district in Ladakh. This is the second photographic evidence of the species in the region. WWF-India is working towards developing a conservation strategy for snow leopards in Kargil.



WWF-India field team measuring physical parameters like water quality, depth and temperature of the Tsomoriri lake.  
© P. Chandan/WWF-India



A camera trap image from Kargil district of Ladakh.  
© Jammu and Kashmir Forest Department and WWF-India





# Towards sustainable fisheries



India has a coastline of more than 8000 kms with the Arabian Sea on the West, the Bay of Bengal in the East, and the Indian ocean in the South. Apart from sustaining rich fishing grounds, these waters and coasts provide foraging and nesting sites for a variety of marine species, including sea turtles. However, India's marine wildlife is under growing threat due to unplanned beach development, bycatch mortality, pollution and other factors. WWF India's marine conservation programme works towards the conservation of marine turtles, promoting sustainable fisheries and understanding and addressing the trade in marine gastropods.

**WWF-India worked with the fishing community around the Ashtamudi estuary, who agreed to put in place a self imposed seasonal ban on catching clam during the spawning period.**

In 2011-2012, WWF-India facilitated a study of all the mainland coastal states of India to understand the current status, distribution and threats to sea turtles. The study, which was conducted by local NGOs in each state, including WWF-India state offices in Kerala, Orissa, Tamil Nadu, and Andhra Pradesh focused on identification of major nesting beaches, quantification of nesting concentrations, assessment of incidental catch in fishing nets and other causes of

mortality, and identification of biotic and abiotic factors that affect nesting populations, nesting beaches and survival of sea turtles. The report of this study will help in developing conservation strategies for sea turtles in the different states.

The Ashtamudi Estuary is the second largest estuarine system in Kerala and a designated Ramsar Site. Up to 4,000 fisherfolk in the area rely on collection of clams for their livelihood and an equal number are involved in cleaning, processing and trading the clams. However, due to over exploitation of juvenile clams for use in cement production, the fisherfolk noticed a significant drop in their overall catch. To address this, WWF-India worked with the fishing community and district administration to identify key management measures. The fishing community has now agreed to put in place a self imposed seasonal ban on catching clam during the spawning period. They have also agreed on a minimum net size ensuring controlled fishing of small clams. Going a step further, the fishery has entered the Marine Stewardship Council certification process. A pre-assessment study of the fishery has been completed, and shows the fishery is fundamentally well suited for certification.



Olive Ridley making its first journey towards the ocean, on the coast of Orissa. © S. Worah/WWF-India



Sand mining on nesting beaches is a serious threat to marine turtles. © V. Malayilethu/WWF-India





# Securing water for Keoladeo National Park



WWF-India has been working in the Keoladeo National Park in partnership with the Rajasthan Forest Department to protect the habitat of this World Heritage Site. Since 2004, a three-pronged conservation strategy has been adopted for the long-term conservation of this wetland which addresses aspects of policy and advocacy as well as education and awareness.

**297 million cubic feet (mcft) of water was released into the park from the Chambal Bharatpur pipeline that supplies water to Bharatpur city.**

With increasing competition for the limited water available, shortage of water is one of the major threats facing the park. WWF-India, along with the Rajasthan Forest Department and other stakeholders has been working to identify alternate sources of water for the park. In October 2011, after years of lobbying with the Rajasthan Government, 297 million cubic feet (mcft) of water was released into the park from the Chambal Bharatpur pipeline that supplies water to Bharatpur city. Water was continuously supplied to the park for four months from October 2011 to February 2012 to coincide with the migratory season for waterfowl visiting the park.

To ensure long term water security for the park, the Govardhan drain carrying 2000 mcft of flood water from the low lying pockets of Haryana, Rajasthan and Uttar Pradesh has been identified, and a project of constructing a 17 km underground

pipeline to divert 350 mcft of water to the park was initiated. By 2011, 15 kms of the pipeline had been laid and tested and the project will be completed by 2012. The pipeline will provide water to the park for 35 days in late July to August which is the breeding season for many bird species, and also ensure water availability till end December attracting migratory birds.

In partnership with the Rajasthan Forest Department, WWF-India surveyed 27 satellite wetlands around Keoladeo National Park that have been identified as important breeding and roosting grounds for migratory birds. The study will collect data on bird species visiting the wetlands, water availability, and anthropogenic activities, to help develop a wetland management plan for these areas.

WWF-India's 'Water School' programme in villages around the park continues to raise awareness about environment conservation. In 2011, 820 students from 12 schools attended the programme and also initiated a number of environmental activities like clean up drives and awareness campaigns in their villages.



Keoladeo National Park, a world heritage site, plays host to thousands of migratory birds during the winter season.

© C. Khan



A group of students participating in environment education activities under the 'Water School' programme.

© A. Bhatnagar/WWF-India







# Conservation with communities



Conserving wildlife and natural resources is only possible in India if local communities have a strong stake in this. WWF-India works with local communities in all its landscapes to secure their interests and enable them to become powerful stewards for conservation.

In the Western Arunachal Landscape, WWF-India is assisting the local indigenous communities to manage two Community Conserved Areas (CCAs), Thembang Bapu and Pangchen-Lumpo-Muchat, covering 410 sq km of traditionally owned forests. Local Committees manage the CCAs and help villagers earn additional income from Community Based Tourism (CBT) and other alternative livelihoods. Capacity building of villagers has enabled them to manage and conduct bird watching expeditions in the CCAs, earning significant income that is widely distributed within the community through elaborate benefit sharing mechanisms. To reduce dependence on fuel wood, solar water heaters have been set up in the villages where CBT is being implemented, and a yak-dung briquette manufacturing unit has been set up in Lumpo village. Encouraged by the progress of conservation initiatives in these CCAs, two more villages have identified and demarcated the Pangchen Lakharo CCA on the eastern side of the Nyamjangchu river.

In Kerala, WWF-India works with the Kadar tribes living in the Vazhachal Forest Division. Their main source of livelihood is collection of Non Timber Forest Produce (NTFPs). Resource use and mapping revealed that honey collection is the most viable option for value addition. A honey production unit was set up at Pokallapara with financial support from the Forest Department. The honey is sustainably collected by the tribal

communities and marketed through the Forest Development Agency (FDA), benefitting more than 314 families. A team of Kaders was trained to conduct an impact assessment of their resource collection on the forests. The findings have enabled the community to diversify the NTFP value addition. Now they also collect and sell black *dammar* and *incha* through the FDA.

**In the Western Arunachal Landscape, WWF-India is assisting the local indigenous communities to manage two Community Conserved Areas (CCAs), covering 410 sq km of traditionally owned forests.**

Involving communities in overall conservation strategies, the project, “People and Protected Areas: Conservation and Sustainable Livelihoods in Partnership with Local Communities” was launched in 2007 as a joint initiative of WWF-India and SEED (Society for Equity, Empowerment and Development) division of DST (Department of Science and Technology), with an aim to enhance the livelihoods of local communities, while reducing dependence on natural resources. By 2011, the first phase of the project covered 50 villages around 13 Protected Areas from different eco-systems in partnership with 13 local NGOs. More than 3,750 households were trained in activities like *dhurrie* weaving, nursery raising, medicinal plant cultivation, production of *Mahua* jam and honey, use of improved chulhas, briquettes and biogas. The project has successfully established a market for the products made by these communities, thereby providing a steady income to the beneficiaries, as well as reducing their fuel wood consumption.



Members of the local committees weaving baskets as an alternative source of livelihood to reduce their dependence on forest resources. © V. Uppal/WWF-India




A team of Kaders in the field conducting a survey to understand the ecological impact of their collection on the forest. © V. Uppal/WWF-India









Much of WWF-India's work is conducted by our field teams, whose dedication to the cause of conservation and the mission of this organization reflects in our achievements. They remain undeterred and motivated to bring about change despite the difficult challenges faced at every step of the way.





Every year, WWF-India makes significant advances towards developing solutions for the country's environmental problems. These milestones represent some of the successes achieved in 2011.

# Some achievements and impacts in 2011



## POPULATION BOOST for Manas's Rhinos

4 rhinos successfully translocated to Manas National Park from Pobitora Wildlife Sanctuary in North-East India under the Indian Rhino Vision 2020 programme.



## Protecting critical tiger habitat in Central India

Camera trapping exercise conducted in the Kanha Pench corridor of Central India successfully proved the presence of tigers and co-predators, and helped to avoid diversion of 70 hectares of forest land in this corridor for developmental activities.



## CLEAN ENERGY for Sundarbans delta

A micro solar power station on Satjelia Islands in the Sunderbans was set up through a partnership between WWF-India and CAT Projects Australia. The station, with a capacity of 9.63 KWp, provides uninterrupted power to 50 households, 6 local businesses and 3 community buildings.



## Mountain springs recharged in Sikkim

The springshed conservation initiative of the Rural Management and Development Department, Government of Sikkim, in partnership with WWF-India, local communities and other NGOs, implemented pilot projects on six springs in Sikkim. This resulted in increased water discharge, providing water security for the local communities.



## Reducing carbon footprint

State Bank of India, the largest public sector bank in India, became a signatory to the Carbon Disclosure Project. It is now among 551 global financial institutions, of which eight are in India, who promote the disclosure of data pertaining to climate change mitigation.

March

60+

## 130 Indian cities unite for Earth Hour

Breaking earlier records of mass participation, Indian citizens expressed their solidarity to commit to a more sustainable lifestyle by switching off lights, and pledging to go beyond the hour through positive action for the planet.





## BLACK PIKA documented in Arunachal Pradesh

Field surveys conducted by WWF-India and the Thembang Bapu Community Conserved Area Management Committee recorded the first ever sighting of the black pika (*Ochotona nigritya*) in India at an altitude of 4300m in the West Kameng district of Arunachal Pradesh. WWF-India has been working here since 2002 for biodiversity conservation with the local communities.

## 1200 million litres of sewage water treated

WWF-India tested the alternate sewage treatment technology of Bioremediation on sewage water in Kanpur and Allahabad. The methodology has been adopted by the Indian government to treat sewage waste in seven cities along the Ganga.



## 26% REDUCTION in water footprint of sugarcane farming

Better Management Practices in sugarcane farming adopted by farmers of Maharashtra successfully reduced the use of water and chemical fertilizers and pesticides.

April

## Transboundary cooperation for conservation

'Cranes Calling' a regional workshop organized by WWF-India in collaboration with the Ministry of Environment and Forests, BNHS and IBCN brought together the three range countries of the Vulnerable black-necked crane to facilitate knowledge-sharing among conservation experts from India, China and Bhutan.



June

September

## Water security for India's largest Tiger Reserve

Deep well solar pumping system set up at Farahabad in Nagarjuna-Srisailem tiger reserve. The system pumps upto 30,000 litres of water and will regularly supply water to the wildlife and communities in the area during the dry season.



October

## Bringing water back to Keoladeo National Park

297 mcft of water released from the Chambal Bharatpur pipeline serving water to Bharatpur city into the Keoladeo National Park. Work is underway to construct a pipeline which will regularly provide water to the park during the dry season.





## 23 poaching cases avoided in 2011

TRAFFIC India's informant network helped avert 10 incidents of tiger and leopard poaching in Madhya Pradesh and 13 incidents of rhino poaching in Assam through the year.

## Cross border collaboration to revive the Ganga



WWF-India, The Peace Institute Charitable Trust and the Thames Rivers Restoration Trust launched the Thames and Ganges Twinning Program that aims to develop new techniques for the restoration of rivers, their wildlife and sustainable livelihoods for people. The program provides a platform for different organizations to share knowledge, expertise and experience of conserving river systems.

December



WWF-India continues to move conservation forward towards building a future in which humans live in harmony with nature.



## NEW SPECIES of scorpion discovered in agricultural fields using BMPs

A biodiversity survey of agricultural fields adopting Better management Practices as part of the Better Cotton Initiative in Andhra Pradesh led to the discovery of a new species of scorpion *Heterometrus telanganaensis*, indicating a healthy ecosystem with the ability to support biodiversity.

## 57000 students participate in Wild Wisdom quiz

Wild Wisdom, in its fourth year, expanded its reach to more than 57000 students participating across 570 schools from 17 states in India.











Wildlife and environment conservation is driven by the dedication and passion of a handful of individuals who have devoted their lives to this cause. The true heroes are the frontline staff, forest guards, mahouts, foresters, rangers, researchers, and conservationists, who work tirelessly in difficult terrains and climatic conditions across all geographies to protect our natural world.



# Centre for Environmental Law (CEL)

© R. Sengupta/MLPC



Awareness camp for unorganised mine workers in Makrana

The Centre for Environmental Law (CEL), established in 1993, is an integral part of WWF-India, set up to serve as a resource centre for teaching environmental law and conduct enviro-legal research in national, regional and international context.

The year 2011 witnessed the launch of the National Green Tribunal (NGT) on 4 July set up under The National Green Tribunal ACT, 2010 in Delhi. This Act will ensure the effective and expeditious disposal of cases relating to environmental protection and conservation of forests and other natural resources. CEL is providing research support to the Environmental Lawyers and Counsels which would enable them to present a stronger case before the

tribunal. CEL, in collaboration with Lawyers Initiative for Forest and Environment (LIFE), will soon be launching training programmes for Civil Society Groups and organisations to build their capacity in understanding and filing applications at NGT for protection of conservation sites. Two flagship CEL programmes, Post Graduate Diploma in Environmental Law, run in partnership with the Indira Gandhi National Open University (IGNOU) and Post Graduate Diploma in Urban Environmental Management and Law run in partnership with the National Law University, Delhi, received excellent responses. One of the students of the Post Graduate Diploma in Environmental Law received a Gold Medal for academic excellence at the IGNOU convocation for 2011.

# Indira Gandhi Conservation Monitoring Centre

© IGC/MC/WWF-India



During 2011, beyond supporting WWF-India's conservation programmes with GIS and mapping, the Indira Gandhi Conservation Monitoring Centre (IGCMC) collaborated with the Government of Arunachal Pradesh to develop a Protected Area Management Information System in Namdapha National Park, Mouling National Park, Mehao Wildlife Sanctuary and D'ering Wildlife Sanctuary in Arunachal Pradesh using Remote Sensing and GIS.

The ENVIS centre of WWF-India recognises the important role of environmental information in sound decision-making and serves as an information resource repository

in the concerned subject areas i.e. NGOs, Parliament and Media. In 2011, the centre's database went digital, enabling faster dissemination of information to its users and network partners. The centre also compiled 'Environment in the Indian Parliament: An Analysis' which highlights statistical and graphical depiction of the trend of the discussions on environment in the parliament. ENVIS regularly updates data on environmental NGOs with the cooperation of the NGO cell of the Ministry of Environment and Forests. Advancing this initiative, ENVIS has submitted a proposal to the ministry for creating a web portal for environmental NGOs in India.

# Combating illegal wildlife trade

TRAFFIC is a joint programme of WWF and IUCN. In India, it operates as a division of WWF-India with an aim to monitor and investigate wildlife trade, and provide information to a diverse audience as a basis for effective conservation policies.

## TRAFFIC India helped avert 10 incidents of poaching of tiger and leopard in Madhya Pradesh, and 13 incidents of rhino poaching in Assam.

In 2011, TRAFFIC India conducted workshops to strengthen wildlife law enforcement capacities of more than 150 forest officials in the States of Maharashtra, West Bengal and Karnataka. In collaboration with the National Academy of Customs, Excise and Narcotics (NACEN) Mumbai, regular training programmes on similar lines were conducted for custom officials. Orientation programme for the judiciary in Manipur and Mizoram on issues related to wildlife conservation and laws was also held in July 2011.

TRAFFIC India's sniffer dog project has begun to show early successes. In December 2011, TRAFFIC India was invited to the first of its kind meeting by the General Administration of Customs of China (GACC) to exchange information and expertise with China's Custom Officials regarding use of sniffer dogs.

TRAFFIC India was also successful in generating actionable information through informant networks across

the country that helped avert 10 incidents of poaching of tiger and leopard in Madhya Pradesh, and 13 incidents of rhino poaching in Assam. The information also led to the arrest of tiger and leopard poachers in Haryana, Madhya Pradesh and Arunachal, and rhino and elephant poachers in Assam.

TRAFFIC India provided support to the newly formed South Asia Wildlife Enforcement Network (SAWEN) in helping them organize a training programme on 'Strengthening Wildlife Law Enforcement for Wildlife Protection in South Asia' in July 2011 at the University of Forensics, Gandhinagar, Gujarat for the senior government officials in the eight South Asian countries. TRAFFIC also helped in compilation and designing of the SAWEN's quarterly newsletter 'The SAWEN bulletin' launched in October 2011.

TRAFFIC India's report on '*review of the Status of Saussurea costus (Falc.) Lipsch. in India and the impact of its listing in CITES Appendix-I*' was presented as information document at the 19th meeting of the Plants Committee held in Geneva in April 2011. Head of TRAFFIC India was nominated by the Planning Commission, Government of India to a panel entrusted with the responsibility of preparing the report on wildlife conservation for the 12th Five Year Plan.

TRAFFIC India's consumer awareness campaign "Don't Buy Trouble" continues to run successfully at various locations across India.



© TRAFFIC India

Participants learning new tools and techniques of investigating wildlife crime cases at a training programme organized by SAWEN with support from TRAFFIC India



© S. Sinha

Illegal wildlife trade is one of the largest threats to India's wildlife.







© WWF-India

# Earth Hour 2011

Earth Hour 2011, marking the third year of its journey in India, once again brought the nation together as governments, organizations, institutions, schools, colleges and individuals came together to switch off lights on 26th March and stand united against climate change. This year marked the start of a new phase for this extraordinary people's movement, which is also reflected in the all new '60+' logo, representing a commitment to go beyond the hour by adding a positive act for the planet. Earth Hour reached out to over 130 Indian cities, as more citizens expressed their solidarity to commit to a better lifestyle. While mega cities like Mumbai, New Delhi, and Bangalore were epicenters with extensive participation, the campaign reached tier II and III cities and small towns like Erode, Latur, Panna, Chindwara, Kakinada, Guna and more. More than 10,00,000 students across India volunteered for Earth Hour by organizing local events to bring people to switch off.

On the night, Earth Hour celebrations took the shape of candle light marches, musical performances, candle lit dinners, signature campaigns, awareness rallies, or simple family and friends get togethers. In New Delhi, Indian rock band Euphoria performed on the lawns of the iconic India Gate, in the presence of the Chief Minister, Smt. Sheila Dikshit, Brand Ambassador Vidya Bala and Director General WWF-International, Jim Leape. The Rashtrapati Bhawan, Prime Minister and Chief Minister's residence in Delhi all observed Earth Hour along with many more Chief Ministers of states and iconic monuments across the country, reiterating India's sincere commitment to the cause of environment conservation.





# Cities for Forests

WWF-India's Cities for Forests, is a national level campaign focusing on raising awareness about the intrinsic link between forests and human well-being amongst urban youth. The campaign calls upon the youth to visit a forest near their city, experience and document its biodiversity and share their experiences in the form of stories, pictures, videos, and photo presentations on the campaign website [www.citiesforforests.in](http://www.citiesforforests.in). The campaign was launched on 30th July 2011 through on ground activities in more than 15 cities and towns including New Delhi, Bangalore, Kolkata, Bhopal, Valsad, Dehradun, Kaladhungi, Haldwani, Shimla, Jabalpur, Mandla, and Chhindwara. In New Delhi, hundreds of young environment enthusiasts gathered at Nelson Mandela Marg, Vasant Kunj to raise awareness about Delhi's green spaces, holding up banners and placards with conservation messages while Dehradun witnessed a gathering of more than 300 students, housewives, army personnel, forest department staff who marched along Rajpur road, in support of the urban forests around the city. In Shimla, the Chief Justice of Himachal Pradesh kicked off the campaign, encouraging the youth to take action towards conserving forests.

Students and youth across the country were encouraged to visit and document the forest that supports their city, and thousands of entries of pictures, videos, and stories were received. The campaign's unique call to action aims to build environmental literacy amongst the youth, providing a platform for them to become future agents of change, and enlarging support for the protection of India's forests and her natural heritage.





# Green Hiker

The Green Hiker Campaign is WWF's initiative launched in 2009 to encourage tourists and tour operators in the Himalayan region to opt for sustainable and responsible tourism. In January 2011, the campaign awarded the winners of the Ecotrail Travelogue Contest launched in by WWF-India and Lonely Planet Magazine-India. Eleven pieces of travel writings were acknowledged, which spoke of how they traveled green or of experiences in the high altitude Himalayas that moved them to change and inspire change in others. The award ceremony was accompanied by a photo exhibition by renowned Himalayan photographer Mr. Ashok Dilwali. After the preliminary step of raising awareness, the campaign geared up for further action, in the form of clean-up drives, training workshops for tour operators, hoteliers and other service providers, environmentalists, government officials from the departments of tourism and environment, students and various NGOs. These were held in Jammu and Kashmir and Sikkim.

On May 29, 2011, the campaign was launched in Nepal on the occasion of Mount Everest Day in collaboration with the Nepal Tourism Board. On September 27, 2011, the campaign was launched in Bhutan on World Tourism Day jointly by WWF-Bhutan, Nature Recreations and Ecotourism Division, Department of Forests and Park Services, Ministry of Agriculture and Forests, and the Association of Bhutanese Tour Operators.



# Corporate support for conservation

© WWF-India



Corporate Partners with the community children near Harike Wildlife Sanctuary.

© WWF-India



The five member team of Royal Sundaram won the Arctic Challenge and were rewarded with a trip to the Arctic.

WWF-India's conservation alliances with corporate and other agencies delivers on multiple benefits and provides leadership examples that leverage broader change. These alliances develop into long term partnerships generating awareness and establishing a participatory platform. In 2011, RSA Group and WWF joined hands to set up the Arctic Challenge around the globe for RSA employees globally, focusing around initiatives promoting green living. In India, 5 employees representing Royal Sundaram (part of RSA group) came forward as leaders and launched a fund raising drive for WWF-India's 'Save The Tiger' campaign. Their initiative won them the Arctic Challenge, and the team was rewarded with a trip of a lifetime to the Arctic. WWF-India has shared this success story with other corporate partners as an ideal tool to sensitize their stakeholders and the CSR division of their organizations.

**The year also witnessed the launch of a brand new collection of t-shirt 'Jungle Safari' in partnership with Indian fashion mogul, Satya Paul.**

WWF-India began the 'Give Back To Nature' initiative in 2011, under which it engages with three major sectors; retail, tourism and hospitality. In the retail industry, WWF-India has partnered with The Mobile Store to encourage the creation of Green Corner in their store to sell WWF nature products. Ibex Expeditions and Dev Vilas, Ranthambhore have also joined the initiative by motivating

clients and guests to donate for WWF-India's conservation initiatives. Ibex expeditions have agreed to match the funds generated through their clientele. The year also witnessed the launch of a brand new collection of t-shirt 'Jungle Safari' in partnership with Indian fashion mogul, Satya Paul. The collection, made from soft organic cotton and bamboo fabrics, and manufactured by 'Do U Speak Green', showcases a blend of India's magnificent fauna and vibrant colors in its design. The collection is available in Satya Paul stores as well as on [www.douspeakgreen.com](http://www.douspeakgreen.com).

The 'Tiger Talk' photograph exhibition went global, making its first global appearance at the Pravasi Bhartiya Divas in Canada, in June 2011. The photograph exhibition is now travelling to several other locations, on the list are London, Hong Kong, Japan and Singapore. The 'Tiger Talk' coffee table book, won 3 silvers and 1 bronze at Goafest. Silver for Book Design, Art Direction and Photography, and Bronze for Typography.



# TIGER TALK

a travelling photography exhibition





# States

WWF-India has a vast network of state and divisional offices across India working on various environmental issues in their states, as well as educating, empowering and sensitizing the youth about environment conservation.

© WWF-India



## Andhra Pradesh

The state of Andhra Pradesh is a drought prone region, and water scarcity during the summer season is a major issue for the wildlife and communities living around Protected Areas. To address this, WWF-India identified few permanent perennial streams and wells in Nagarjuna Srisailem, India's largest Tiger Reserve, and installed the first solar deep well pumping system at Farahabad in association with the Andhra Pradesh Forest Department. This system pumps upto 30,000 litres of water, and will provide regular supply of water to the wildlife and communities in the area using clean energy. It can also charge 36 LED lamps of 3V capacity, enough to provide light to a small community. Based on the success of this model, WWF-India plans to replicate it in other Protected Areas of Andhra Pradesh.

© S. Worah/ WWF-India



## Himachal Pradesh

WWF-India is working towards upgradation and modernization of traditional watermills in Himachal Pradesh with an aim to increase the electricity generation capacity of these mills, thereby improving the livelihoods of the local communities by providing clean energy. The project is funded by the UNDP-CEE Small Grants Programme. In 2011, two watermills were upgraded in the Raksham Village in Kinnaur District, and generate 4KW of energy per mill. The mills supply regular energy to more than 40 families, and can provide enough electricity to support wool carding machines, oil expellers and spice grinding machines, thereby increasing the livelihood options available. A village energy committee is responsible for the maintenance of the mills, and has also initiated the process of creating a water channel to ensure abundant water supply for higher electricity output.



## Kerala

As part of the national survey of all coastal states of India undertaken by WWF-India, the entire coastline of Kerala was surveyed to assess the status of marine turtles and identify the threats posed to them. Major threats to marine turtles identified here were sand mining, predation by humans and animals, tourism and human disturbances. The results of this study will be used by WWF-India to develop site specific strategies for the conservation of marine turtles.

WWF-India conducted a study on the livelihoods of the local communities living around Vembanad lake, the largest lake in Kerala. Fishing, agriculture, clam and lime shell collection, aquaculture and tourism emerged as the main livelihood options, all of which heavily depended on the lake and had an adverse effect on the biodiversity supported by it. This study will form the foundation of government interventions for conservation of the lake and alternate livelihood options for the communities.



## Jammu & Kashmir

Education for Sustainable Development (ESD) builds upon a desirable vision for the future without exceeding the carrying capacity of nature. WWF-India has been conducting ESD workshops for the master trainers of NCERT, SCERTs and DIETS in order to facilitate the institutionalization of the ESD approach in the formal system.

WWF-India's Jammu & Kashmir State Office is a Resource Agency for the National Environment Awareness Campaign programme of the Ministry of Environment and Forest, Government of India. In 2011, more than 550 educational institutions were engaged in Education for Sustainable Development activities aimed to promote biodiversity conservation. Over 100 colleges and schools established botanical gardens in their campus, along with 400 vermi-composting pits for waste management. WWF-India expanded its reach to schools in 10 more districts of Jammu & Kashmir, and ensured the ESD is included in the mainstream education framework.



## Uttarakhand

The state of Uttarakhand situated in the foothills of the Himalayas holds a number of low and high altitude wetlands that support unique biodiversity and local communities living around them. WWF-India conducted an on-site documentation of all wetlands of Uttarakhand ranging between altitudes of 300m – 5000m. Over a period of 6 months, 118 wetlands were documented with the objective of recording their size, threats, effects of anthropogenic activities, as well as faunal biodiversity. The study will be compiled into a detailed report which will help the Government of Uttarakhand identify priority wetlands and implement site specific conservation plans.



# Publications

## Grow A Green Gene

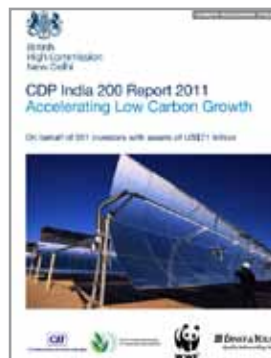
A handbook for children who want to do more to protect the environment.



The book, especially conceived by WWF-India, shows how a slight shift in attitude makes a huge difference. It focuses on simple, easy tips on how to make green choices.

## CDP India 200 Report 2011

Accelerating low carbon growth



The Carbon Disclosure Project report in its fifth consecutive year, contained voluntary disclosures from approximately 30% of the top 200 Indian companies, relating to their GHG emissions and their strategies to mitigate climate change. The information request was backed by 551 global investors with assets worth USD 71 trillion under management.

## Indian Sundarbans Delta

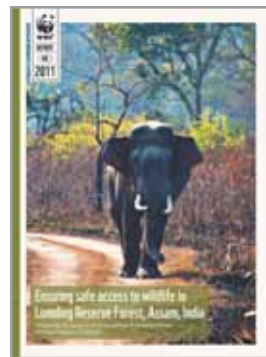
A vision document for the Sundarbans region



This unique document is the result of a year-long effort and engagement with key academics and policy makers cutting across sectors to deliberate on a future vision for the region. The document highlights key recommendations that should be adopted in order to safeguard the future of the Sundarbans.

## Ensuring safe access to wildlife

A report on the impacts of upgradation of Doboka-Silchar National Highway



A report on the impacts of upgradation of Doboka-Silchar National Highway. WWF-India conducted a survey of the area proposed for the upgradation of the Doboka-Silchar National Highway which bisects Lumbini Reserve Forest in Assam. Based on the study, this report details the mitigation measures proposed to facilitate wildlife movement.

## Ganga Basin's Vulnerability to Climate Change

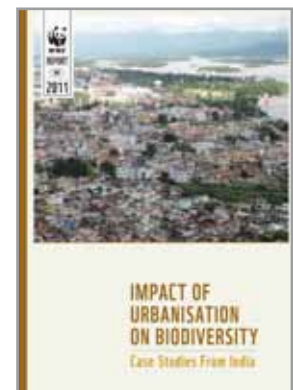
A report assessing the impact of climate change on people and ecosystems



WWF-India studied the climate vulnerability of people living in the Ganga basin. The study covered the states of Uttarakhand and Uttar Pradesh and identified the vulnerability of key sectors by assessing the exposure, sensitivity and adaptive capacity of an ecosystem to changing climate scenarios. This report has helped us design adaptation strategies for most vulnerable communities and regions in the Central Ganges river basin.

## Impact of Urbanization on Biodiversity

A study to assess the environmental impact of urbanization of cities situated near biodiversity rich areas.



Two cities, Coimbatore and Kolkata, located in different bio-diverse regions were studied to understand the impact of urbanization on the surrounding biodiversity. The report aims to encourage the development of urban planning that takes into account aspects of biodiversity including human animal conflict, ecosystem services and long term sustainability of nature-society relations.

# Spreading the message

WWF-India uses various mediums and channels of communication to ensure the message of conservation reaches across a wide social spectrum.

## Conservation Through Cameras



This short film, produced in-house, provides an overview on how the technique of camera trapping is used to estimate tiger numbers and how this aids in tiger conservation. The film has been well received by the online audience, with more than 11,000 views on WWF-India's youtube channel [www.youtube.com/wwfindia](http://www.youtube.com/wwfindia)

## Jungle Gang series



WWF-India commissioned an external filmmaker to make the Jungle Gang series, comprising four films on the tiger, rhino, elephant and bear. The films are a blend of animation and live action, produced to raise awareness about the threats faced by these species among children and young adults.

## Eco-trail Travelogue content



The Ecotrail Travelogue Contest, organized in partnership with Lonely Planet India magazine as part of Green Hiker, called for entries that spoke of individuals experiences of travelling green in the Himalayas. Eleven winning entries were awarded at an event in WWF-India secretariat by Mr. R. H. Khwaja, Secretary, Ministry of Tourism.



WWF-India special cover released to raise awareness about the need for tiger conservation.



The new collection of WWF-India t-shirts made from organic cotton and bamboo fabrics is available Satya Paul stores and [www.douspeakgreen.com](http://www.douspeakgreen.com)



# Financial Data for 2011

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## Income And Expenditure Figures

For the year end 31st March 2011

Income	Rs. '000s
Fund raising and Subscription	5,363
Donation	1,961
Project Grants	181,967
Other Income	58,689
<b>Total Income</b>	<b>247,981</b>

Expenditure	Rs. '000s
Conservation Expenditure on Object of the Trust	197,468
Other Expenses/Operating Costs	47,150
<b>Total Expenditure</b>	<b>244,618</b>

## Salient Balance Sheet Figures

For the year end 31st March 2011

Fund and Liabilities	Rs. '000s
Trusts Funds or Corpus	95,092
Earmarked and Other Funds	43,830
Current & Other Liabilities	138,194
<b>Total</b>	<b>277,117</b>

Property and Assets	Rs. '000s
Fixed Assets	15,472
Investments	76,347
Current & Other Assets	185,298
<b>Total</b>	<b>277,117</b>





## Outreach

Over 8 million individuals participated in campaigns launched this year.

## Communication

Several publications on key environmental and wildlife issues were released.

## Conservation

Conservation witnessed significant achievements in 2011, from camera trapping exercises and rhino translocation, to influencing businesses towards sustainable practices, and building support from local communities.

## Education

Students from more than 12,000 institutes across India were engaged in several activities, sensitizing them about environmental issues.

## Fundraising

Jungle series launched as an innovative tool to engage with corporates and individuals.



### Why we are here

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature.

[www.wwfindia.org](http://www.wwfindia.org)

© 1986 Panda Symbol WWF-World Wide Fund For Nature (Formerly World Wildlife Fund)

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