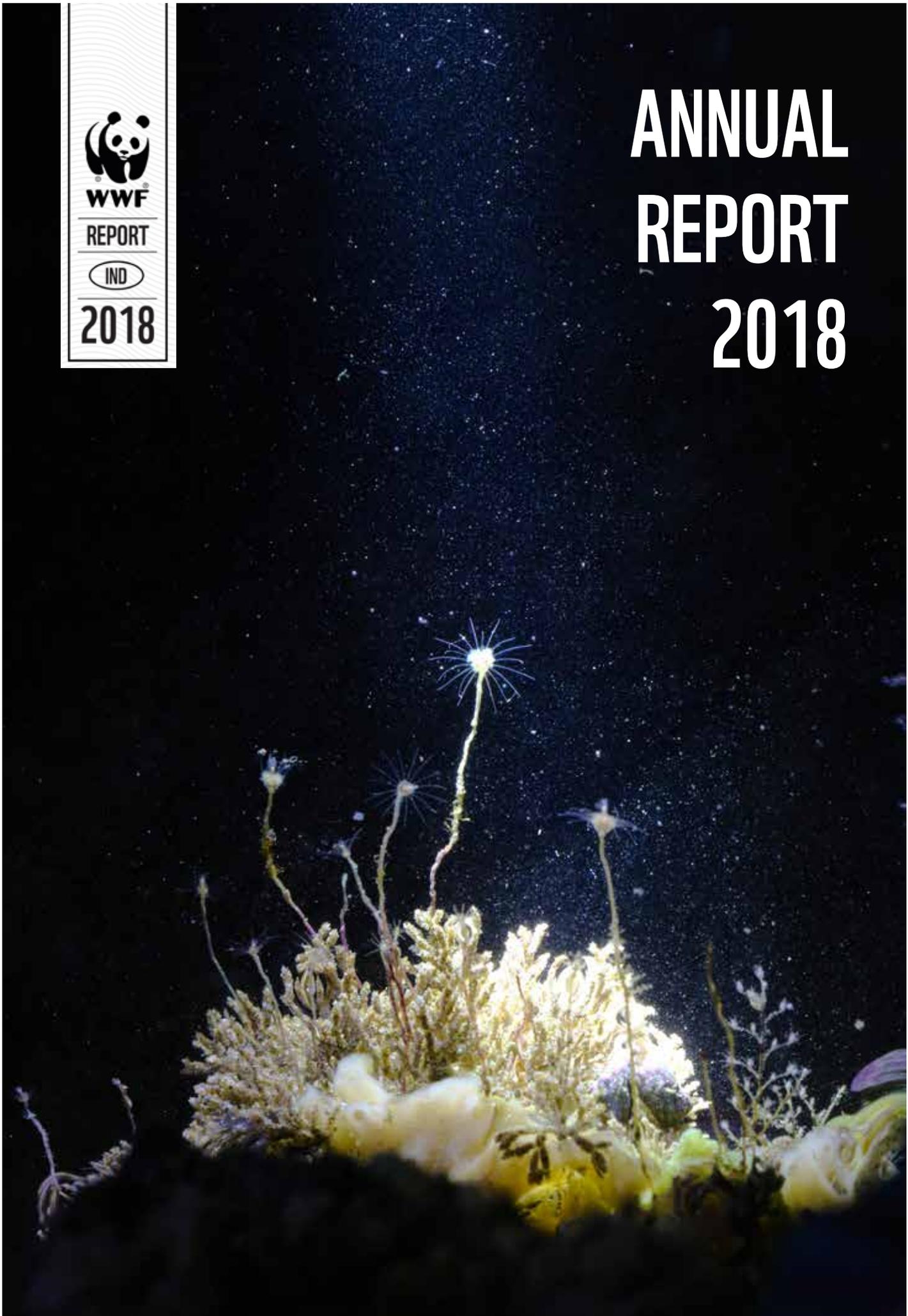




# ANNUAL REPORT 2018



Annual Report 2018  
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#### Acknowledgements

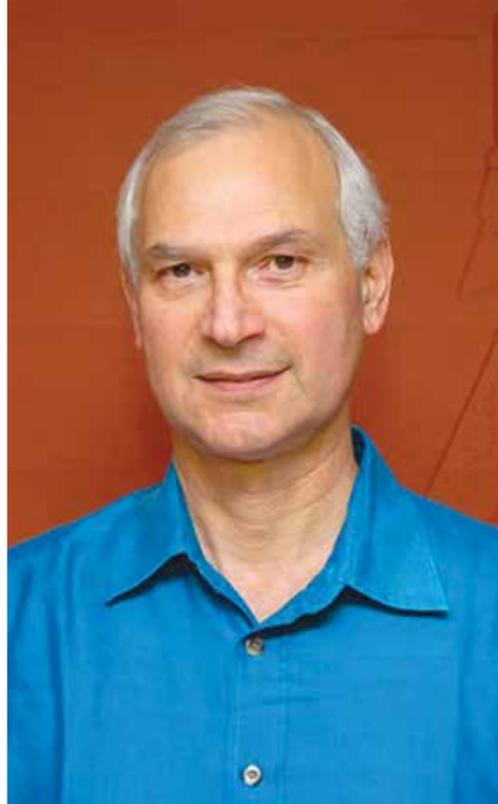
WWF India would like to acknowledge the support  
of all its partners including the National and State  
Governments, State Forest Departments, educational  
institutions, NGOs and CBOs, corporates and industry  
bodies, local communities, media and the international  
network of WWF offices. These collaborations play an  
instrumental role in helping us implement conservation  
initiatives and achieve impact on ground.



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# PRESIDENT'S NOTE



We are living in times of rapid change. India is moving towards a steep growth trajectory, aiming to become one of the leading economies of the world by 2030. This brings with it an opportunity to adopt a sustainable development pathway that improves the lives of millions of Indians, while preserving our natural heritage – our forests, rivers, oceans and wildlife.

WWF India is committed to creating and demonstrating practical solutions that support India to conserve biodiversity, maintain its ecosystems and contain its ecological footprint. The organisation is constantly innovating and evolving to remain relevant to the times and ensure it has the capacity to deliver conservation impact needed for India to achieve sustainable development.

WWF India's initiatives on-ground, its partnerships with a diverse set of stakeholders, including governments and businesses, address India's complex environmental challenges and contribute to building an India in which people live in harmony with nature.

I congratulate the WWF India team for their contributions in environment conservation, and commend them for their dedication and hard work.

**Jamshyd N. Godrej**  
*President, WWF India*

# FROM THE SG & CEO



WWF India is entering its 50th year of service towards conservation of nature in the country. We have dedicated our work towards building a legacy of delivering sustainable solutions for challenges at the interface of development and environment conservation. We share our achievements with all our stakeholders – government, research organisations, NGOs, corporates and businesses, education institutions – and our donors and supporters. Our work would not be possible without their trust, collaboration and support.

This Annual Report highlights the combination of approaches we deploy to find solutions for India's complex environmental challenges. We focus on creating science-led solutions and demonstrating them in the field to encourage their widespread adoption. We attempt to inform science-driven policy design that promotes sustainable development. We forge strategic partnerships with diverse stakeholders and build platforms for collaboration, knowledge sharing and cross learning from one another.

Last year our work on species ventured into new territory, through studies on tigers in the high-altitude Himalayas and radio-tagging of golden mahseer. We launched new education and capacity building programmes on countering illegal wildlife trade, environmental law, climate innovations and more. The report particularly draws attention to two initiatives that showcase how scientific solutions are being translated into action on the ground to achieve conservation impact. These focus on enhancing environmental flows in the Ramganga river in Uttar Pradesh and finding scalable and profitable solutions for crop residue burning in Punjab to reduce air pollution and carbon emissions.

We are also witnessing increased participation and support from the general public in our awareness campaigns, events and on-ground conservation projects. Consumer awareness campaigns like Earth Hour and Give Up to Give Back are receiving tremendous support from corporates and businesses. We are also happy that the Wild Wisdom Quiz is now attracting students and teachers from schools in countries beyond India. Our other education initiatives like Eco-Trails, One Planet Academy and volunteering are seeing increased participation from students and teachers and people from various walks of life.

We continue to be steadfast on our mission of building a future in which humans live in harmony with nature and hope that our work across the country will inspire people to come forward and support us in our endeavor to protect the planet and its natural heritage.

I express my sincere appreciation for the dedication, passion and vision of our teams, which has made WWF India the organisation it is today.

**Ravi Singh**  
*Secretary General & CEO, WWF India*

## BOARD OF TRUSTEES

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**Mr. Arvind Wable, Vice President & Trustee Treasurer**  
**Mr. Shyam Sharan**  
**Ms. Chanda Singh**  
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**Mr. N. Kumar**  
**Mr. Ravi Singh, Secretary General & CEO & Ex-Officio**

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**Mr. Sudhir Vyas**  
**Mr. Ratindra Puri**  
**Mr. Brijendra Singh**

# SCIENCE AND CONSERVATION

*India's complex environmental and developmental challenges require science-based solutions that can be implemented at scale. WWF India conducts studies and research on conservation issues, which guide the design of its on-ground actions and policy inputs. The results are shared widely with partners and stakeholders, including state and central governments, to encourage science-led conservation action.*

## SEARCHING FOR TIGERS SKY HIGH

In partnership with the National Tiger Conservation Authority, the Global Tiger Forum and the Wildlife Institute of India, WWF India is conducting a survey of tigers and their habitats in the high-altitude areas of Uttarakhand, Sikkim, West Bengal and Arunachal Pradesh. These Himalayan regions have reported sporadic tiger sightings in the past, indicating the presence of small populations. The initiative, developed under the Integrated Tiger Habitat Conservation Programme (ITHCP), funded by IUCN-KfW, focuses on understanding the distribution of tigers and generating critical data to help design conservation strategies to protect their populations in high-altitude Himalayan forests.



Field surveys have been conducted in Himalayan forests up to **13,000** feet (asl) in four states, in close coordination with the Forest Department field staff.

**11,000+** media articles have been analysed to map human elephant conflict across India.



## UNDERSTANDING HUMAN-ELEPHANT CONFLICT

Human-elephant conflict is a major challenge that is threatening the well-being of elephants and communities living in and around forests. Designing effective mitigation measures requires a holistic understanding of the drivers of conflict and regions where it is most prevalent. To generate such knowledge, WWF India is undertaking an extensive analysis of conflict related media reports across the country from 2004 to 2018. Initial findings show that, in the last decade, media reports on conflict have increased. WWF India is also collecting primary data on conflict incidents from forest divisions of select elephant range states, in partnership with IUCN. These data will be analysed and corroborated with the media reports to identify high conflict regions and types of conflict such as crop and property damage, human and elephant death/injury, and railway accidents. It will complement on-going work to understand and mitigate human-elephant conflict in priority landscapes.

## CONSERVING THE GOLDEN MAHSEER

The golden mahseer – the state fish of Uttarakhand – is one of the most iconic fish found in free-flowing streams and rivers of the Himalayas. Its population is declining due to habitat degradation and unsustainable fishing practices. WWF India is working with the Wildlife Institute of India and the HNB Garhwal University to develop a Mahseer Conservation Action Plan for Uttarakhand, with a focus on securing the species' habitats. Studies are being conducted in the Ganga-Nayar river complex to understand the species' range, distribution and threats. A preliminary assessment in an 80 km stretch of the river Nayar has helped identify 13 deep pools and potential nursing grounds. Further, six mahseers will be radio tagged in the Nayar to understand its habitat preferences and estimate the specific river flow required for its survival.

**110 KM** of the Ganga-Nayar river complex is being studied to generate scientific information about the golden mahseer in Uttarakhand.



# IMPACTS IN THE FIELD

*WWF India translates scientific research into on-ground actions to address challenges at the interface of conservation and development. These field projects aim to prove the applicability, effectiveness and scalability of science-based solutions, thereby encouraging their widespread adoption by stakeholders at the local and national level, as well as inform policy.*

## ENHANCING LIVELIHOOD OPPORTUNITIES

Ramnagar and Kotabagh areas, adjoining the Corbett Tiger Reserve in Uttarakhand, hold critical wildlife movement corridors that are used by large mammals in the Terai Arc Landscape. Local community members from six villages in Ramnagar and Kotabagh have been trained in manufacturing farm-fresh and handmade food products such as pickles, chutneys, jams and juices. Sold under the brand name *Hameri*, the products have received FSSAI registration which clears them for quality and improves sale value. WWF India has supported this initiative by building capacity and skills of the community members, institutionalising procurement processes, retaining traditional food processing knowledge of the community, and creating market linkages for better sales.



**80**  
women from six villages have been supported to form a federation – Corbett Gramin Mahila Sangathan – and manufacture food products to enhance their household income.

## CONSERVING THE INDIAN RHINO

WWF India is working in all rhino bearing states of India - Assam, Uttar Pradesh, West Bengal and Bihar – to secure wild rhino populations and expand their distribution in potential habitats. This year, WWF India and the Wildlife Trust of India supported the Uttar Pradesh Forest Department in relocating four rhinos within Dudhwa National Park to establish a second population and reduce risks of disease. This is an attempt to expand rhino distribution in Dudhwa after they were reintroduced 34 years ago. At the national level, with guidance from the Ministry of Environment, Forest & Climate Change, WWF India is supporting state Forest Departments in using a new tool – Rhino DNA Indexing System (RhoDIS) – to collect samples of rhino dung, tissue and blood. Approximately 2,300 samples have been collected and sent to the Wildlife Institute of India for analysis, which will help establish a national rhino DNA database.



**NATIONAL RHINO DNA DATABASE**  
This database will enable the scientific and forensic investigation of rhino poaching and rhino horn trade, aimed at curbing wildlife crime in rhino products.

## FISHERS ACTING AS SEA-WATCHERS

WWF India is engaging with fisher communities along the coast of Maharashtra, Goa and Karnataka to record sightings of dolphins, whales and porpoises, as well as incidents of bycatch in fishing gears and entanglement in discarded or lost fishing nets. This critical data will help understand the overlap between the habitat of these marine species and their interaction with fisheries, thereby supporting strategies to reduce incidents of bycatch and entanglement. A smart phone app is being designed to allow fisherfolk to upload their observations in real-time when at sea, ensuring accuracy of the data in a standardised form. The information will be used to prioritise areas for intervention and identify methods to mitigate such incidents.



**40+**  
fisherfolk have been trained to collect critical data on sightings of marine species, net entanglement and accidental catch. They recorded 35 sightings in the 2018-19 fishing season.

# COLLABORATIONS FOR IMPACT AT SCALE

*Sustainable development in India requires collaborative and concerted efforts from a wide range of stakeholders at the local, national and international levels. WWF India works closely with governments, businesses, education and research institutions, NGOs and CBOs, to jointly find solutions that balance development and environment conservation.*



## ENHANCING CLIMATE ACTION IN CITIES

WWF's Global One Planet City Challenge (OPCC) encourages cities to integrate climate mitigation and resilience into urban policies and action plans. This year, more than 400 urban stakeholders – municipal corporations, state governments, think-tanks, research institutions, industry associations, corporates and civil society – from six Indian cities were engaged to recognise pioneering climate actions, foster knowledge sharing, and showcase national and global best practices. A national level conference was organised in partnership with ICLEI-South Asia, providing a platform for eight cities to learn, share experiences and network with multiple stakeholders on the role of cities in addressing climate change. Mr. H. S. Puri, Minister for Housing & Urban Affairs, Civil Aviation and Commerce and Industry, was the Chief Guest.

**26** cities are part of the OPCC network in India, working to integrate low carbon development and climate resilience into urban planning.

WWF India launched an LLM Programme with O. P. Jindal University in the presence of judges from the Supreme Court of India, Supreme Court of Hawaii, USA and the National Green Tribunal of India.



## MAINSTREAMING ENVIRONMENT IN LEGAL EDUCATION

In a significant step towards integrating environmental law into mainstream legal education in India, WWF India partnered with the O.P. Jindal Global University to jointly design and launch an L.L.M. Programme on Environmental Law, Energy and Climate Change. This first of its kind course aims to enhance knowledge on national and international environmental laws, energy laws and policies, climate change governance, renewable energy development, and climate adaptation, through classroom teaching and field experiences. Imparted by O. P. Jindal University professionals, international practitioners and environment experts, the programme will equip lawyers to adapt, innovate and apply their legal knowledge to further the cause of environment conservation.

## PROMOTING SUSTAINABLE PALM OIL UPTAKE

The Sustainable Palm Oil Coalition (SPOC) for India was launched in partnership with the Centre for Responsible Business, Roundtable for Sustainable Palm Oil and Rainforest Alliance. India SPOC aims to address the barriers to the uptake of sustainable palm oil by creating awareness about sustainable palm oil, promoting best practices, and building sustainable supply chain linkages. It will engage with key stakeholders such as industry associations, FMCG manufacturers, retailers, banks and financial institutions, palm oil traders and producers, and civil society organisations. The current members of the coalition include Hindustan Unilever (HUL), P&G, L'Oreal, Ferrero, Colgate - Palmolive, Haldirams, Rabobank, AAK - Kamani, Galaxy Surfactants, IDH Sustainable Trade Initiative, Carbon Disclosure Project (CDP), Navabharat and HSBC.



**13** companies from diverse backgrounds have joined the coalition to address barriers to sustainable palm oil consumption in India.

## PROMOTING SUSTAINABLE LIVELIHOODS AND CONSERVATION

The People and Protected Areas Programme, supported by the SEED division of the Department of Science and Technology, promotes technological innovations for sustainable livelihoods and conservation of local natural resources for communities living in and around Protected Areas. This initiative works with local NGOs to establish diverse sustainable models for livelihood diversification and conservation. WWF India culminated the second phase (2014 – 2019) of this initiative, which focused on augmenting incomes of local communities through on-farm and off-farm actions, and developing capacity for enhancing linkages with other technical and government agencies. Development of handicraft products, community-based tourism, NTFP value addition, horticulture, tuber cultivation, clean energy access, water conservation measures, low-cost polyhouses for vegetation cultivation as well as multi-tier cropping were some of the activities undertaken.

### OUTREACH

65,000+ community members  
7000+ households  
29 Protected Areas  
27 Partners



# KNOWLEDGE SHARING



*Collective action is not only about collaboration, but also building capacity and sharing knowledge. WWF India organises training programmes, workshops and certificate courses for various stakeholders, as well as creates platforms for knowledge sharing, cross learning and celebrating innovative best practices in conservation.*

19

cleantech SMEs were supported through capacity building to scale-up innovative climate solutions that reduce GHG emissions and increase clean energy access.



## SCALING UP CLIMATE INNOVATIONS

The Climate Solvers initiative recognises Small and Medium Enterprises (SMEs) for their innovative low carbon technologies that significantly reduce greenhouse gas (GHG) emissions or improve clean energy access. Since 2012, 19 Indian SMEs have been globally recognised for their innovations. Going a step further, WWF India has partnered with D-Labs, the incubation and acceleration arm of the Indian School of Business (ISB), Hyderabad, to build the capacity of selected Climate Solver SMEs to scale up their existing climate innovations. These SMEs participated in specially curated six-month programmes – Business Accelerator and Capacity Development – that helped them chart future growth strategies and create business plans to secure funding.

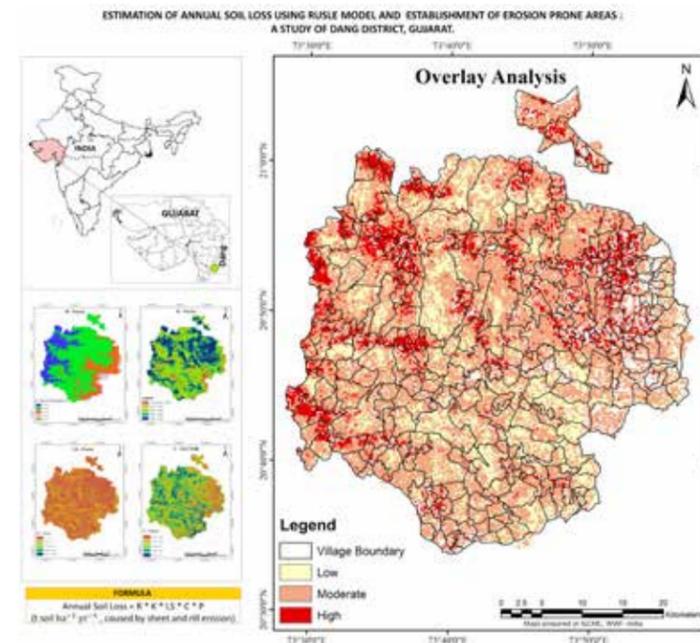
## CURBING CYBER CRIME IN ILLEGAL WILDLIFE TRADE

The internet is emerging as a major platform for illegal trade of wild species and their products in India. Enforcement agencies are now faced with the challenge of monitoring online wildlife crime, with limited understanding of the complex and fast-moving cyberspace. Recognising this, TRAFFIC India partnered with the National Tiger Conservation Authority (NTCA) and the Police Radio Training School (PRTS), Indore to jointly design and launch CYBER CLAW – India's first programme to build the capacity of enforcement officials in monitoring and curbing online wildlife crime. The vision is to have specialised forces that deal with online wildlife crime in all wildlife rich areas across India.



100+

personnel from three Tiger Reserves – Corbett, Kaziranga and Kali (Anshi-Dandeli) - have been trained in skills to monitor and combat online trade of wildlife.



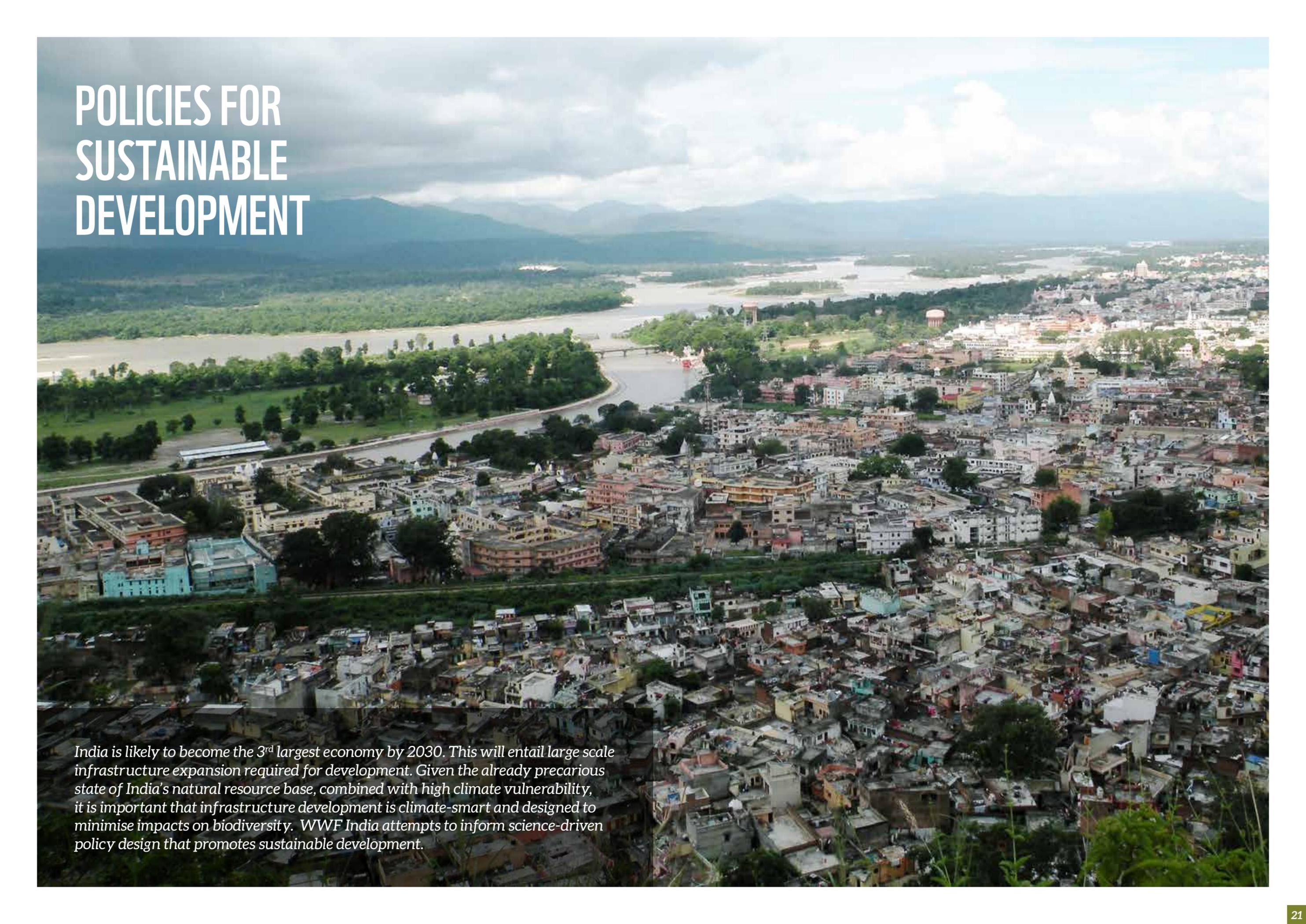
30

students were trained in using geospatial techniques in wildlife management through WWF India's certificate course.

## PROMOTING GEOSPATIAL KNOWLEDGE FOR CONSERVATION

The use of geospatial tools and techniques is an integral part of WWF India's research and strategy design for wildlife and natural resource management. To promote this widely, WWF India introduced a two-month certificate course on geospatial techniques in wildlife management, under the Green Skill Development Programme conducted by the Ministry of Environment, Forest and Climate Change (MoEF & CC). The certificate course focuses on enhancing the knowledge of students in GIS softwares, field surveys, wildlife census methods and techniques, and more – all through the lens of geospatial tools. Of the 30 students trained this year, 15 have already been placed in various institutes and organisations or are pursuing higher education.

# POLICIES FOR SUSTAINABLE DEVELOPMENT

An aerial photograph of a city, likely Varanasi, India, showing a dense urban area with a mix of colorful buildings and a large river (the Ganges) winding through it. In the background, there are green mountains under a cloudy sky. The text 'POLICIES FOR SUSTAINABLE DEVELOPMENT' is overlaid in the top left corner.

*India is likely to become the 3<sup>rd</sup> largest economy by 2030. This will entail large scale infrastructure expansion required for development. Given the already precarious state of India's natural resource base, combined with high climate vulnerability, it is important that infrastructure development is climate-smart and designed to minimise impacts on biodiversity. WWF India attempts to inform science-driven policy design that promotes sustainable development.*

## BUILDING CLIMATE RESILIENCE IN SUNDARBANS

The Sundarbans is highly vulnerable to the impacts of climate change, which threatens biodiversity as well as the safety and livelihood of local communities. WWF India is working with government agencies, civil society partners and scientific institutions to support village panchayats and local communities in incorporating climate resilience into development planning, thereby securing livelihoods, biodiversity and ecosystem services. For the first time, panchayats will undertake science driven development planning that reduces climate vulnerability. The aim is to create Climate Smart Panchayats in all vulnerable islands of the Sundarbans, thereby contributing to sustainable development at scale. Building on WWF India's Delta Vision 2011, a dialogue has been initiated with relevant stakeholders, including elected representatives exploring alternatives to business as usual. In collaboration with the Observer Research Foundation, (Kolkata), a platform is proposed for interaction among stakeholders and top domain experts on the current and future threats to the region, as well as opportunities. The outcomes will be used to initiate the comprehensive development planning process for the Sundarbans of the future.



### CLIMATE SMART PANCHAYATS

Modelled on the concept of Climate Resilient Village by the National Initiative on Climate Resilient Agriculture under the Indian Council of Agricultural Research, and the Climate Smart Hubs of the U.S. Department of Agriculture, Climate Smart Panchayats focus on improving local livelihoods, building income opportunities from existing assets, enhancing farmland productivity through low-cost scientific measures, and modifying crop calendars according to impacts of climate change.



## INTEGRATING SDGs INTO DISTRICT PLANNING

The 17 Sustainable Development Goals (SDGs) aim to achieve equitable and environmentally sustainable economic development. Recognising that "Localisation of SDGs" is a crucial requirement, states are developing SDG vision documents and integrating the SDG targets into planning processes. WWF India is collaborating with the Uttar Pradesh State Planning Commission to integrate SDG targets into the district planning process of Pilibhit and Moradabad, both priority areas for WWF India's work on rivers, wetlands and terrestrial biodiversity. Discussions are underway to develop a roadmap on how certain schemes can be broadened to enhance SDG integration, increase the coverage and fund allocation; as well as develop new schemes for SDG targets that are not covered by current government schemes and missions.

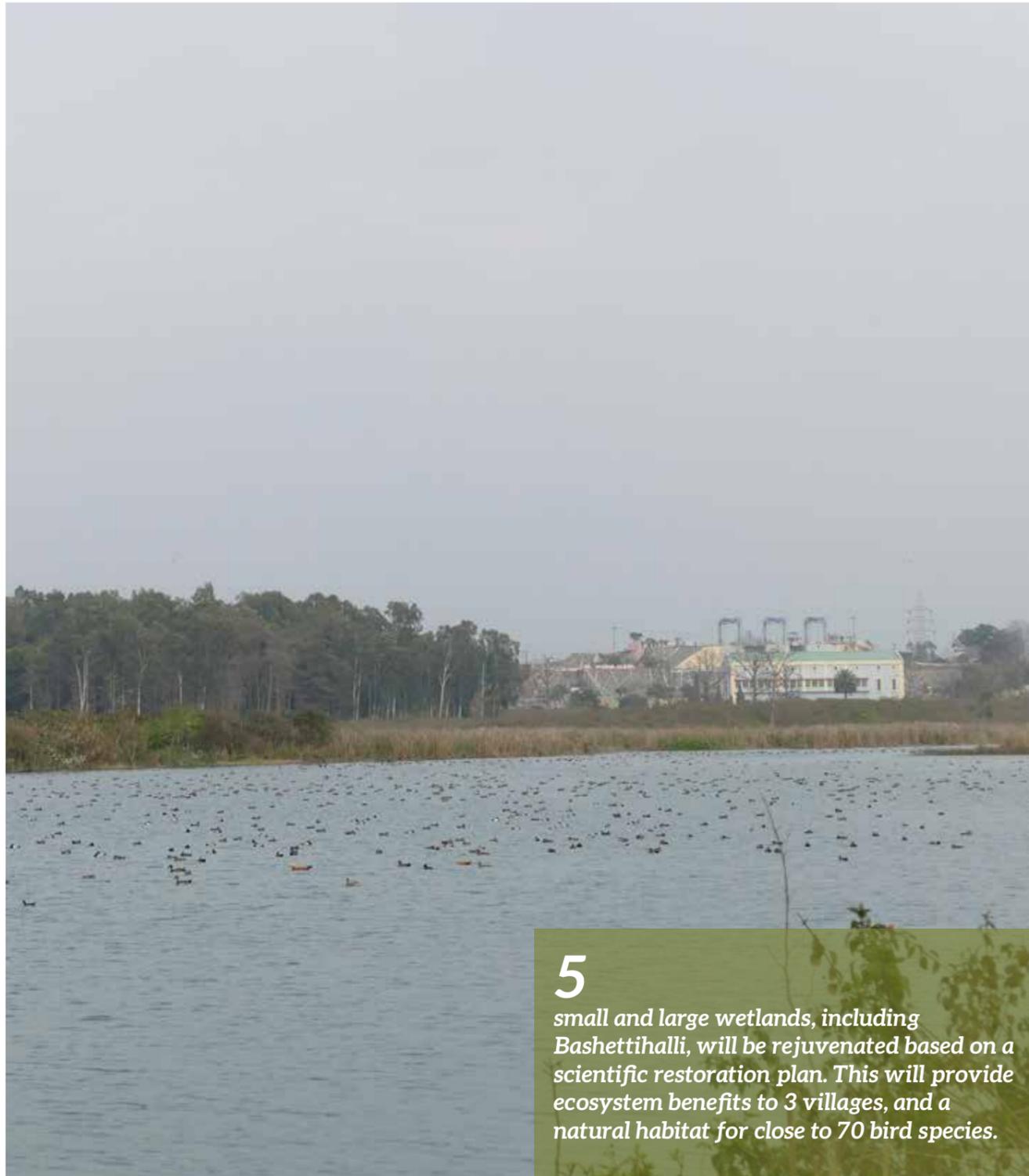


### KNOWLEDGE PARTNERSHIPS

As "technical experts on integrating environmental dimensions in the planning process for the Dehradun Masterplan 2041" by MDDA, WWF India has initiated a series of workshops with the Town and Country Planning Officers in Uttarakhand to sensitise them on environmental challenges and identifying innovative solutions for sustainable development.

## PROMOTING SUSTAINABLE URBAN DEVELOPMENT

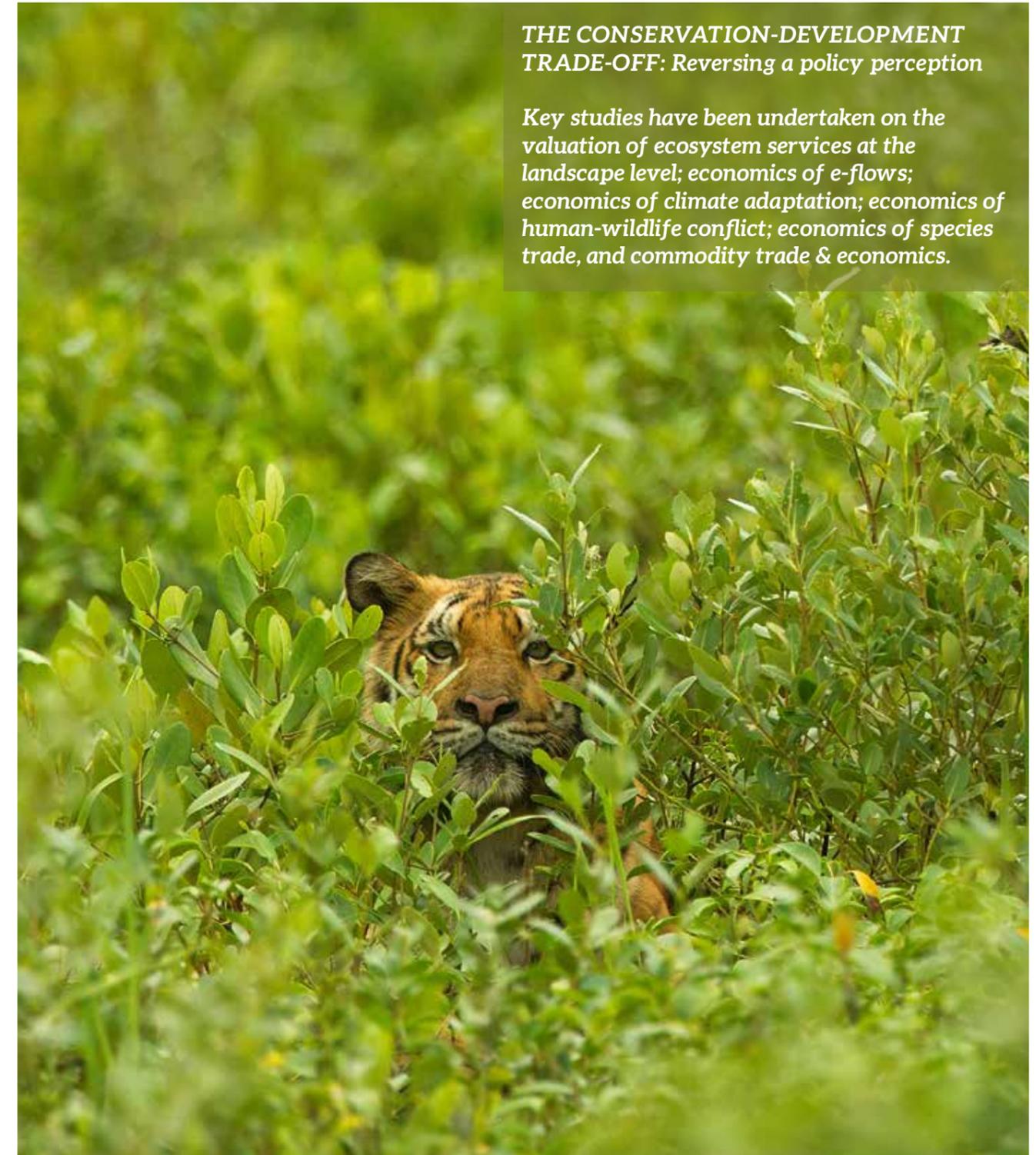
Urban areas in India are experiencing immense population pressures and cities are expanding beyond capacities, leading to unsustainable footprints on water, land and biodiversity. The rampant and unplanned urban expansion is leading to change in land use in the peri-urban areas located outside the city limits. These areas often act as soft edges between forests and the urban centers. Planned and responsible development of such crucial areas is critical, in order to minimise the urban footprint on forests and maintain forest connectivity. To address this issue, WWF India is working on conservation-based land use planning solutions and engaging with relevant stakeholders in Uttarakhand at the regional, district and city level, to provide smart solutions to manage the impacts of urban expansion.



**5**  
*small and large wetlands, including Bashettihalli, will be rejuvenated based on a scientific restoration plan. This will provide ecosystem benefits to 3 villages, and a natural habitat for close to 70 bird species.*

## ESTABLISHING THE IMPORTANCE OF URBAN WETLANDS

The Bashettihalli wetland in the Bengaluru rural district of Karnataka holds little or no water today, due to degradation of the catchment and land use changes around it, including loss of connectivity with upstream wetlands which are part of a cascade system. This year, WWF India concluded a multi-stakeholder effort to develop a participatory and science-based wetland restoration plan for Bashettihalli and its upstream wetlands. The plan was approved by the multi-stakeholder committee created by WWF India, comprising Gram Panchayats, District Administration, Karnataka State Pollution Control Board, Industry Associations and the Deputy Commissioner. They will now lead the restoration work on these wetlands, with technical inputs from WWF India.



## THE CONSERVATION-DEVELOPMENT TRADE-OFF: Reversing a policy perception

*Key studies have been undertaken on the valuation of ecosystem services at the landscape level; economics of e-flows; economics of climate adaptation; economics of human-wildlife conflict; economics of species trade, and commodity trade & economics.*

## DEVELOPING ECONOMIC ARGUMENTS FOR CONSERVATION

The Ecological Economics lens is used to justify the imperative to strike a balance between development, livelihoods, and conservation. The current need is not merely to understand the trade-offs between conservation goals and development priorities, but also to create opportunities for processes and institutions to reconcile between the trade-offs. With the aim of embedding environmental conservation strategies in the framework of our development paradigms, the Ecological Economics programme offers fact-based alternative development policies and practices that take into account the values of ecosystem services and biodiversity. It promotes the use of economic instruments to help conservation and sustainability. Several WWF India studies in 2018-19 were used for policy advocacy and popular articles are creating awareness among stakeholders.

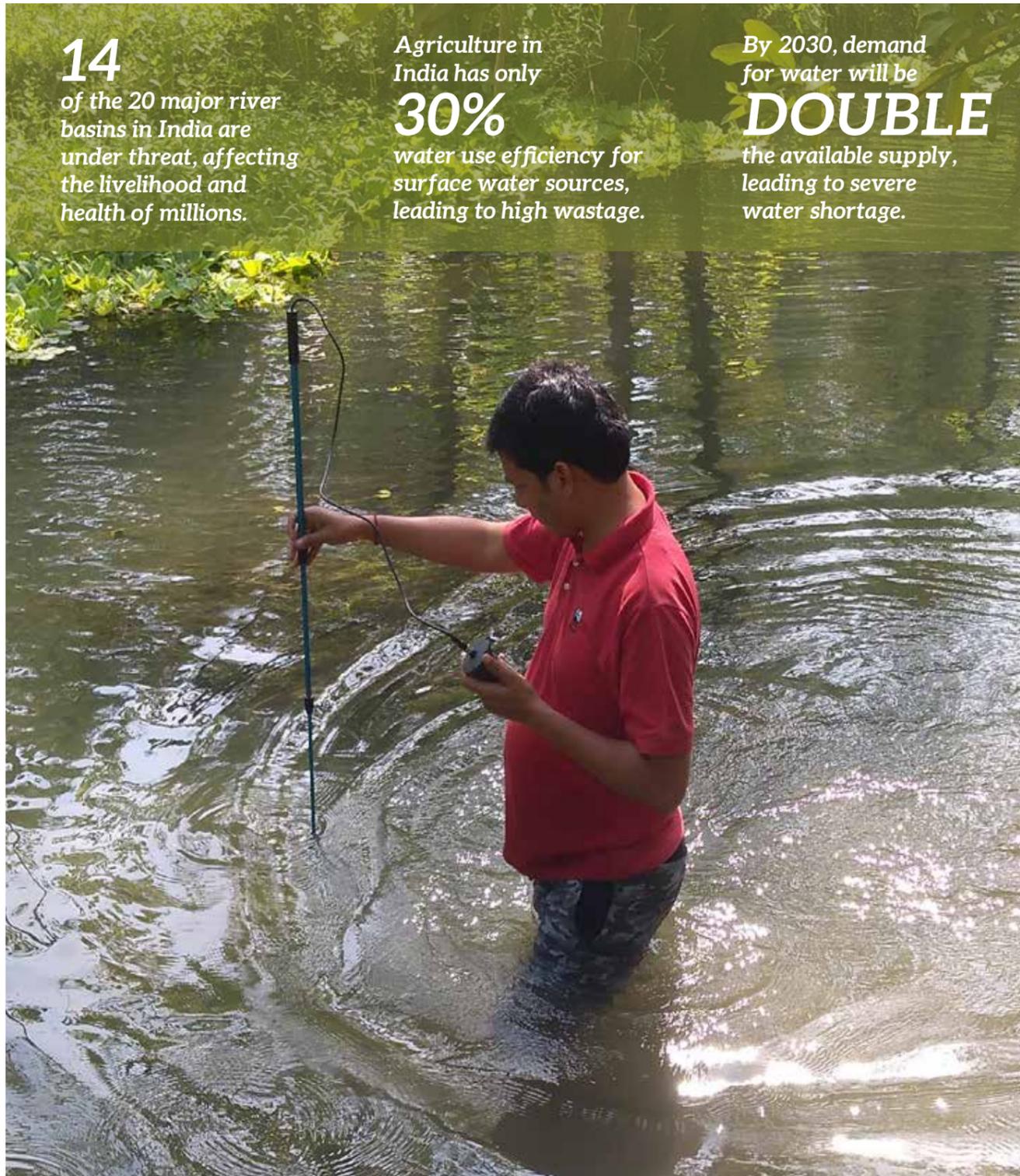
# PROOF OF CONCEPT



*This year, two initiatives were tested to demonstrate how science-led solutions can be translated into conservation action on the ground. They demonstrated that such solutions deliver higher impact and are scalable.*

## ENHANCING E-FLOWS IN THE RAMGANGA

India's rivers are facing unprecedented pressures due to over extraction, pollution from industrial and sewage discharge, and poorly planned infrastructure development. This is impacting river health and aquatic biodiversity as well as water security for millions of people.



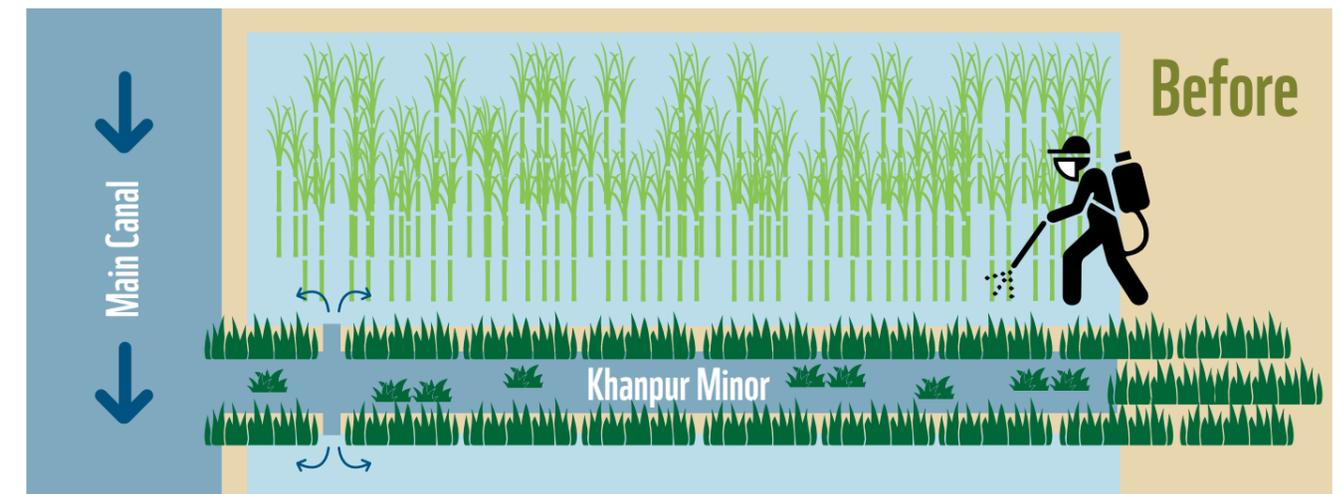
**14**  
of the 20 major river basins in India are under threat, affecting the livelihood and health of millions.

Agriculture in India has only **30%** water use efficiency for surface water sources, leading to high wastage.

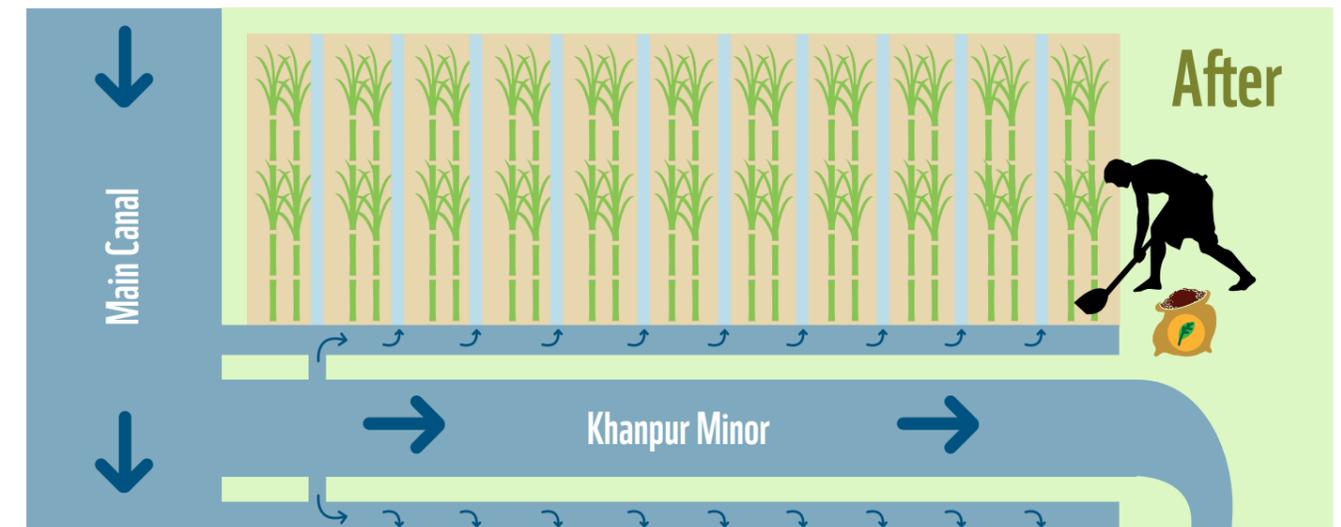
By 2030, demand for water will be **DOUBLE** the available supply, leading to severe water shortage.

WWF India has been working to conserve the Ganga and its tributary, the Ramganga, through addressing major threats, including water over abstraction. A key focus area has been an assessment of Environmental Flows in the Ramganga and developing a Trade-Offs Analysis that enables decision-makers to weigh the impact of water allocation decisions.

This year marked a significant milestone in demonstrating improved Environment Flows for the river Ramganga. A 'proof of concept' project was initiated to enhance flows in the Karula, a tributary of the Ramganga river system, in partnership with the Uttar Pradesh Irrigation and Water Resource Department, Government of Uttar Pradesh, the Bijnor District Administration, gram panchayats, farmers and communities. Flows will be enhanced in the Karula by securing water through supply and demand side management and institutional establishment to sustain the initiative.



More than 120 farmers (50% of sugarcane farmers) from four villages in the Khanpur minor command area of Bijnor adopted Better Management Practices for irrigating sugarcane, thereby reducing their water demand.



The Khanpur minor canal was repaired by plugging leaks and outlets, desilting and de-weeding, and installing new outlet head pipes.

Close to 25% water savings were recorded in the Khanpur minor command area, as a result of these actions.

### Karula River

This water has reached the tail end of Khanpur canal and work is underway to channel the saved water to enhance flows in the Karula, and ultimately the Ramganga river system. WWF India is facilitating the establishment of a Water User's Association (WUA) as per the Uttar Pradesh Participatory Irrigation Management (PIM) Act 2009 to sustain this initiative.

**Footnote:** Environment Flows is the quality, quantity and timing of water flows in a river to sustain its ecological integrity and ecosystem services.

## “PELTING OUT” POLLUTION

Growing air pollution in India, particularly in the north, is an issue of national concern. Widescale crop residue burning in northwest India has been identified as a major pollution source, particularly in the winter months. This practice also contributes to carbon emissions and deterioration of soil health.

**15**

of the 20 cities with the worst air quality globally, are in India.

**18**

Million Tonnes of rice straw is burnt every year in Punjab, leading to extremely high PM2.5 levels above WHO's safety standards. This emits 29 MT CO<sub>2</sub> of green house and other gases.

**Top 5**

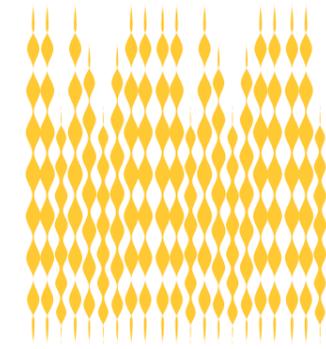
health risk factors in India include air pollution, leading to premature mortality.



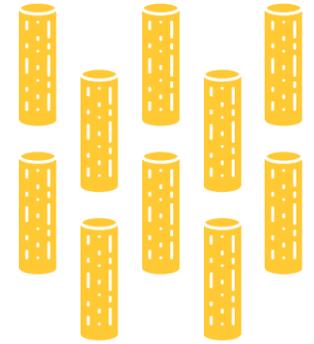
WWF India works with farmers to promote sustainable agriculture practices that reduce water and carbon footprints, while also improving crop productivity. The focus so far has been on cotton and sugarcane across all major production belts of India.

This year, WWF India worked towards finding a scalable and cost-effective solution to address crop residue burning in northwest India. A pilot project was launched to convert rice straw into high quality energy pellets, to be sold as fuel for boilers. Implemented through a partnership between paddy farmers in Punjab, energy solutions company A2P Energy and home furnishing manufacturing company Jawandsons, this pilot proved the efficiency and potential scalability of this solution.

A2P Energy procured rice straw from paddy farmers at Rs 2,500 per acre. After multiple rounds of testing, they successfully improved the calorific value of the pellets, making them cost effective as a power source.



Rice straw converted into energy pellets.



WWF India engaged with Jawandsons, a major supplier for IKEA, to procure these energy pellets for feeding their boilers. They consume up to 3 tonnes of rice straw pellets every day.



Paddy farmers were incentivised to stop burning, as they received a good price for the rice straw without worrying about storage or transportation.

Studies reveal that, if scaled, this solution can provide the following benefits:



Reduce rice straw burning by 28% in Punjab, thereby bringing CO<sub>2</sub> emissions down by 28 million tonnes.



Potentially generate an income of Rs 500 Crores through new opportunities in industrial growth such as production of pellets, as well as for farmers through sale of rice straw.

# NATIONAL OUTREACH



**30 M**

people reached through digital platforms, campaigns and other outreach initiatives

**200,000+**

students youth engaged through educational programs

**6000+**

volunteers participated in environment activities

**2000+**

stories covering our work across national and regional media platforms

**15**

ambassadors supported WWF India campaigns

**2**

National

Ambassadors appointed –  
Rohit Sharma – Ambassador for Rhino Conservation and  
Yami Gautam – Ambassador to mitigate Illegal Wildlife Trade



## EARTH HOUR 2018

Over the years, Earth Hour has evolved into the largest global grassroots movement on the environment, witnessing participation from over 188 countries worldwide. Through innovative and engaging messaging, the campaign inspires mindful consumption of resources to reduce one's footprint on the planet. This year, Earth Hour inspired individuals, organisations, institutions and governments to #Connect2Earth by encouraging conversations and actions on stopping the loss of nature.



## "GIVE UP" TO GIVE BACK

This year, Earth Hour was used as a platform to launch a unique initiative – 'Give Up' to Give Back – which aims to inspire individuals, organisations and institutions to 'GiveUp' some habits and lifestyle practices that are detrimental to the environment and choose alternatives that 'give back' to nature. The initiative received unprecedented response across all audience groups.



## WILD WISDOM QUIZ

Asia's largest wildlife quiz broke new records, with participation from more than 60,000 students from 885 schools across 200 Indian cities. It is now conducted in three countries, with Bhutan following in Nepal's footsteps and launching the quiz this year. The theme – The Price of our Planet – supported the Convention on Biological Diversity's Aichi Target 1 and raised awareness about the significance of natural resources, and human impact on them. The quiz was endorsed by the Central Board of Secondary Education and Kendriya Vidyalaya schools.



## ECHO - WWF VOLUNTEERS

A national level competition called ECHO was launched under the WWF Volunteers programme to encourage university students to design innovative, long-term conservation projects that have high impact. 2000 youth from 30 colleges across five states designed and promoted interventions to reduce the use of single-use plastics. WWF India supported the youth by providing in-depth knowledge on the subject and management skills to execute their projects. Various other WWF India organised conservation projects received participation from more than 23,000 youth across six states.



## BAREFOOT BOTANIST & BIRDER

To discover the secret world of plants and birds, an interactive Barefoot Botanist and Birder course was organised for citizens wanting to enhance their knowledge of biodiversity in their surroundings. More than 50 nature enthusiasts participated to learn about morphology, natural adaptation, reproduction and habitats of common plants and birds. Conducted by experts, the courses used a mix of classroom and field trips to develop in-depth understanding of biodiversity and help participants recognise various species of plants and birds.



## COOL CONSERVATIONISTS

This summer, a series of workshops were organised to help young children connect with nature and promote biodiversity conservation. Close to 80 students participated in fun activities like nature walks, interactive discussions, quizzes and film screenings to learn about various local wildlife species – birds, snakes, lizards, butterflies and frogs – as well as nature's importance for human well-being. The workshops culminated with the participants creating and performing wildlife skits for their friends and families in small events organised by WWF India.



## TOONY TAILS

This unique exhibition aims to create awareness about the wonders of nature, environment conservation and sustainable living, through wildlife cartoons and humor. It blends learning with fun through interactive and enjoyable activities such as dance like a bear on Macarena, send postcards to your favorite animals, play on the floor game of Uncle Bikky's Nature Trail, or learn to draw cartoons in simple steps. It has been curated using artistic, environment friendly material and designed by Rohan Chakravarty, creator of the Green Humour brand.



## ADOPT A TREE

In its 14<sup>th</sup> year running, Adopt A Tree has become a signature campaign for WWF India. Every year in the monsoons, individuals from all walks of life and organisations across India show their support for nature by adopting and nurturing tree saplings in their homes, offices or neighbourhood. In 2018, more than 21,500 saplings of native tree species were adopted through the campaign, contributing towards a healthier and greener planet.

# ENVIRONMENT EDUCATION



**ECO-TRAILS**  
A RENDEZVOUS WITH NATURE

**15,000+**  
citizens

**500**  
trails

**12**  
states

**ONE PLANET ACADEMY**  
DIGITAL HUB FOR CONSERVATION

**44,600**  
students

**2,100**  
teachers

**335**  
schools

**11**  
states

Environment education has been a core part of WWF India's work since its inception in 1969. The programme aims to inform, inspire and empower children, youth and citizens to take actions for a sustainable planet. With a focus on building environmental awareness and knowledge, developing requisite capacity and skills, and enabling action for conservation, it aims to influence at least one million children and young adults through five diverse programmes designed to build a generation of environment friendly individuals.

This year, Ek Prithvi – a formal school education programme that aims to motivate students, teachers and the entire school towards sustainability and conservation leadership – achieved new heights. In a short span of three years, the programme in partnership with State Education Departments, is empowering 1,30,000 students in 300 government schools across 11 Indian states. WWF India has signed long-term MoUs with four states. Such partnerships support in policy advocacy. Monitoring and evaluation efforts reveal that the programme is encouraging a behavior and attitude change towards environment friendly practices among teachers and students.

# EVENTS ACROSS INDIA



## CITIZEN-LED BIRD ATLAS, KERALA

WWF India is supporting a unique initiative to create district level bird atlases for the state of Kerala. This is a first of its kind citizen-science project, where people from all walks of life are encouraged to participate in surveys to document birds within and outside forest areas in all districts of Kerala. More than 2000 individuals across Kerala are working with 25 NGOs, which are part of the Kerala Forest & Wildlife Department's Green Partnership Programme, to document birds and create these atlases. WWF India is carrying out these bird surveys in three districts – Thiruvananthapuram, Kollam and Pathanamthitta – with participation from more than 110 volunteers.



## CORINGA BIRD FESTIVAL, ANDHRA PRADESH

Coringa Wildlife Sanctuary, the second largest mangrove forests on the east coast of India, is a haven for birds, including the endangered white rumped vulture. To raise awareness about the region's biodiversity, a bird festival was organised in December 2018 in partnership with the United Nations Development Programme, GEF, the Ministry of Environment, Forest and Climate Change (MoEF & CC), and the EGREE Foundation. More than 6,000 people, including 2,600 students from 15 neighbouring schools, participated in the festival. They were engaged in activities such as a puppet show, bird portrait painting competition, quizzes, and talks about regional birds and mammals. Hon'ble Deputy Chief Minister, Shri N. Chinarajappa, Member of Parliament Shri Pandula Ravindra and the District Collector, Shri Kartikeya Misra attended the festival.



## PLANTATION DRIVE, ASSAM

As part of the Adopt A Tree campaign, more than 150 villagers from three villages - Bandargon, Dandarai and Markang, participated in large-scale plantation drives. Close to 1,100 fruit-bearing tree sapling and medicinal plants were distributed for plantation. The initiative received participation from several school children, and was successful in raising awareness about the importance of tree and plant cover near human settlements.



## "COAST-WISE" - MARINE FESTIVAL, MAHARASHTRA

Coasts and beaches are more than just a tourist destination. They support immense marine biodiversity such as sea sponges, crabs, slugs, corals, and are breeding grounds for turtles. To raise awareness about these ecosystems, "Coast-Wise", a marine festival was organised in partnership with the Mangrove Foundation, Mangrove Cell of Maharashtra and Marine Life of Mumbai. Nearly 400 people participated in various activities over one month, which include intertidal photography and marine art workshops, film screening on marine life, talks on coasts as marine habitats, and flamingo boat rides.



## "GIVE UP" SINGLE-USE PLASTICS, WEST BENGAL

Festivals witness a spurt in shopping and eating out, and with it, the use of plastic carry bags and plastic plates, spoons and bottles. Single-use plastics are becoming a global pollution hazard for the planet, particularly seas and oceans. During Durga Puja this year, WWF India organised awareness drives around puja pandals to discourage the use of plastic bags and other single-use plastic items and adopt sustainable choices like paper or cloth bags, paper plates etc. Various puja committees and school and college students supported these awareness drives, which resulted in more than 1,000 people pledging to give-up single use plastics.



## CONNECTING WITH NATURE, MADHYA PRADESH

More than 500 students and citizens were engaged in eco-trails and nature workshops to build back a connect with nature and promote sustainable living. The objective was to encourage city dwellers to explore the wonders of nature and understand its link with human well-being. Participants were taken to nearby urban forests, highlighting their proximity to cities and the ecosystem services they provide. Through engaging activities like nature games and quizzes, and outdoor adventure sports like rope balancing and rappelling, participants learnt to enjoy nature once again.

# PUBLICATIONS



## DEMYSTIFYING SUSTAINABLE MOBILITY IN INDIA

This booklet presents the need to adopt sustainable mobility in the Indian context, providing a background on the present scenario in India and best practices being followed across several cities. It also aims to simplify the concept of sustainable mobility for a wider audience.



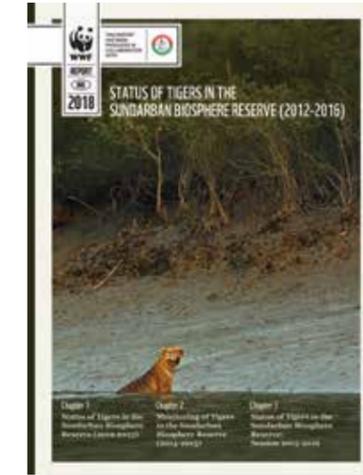
## SUCCESSFUL CLEANTECH INNOVATORS

This report profiles select SMEs who have established themselves in the area of clean technology solutions. It synthesizes key learnings shared by innovators for gaining traction with investors, and reveals the views of the investor community on aspects crucial to the success of an enterprise.



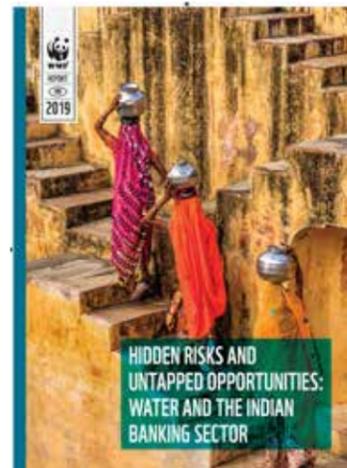
## BRINGING BACK THE HOUSE SPARROW

A report highlighting a project to bring back house sparrows in Gujarat and Daman through awareness programmes as well as setting up artificial nests in urban houses to improve the bird's chances of breeding. House sparrows once commonly found in urban areas, is declining in numbers due to loss of habitat, nesting and feeding areas.



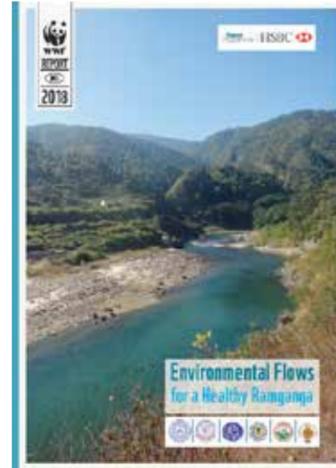
## SUNDARBANS TIGER MONITORING

This three-part report presents the findings of the tiger monitoring exercise conducted from 2012 to 2015 in the Sundarbans Biosphere Reserve. It reveals the tiger population in the Sundarbans and recommends management strategies for long term survival of tigers in the region.



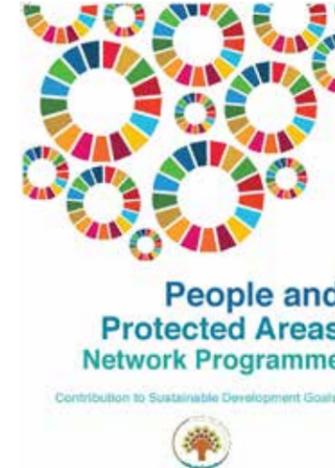
## WATER & THE INDIAN BANKING SECTOR

Launched jointly with the Indian Banks' Association, this report provides evidence that spiralling water risks in India can lead to tangible financial impacts for businesses, and subsequently for banks lending to them. It provides a framework for banks to integrate water related elements within their credit allocation and business development processes.



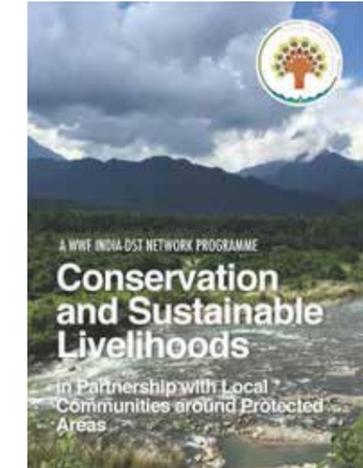
## E-FLOWS FOR A HEALTHY RAMGANGA

Released by Shri Dharam Pal Singh, Hon'ble Minister for Irrigation, Uttar Pradesh, this report documents the requirement of environmental flows in the Ramganga, its flow status and ways to ensure E-flows to revive the river Ramganga, a tributary of the Ganga.



## CONTRIBUTIONS TO SUSTAINABLE DEVELOPMENT GOALS

This report highlights contributions made to 9 Sustainable Development Goals by creating sustainable livelihood opportunities and clean energy solutions for local communities. The SDGs relate to no poverty and hunger, gender equity, clean water and sanitation, renewable energy, jobs and economic growth, innovation and infrastructure, and life on land and water.



## SUSTAINABLE LIVELIHOODS AND CLEAN ENERGY SOLUTIONS

A report highlighting the impact achieved during phase two of the project – People and Protected Areas – from 2014 to 2019. It showcases the various sustainable livelihood activities and clean energy solutions introduced among local communities living around 29 Protected Areas.



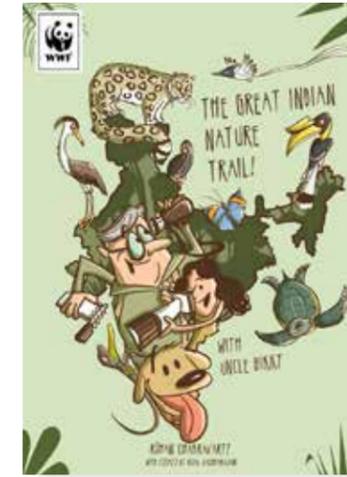
## HASTINAPUR BIRDS

A user-friendly field guide to help budding naturalists observe and recognise birds in and around Hastinapur Wildlife Sanctuary. It aims to raise awareness about the bird life in Hastinapur and garner support towards conservation of the region.



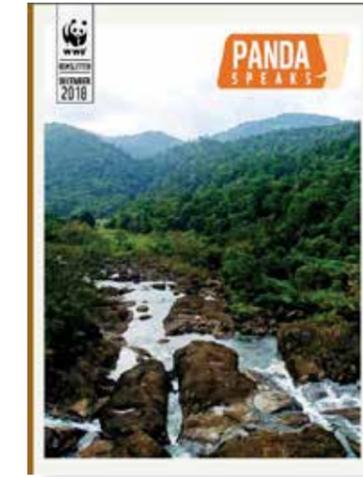
## DELHI LIZARDS

This is a compact user-friendly guide to help readers learn, identify and appreciate the magnificence of lizards. It carries photos and information on common lizards found in Delhi, including their varied habitats and remarkable characteristics.



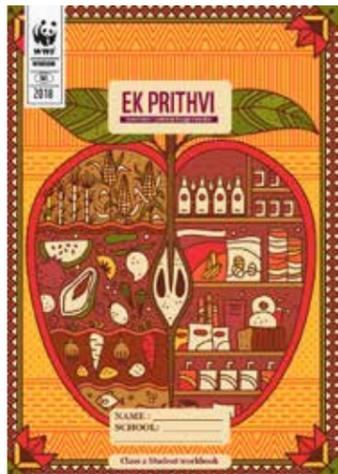
## A COMIC OF WILDLIFE ADVENTURES

This comic follows the adventures of an ornithologist Uncle Bikky, his wildlife photographer niece Chunmun and their pet dog Duggu. Illustrated by Rohan Chakravarty, the publication is packed with interesting trivia, humor and activities from different wild landscapes of India.



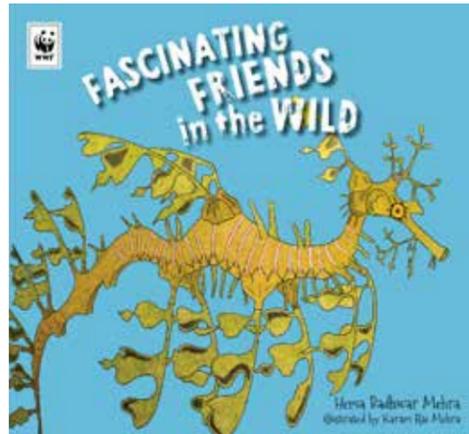
## DONOR NEWSLETTER

Published every quarter, the Panda Speaks is an exclusive donor newsletter which gives updates to our supporters about WWF India's various conservation efforts, human-impact success stories, and campaigns, among others.



## EK PRITHVI BOOKS

These books help teachers impart environment education through an engaging and action-oriented approach. Students record their observations, data and survey details during nature related outdoor activities. They cover five themes - water, waste, energy, biodiversity and food –aligned to the curricula of classes 1 to 12.



## RARE ANIMALS OF THE WORLD

This is a brightly illustrated children's books, written in rhymes to explore the uncommon and rare wild animals from A-Z. The publication is suited for 4 - 8 years old, helping them discover and respect the fascinating living organisms found on Earth.



## SUPER SNIFFERS DIGEST

Launched in 2018, this is TRAFFIC India's quarterly e-newsletter which highlights the achievements of wildlife sniffer dogs, popularly called Super Sniffers, who help curb illegal wildlife trade.



## OUR CORPORATE PARTNERS

A report documenting WWF India's corporate partnerships for sustainability in business, philanthropy and communication and awareness. It showcases the conservation successes achieved through these partnerships, demonstrating the critical role of businesses in environment conservation.

# CORPORATE SUPPORT



## SAHASRA JYOTI: LIGHTING UP HOUSEHOLDS THROUGH SOLAR POWER

On the Satjelia island in the Indian Sundarbans, hundreds of villagers have come together at dusk to witness a phenomenon they did not expect to see in their lifetime.

For the first time, their homes will light up with a simple switch of a button. These households have been connected to a solar micro grid and will now receive grid quality electricity 24 x 7 to power up three LED lights and a fan.

This was made possible due to the support received for Project Sahasra Jyoti from corporate organisations such as Bank of America as the Anchor partner, Schneider Electric as technical partner and part funders, along with Bain Capability Centre, H&M, Atkins, Ebay, PayTM, Trent Limited, Vardhman A&E, Vodafone and OLA.

Project Sahasra Jyoti was conceived by WWF India with the aim of lighting up 1,000 households across parts of the Sundarbans region which do not have access to electricity due to their geographical positioning and difficult terrain. Through energy access, the project also aimed to reduce negative interactions with wildlife, which is fairly high due to the close proximity of these villages to forests.

The project has received tremendous response and support from corporate organisations, demonstrating the power of corporate social responsibility in changing lives. Since launch, 512 households have received access to clean energy both through home lighting solutions and solar powered street lights in their villages. This has reduced the villagers' use of fuel wood or kerosene lamps for light, provided opportunities for new local businesses and decreased the risk of negative interaction with wildlife.

This project is an ideal model of multiple supporters coming together and making dreams possible - corporates through CSR and marketing partnerships, individual giving as well as the community making small contributions for battery purchase and system maintenance.

In India, thousands of people do not have access to energy to meet their basic needs of cooking, lighting and heating. Access to clean, sustainable and affordable energy is fundamental to meet the balance between development, environment conservation and poverty eradication. WWF India believes that working closely with like-minded corporate organisations is the way to make projects like Sahasra Jyoti possible across India.



# FINANCIAL STATEMENT

## INCOME AND EXPENDITURE

For the year ended 31st March 2018

(Rs.000's)

INCOME	31 March 2018	31 March 2017
Project Grants	611,315	545,149
Donations & Other Conservation Receipts	133,185	118,329
Other Income	33,576	30,931
<b>Total Income</b>	<b>778,076</b>	<b>694,409</b>
EXPENDITURE		
Project Expenditure on Objects of the Trust	612,936	547,178
Fundraising & Other Conservation Expenses	48,155	49,238
Admin & Operating Cost	76,225	69,107
<b>Total Expenditure</b>	<b>737,317</b>	<b>665,523</b>

## BALANCE SHEET

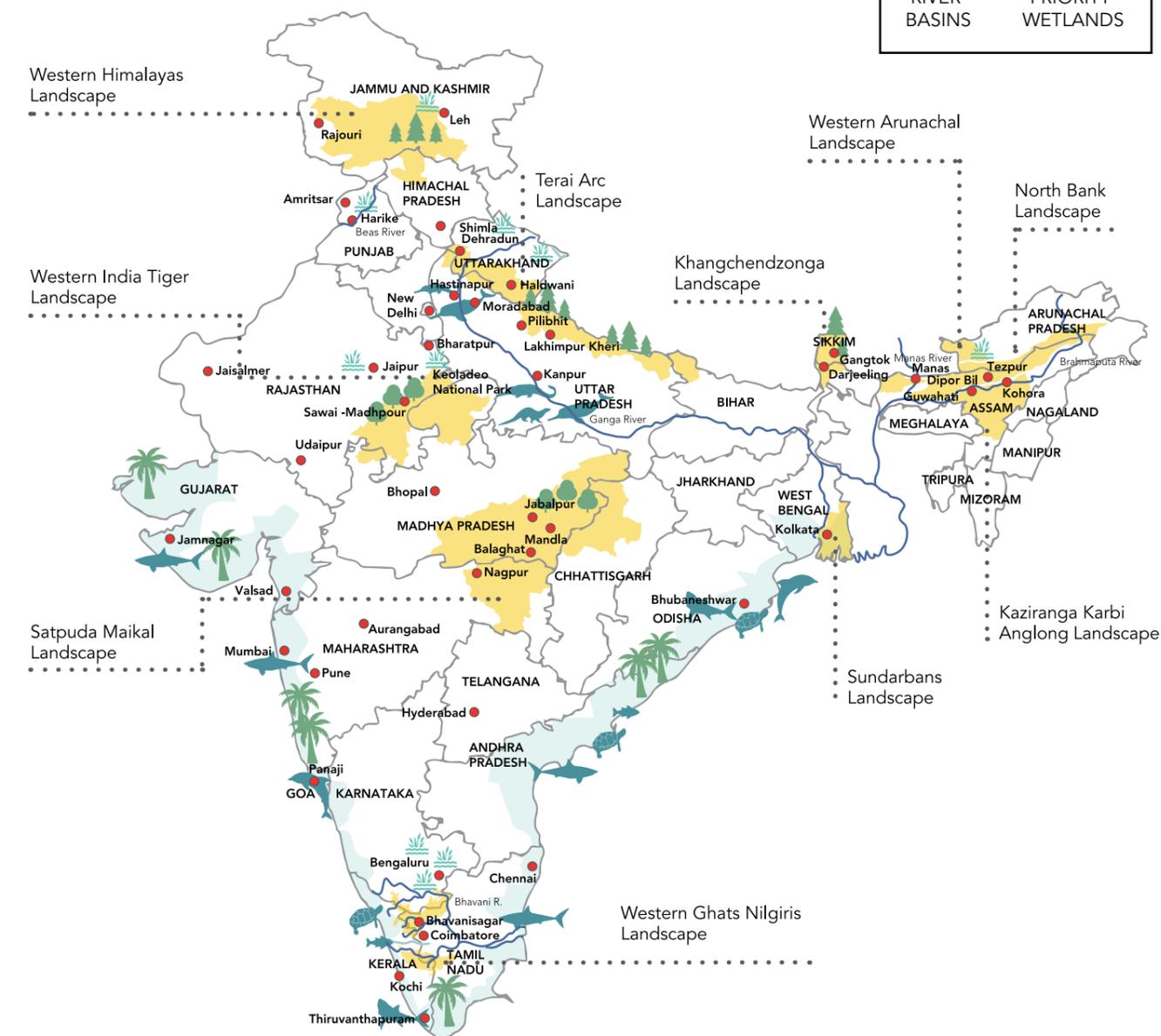
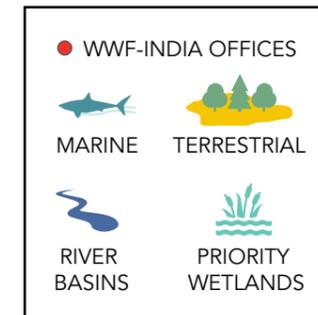
As at 31st March 2018

FUND AND LIABILITIES	31 March 2018	31 March 2017
Trust Funds & Corpus	187,470	187,430
Earmarked & Other Funds	30,640	20,430
Grant Balances-Projects	291,993	311,741
Current & Other Liabilities	96,307	54,468
<b>Total</b>	<b>606,411</b>	<b>574,068</b>
PROPERTY AND ASSETS		
Fixed Assets	13,167	12,281
Investments	218,050	216,649
Current Assets & Bank Balances	375,194	345,138
<b>Total</b>	<b>606,411</b>	<b>574,068</b>

# WWF INDIA

Countrywide Network

## LEGEND



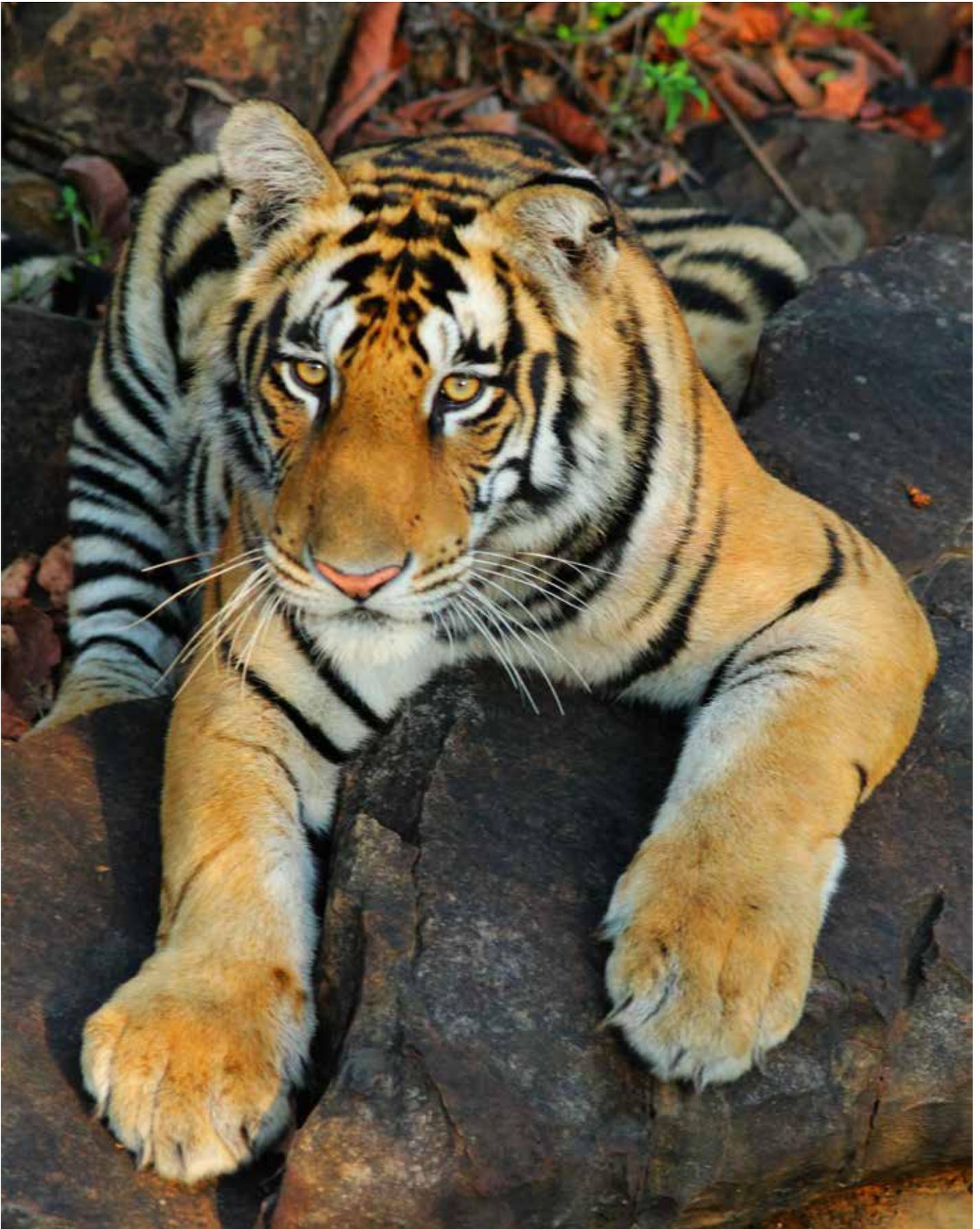
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