

A PANORAMIC VIEW OF INDIA'S



PRESIDENCY



OF COP



TO CBD 2012 2014





सत्यमेव जयते



Ministry of Environment,
Forests & Climate Change
Government of India

A PANORAMIC VIEW OF

INDIA'S

PRESIDENCY

OF CoP

TO CBD

2012
2014



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Design & Realisation
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FOREWORD



Having hosted the Eleventh Conference of the Parties (CoP-11) to the Convention on Biological Diversity in Hyderabad in October 2012, India is the President of CoP for a two-year period up to October 2014. Hosting a mega event such as CoP and holding its presidency for two years is a major responsibility for any government.

India, a recognised megadiverse country, rich in biodiversity and the associated traditional knowledge, has a strong institutional, legal and policy framework on biodiversity. Despite tremendous biotic pressures, India has been making sustained efforts for conserving the biodiversity heritage, recognising its critical linkages with the livelihood security of millions of people.

Hosting CoP-11 provided an opportunity to India to consolidate, scale up and showcase her strengths to the world in the field of biodiversity. This has also led to an enhanced focus domestically on strengthening the implementation of biodiversity programmes and stimulated country-wide awareness on biodiversity issues. As a result, a number of activities relating to biodiversity, some of them quite unique, have been taken up within as well as outside the government set-up.

Having brought out earlier a much-appreciated pictorial booklet on the hosting of CoP-11, compiling information on some of the important activities undertaken during India's presidency of CoP was the expected next step.

I am pleased to present this panoramic view of India's presidency of CoP to the CBD. Although not associated with the CoP presidency activities, as I joined this Ministry a few weeks before CoP-12, I am an ardent supporter of the efforts being made to strengthen biodiversity conservation in the country.

I compliment Shri Hem Pande and Dr. Sujata Arora for taking the initiative in putting together all the relevant information in the form of this document, which will serve as a useful reference in the country and for governments hosting the CoP in future.

A handwritten signature in black ink, appearing to read 'Ashok Lavasa'.

Ashok Lavasa

Secretary

Government of India
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This compilation would not have been possible without the support of the Chairman and Member Secretary of the National Biodiversity Authority and the State Biodiversity Boards of the country, and we sincerely acknowledge them all.

We would like to acknowledge information received from the Zoological Survey of India, Botanical Survey of India, Forest Survey of India, Indian Council of Forestry Research and Education, Centre for Environmental Management of Degraded Ecosystems, National Museum of Natural History, Society of Integrated Coastal Management, National Bureau of Plant Genetic Resources, National Centre for Sustainable Coastal Management, Central Arid Zone Research Institute and Wildlife Institute of India on the biodiversity conservation activities taken by them between 2012 and 2014.

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We express our sincere appreciation to the World Wide Fund for Nature – India, International Union for Conservation of Nature – India, United Nations Development Programme and Gesellschaft für Internationale Zusammenarbeit (GIZ) for information provided by them on their project activities in India.

We would like to especially thank the Chairman, National Biodiversity Authority and Member Secretary, National Biodiversity Authority for their valuable support in the preparation of this document and also for providing funding support for the publication.

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LIST OF ABBREVIATIONS

ABP	Aravalli Biodiversity Park
ABS	Access and Benefit Sharing
AYUSH	Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy
BCRLIP	Biodiversity Conservation and Rural Livelihood Improvement Project
BD	Biological Diversity
BIS	Biodiversity Information System
BMCs	Biodiversity Management Committees
BNHS	Bombay Natural History Society
BSI	Botanical Survey of India
CAZRI	Central Arid Research Institute
CBD	Convention on Biological Diversity
CD	Capacity Development
CEE	Centre for Environmental Education
CEMDE	Centre for Environment Management of Degraded Ecosystems
CGIAR	Consultative Group on International Agricultural Research
CII	Confederation of Indian Industries
CMD	Creative Museum Designers
CMPA	Coastal and Marine Protected Areas
CoMBINe	Coastal and Marine Biodiversity Integration Network
CoP	Conference of Parties
CPB	Cartagena Protocol on Biosafety
CPREEC	C. P. R. Environment Education Centre
CZR	Coastal Regulation Zone
DFID	Department for International Development
DoLR	Department of Land Resources
DPR	Detailed Project Report
DST	Department of Science and Technology
EE	Environmental Education
ENVIS	Environmental Information System
ESAs	Ecologically Sensitive Areas
ESD	Education for Sustainable Development
FICCI	Federation of Indian Chambers of Commerce and Industry
GANDHI	Green Action for National Dandi Heritage Initiative
GB	Governing Board

GBIF	Global Biodiversity Information Facility
GEAC	Genetic Engineering Approval Committee
GEC	Gujarat Ecological Commission
GEER	Gujarat Ecological Education and Research
GEF	Global Environment Facility
GIB	Great Indian Bustard
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GM	Genetically Modified
GoI	Government of India
GSPC	Global Strategy for Plant Conservation
IBBI	India Business and Biodiversity Initiative
IBD	International Biodiversity Day
IBIN	Indian Bioresource Information Network
ICFRE	Indian Council of Forestry Research and Education
ICIMOD	International Centre for Integrated Mountain Development
ICZMP	Integrated Coastal Zone Management Project
IIRS	Indian Institute of Remote Sensing
IMD	India Metereological Department
IMPAC	International Marine Protected Areas Congress
INC	Indian National Committee
IPBES	Intergovernmental Platform on Biodiversity and Ecosystem Services
ISBM	Incentives for Sustainable Management of Biodiversity and Ecosystem Services
ISRO	Indian Space Research Organisation
ITPGFRA	International Treaty on Plant Genetic Resources for Food and Agriculture
IUCN	International Union for Conservation of Nature
KSLCDI	Kailash Sacred Landscape Conservation and Development Initiative
MEFCC	Minister of Enviorment, Forests & Climate Change, Government of India
MFF	Mangroves for the Future
MNP&S	Marine National Park & Sancturay
MoEF/ MOEFCC	Ministry of Environment & Forests / Ministry of Environment, Forests & Climate Change
MoP	Meeting of Parties
MoU	Memorandum of Understanding
NAPCC	National Action Plan on Climate Change
NBA	National Biodiversity Authority
NBAP	National Biodiversity Action Plan
NBPGR	National Bureau of Plant Genetic Research
NBSAP	National Biodiversity Strategy and Action Plan
NBT	National Biodiversity Targets
NCSCM	National Centre for Sustainable Coastal Management

NCT	National Capital Territory
NEAC	National Environment Awareness Campaign
NERIST	North Eastern Regional Institute of Science and Technology
NGC	National Green Corps
NGOs	Non Governmental Organisations
NKLSP	Nagoya–Kuala Lumpur Supplementary Protocol
NMNH	National Museum of Natural History
NMPB	National Medicinal Plants Board
NNCP	National Nature Camping Programme
NR5	India's Fifth National Report to the CBD
NTCA	National Tiger Conservation Authority
NWPC	National Working Plan Code
OBDs	Over Burden Dumps
PBRs	Peoples Biodiversity Registers
SBBs	State Biodiversity Boards
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advise
SEA	Strategic Environment Assessment
SEBS	Science Express Biodiversity Special
SFDs	State Forest Departments
SICOM	Society of Integrated Coastal Management
SoI	Survey of India
SOP	Standard Operating Procedure
SPLAM	Spatial Landscape Modelling
STAG	Scientific and Technical Advisory Group
TEEB	The Economics of Ecosystems and Biodiversity
TII	TEEB India Initiative
TK	Traditional Knowledge
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organisation
USD	United States Dollar
USBF	Uttarakhand Spring Bird Festival
WG	Working Group
WGRI	Working Group on Review of Implementation
WII	Wildlife Institute of India
WWF	World Wide Fund for Nature
YBP	Yamuna Biodiversity Park
YEYAs	Young Environmentalist of the Year Awards
ZSI	Zoological Survey of India
₹	Indian Rupee

1 BACKGROUND



'Biodiversity' encompasses the variety of all life on Earth. India is a recognised megadiverse country, rich in biodiversity and the associated traditional knowledge, which is found both coded, as in our ancient texts of Indian systems of medicine, and non-coded, as in oral, undocumented traditions. With just 2.4% of the land area, India accounts for nearly 7% of the recorded species, even while supporting almost 18% of the world's human population as well as cattle population. The biotic pressure on our biodiversity is therefore immense. Over 45,000 species of plants and 91,000 species of animals have been recorded so far.


For India, conservation of her biodiversity is crucial not only because this biodiversity provides several goods and services necessary for human survival but also because it is directly linked with providing livelihoods to and improving the socio-economic conditions of millions of our local people, thereby contributing to sustainable development and alleviation of poverty.

In the last few decades, biodiversity has come under increasing pressure globally on account of factors such as habitat fragmentation, development imperatives and, more recently, global warming. The global concern about loss of biodiversity found expression in the Convention on Biological Diversity (CBD), which was adopted at the Rio Earth Summit, in 1992.

India is a Party to the CBD. The three objectives of the Convention are: conservation of biodiversity, sustainable use of its components, and fair and equitable sharing of benefits arising from the use of genetic resources. The Convention has near universal membership with 194 countries as Parties.

Two supplementary agreements were adopted under the aegis of the Convention: the Cartagena Protocol on Biosafety (CPB), in 2000, and the Nagoya Protocol on Access and Benefit Sharing (ABS), in 2010.

In India, measures for conservation and sustainable use of biodiversity did not start with the CBD. India has a long history of conservation and sustainable use of natural resources. Environment protection is enshrined in our constitution [Articles 48 A and 51 A (g)]. Over a period of time, a stable organisational structure has been developed for protection of the environment. Numerous wide-ranging policies, programmes and projects are in place, serving to protect, conserve and regulate sustainable use of the biological resources of the country.



CoP is the governing body of the CBD. CoP reviews the implementation of the Convention and steers its development. CoP is open to all Parties, and to observers from non-Parties and international and non-governmental organisations. Eleven meetings of CoP have been held so far, the first three annually (in 1994, 1995, 1996) and the others biennially (in 1998, 2000, 2002, 2004, 2006, 2008, 2010 and 2012).

India, a megadiverse country committed to the cause of conserving her rich biodiversity, successfully hosted the Eleventh Conference of the Parties (CoP-11) to the CBD and the Sixth Meeting of the Parties serving as CoP (CoP-MoP-6) to the Biosafety Protocol, in Hyderabad, in October 2012. CoP is the biggest global event on biodiversity held biennially. CoP-11 was also probably the largest such conference ever organised in India, wherein thousands of delegates from 175 countries participated. The term of office of India's presidency is two years, from October 2012 to October 2014.

With a view to record the background and genesis, along with the preparations and the event, a booklet titled 'Hosting of CoP-11 by India: A Pictorial Presentation' was prepared. It is for the first time that a host country for CoP put together all the relevant information about how the event was planned and conducted. This document, which is available at <http://www.cbd.int/cop/cop-11/doc/cop-11-album-book-en.pdf>, makes interesting reading by providing insights into what went into the organisation of the event and will hopefully be found helpful to others in planning and executing similar activities in the future. The document was received well, including by the CBD Secretariat, which commended the publication as an excellent factual record of actions and events undertaken by the Government of India (GoI) in preparing for and conducting CoP-11. Noting that it would serve as an invaluable reference for future hosting governments, the Secretariat suggested that, building on this excellent publication, the GoI might consider elaborating in a report its presidency of CoP from 2012 to 2014.

Following the hosting of CoP-11, a number of additional activities relating to biodiversity conservation were taken up in the country by various organisations in both the government and non-government sectors. These were facilitated through an enabling environment provided by the Ministry of Environment, Forests & Climate Change (MoEFCC).

Encouraged by the positive response to and building on the earlier publication on the hosting of CoP-11, the present document is a compilation of information on some of the important activities initiated and undertaken during India's presidency of CoP.

2

STEERING THE CBD AGENDA: IMPLEMENTATION OF CoP DECISIONS

In the interregnum between CoP-11 and CoP-12, India, as the president, has been steering the implementation of CoP-11 decisions, on one hand, and facilitating the preparations for CoP-12, to be held in Pyeongchang, Republic of Korea, in October 2014, on the other.

2.1

MEETINGS OF CoP BUREAU

Four inter-sessional meetings of the Bureau of CoP-11 were held, on 31 May and 1 June 2013, 6 October 2013, 15 June 2014 and 14 August 2014. The fifth meeting of CoP-11 Bureau will be held on 5 October, 2014, a day before the CoP-12 begins. The first meeting was held at Trondheim, Norway. The subsequent two meetings were held at the CBD Secretariat, in Montreal, Canada, and the fourth meeting was held at Warth, Switzerland. The Bureau meetings were chaired by Mr. Hem Pande, Additional Secretary, MoEFCC, India, representing the Minister for Environment, Forests & Climate Change as the President of CoP-11. The Bureau meetings have *inter alia* provided guidance and directions that contributed to the successful conduct of the inter-sessional preparatory meetings, including the eighth meeting of the Ad Hoc Open-ended Working Group on Article 8j (8jWG-8), the fifth meeting of the Ad Hoc Open-ended Working Group on Review of Implementation of the Convention (WGRI 5) and the seventeenth and eighteenth meetings of the Subsidiary Body on Scientific, Technical and Technological Advise (SBSTTA). The recommendations of these meetings, which will *inter alia* contribute to enhanced implementation of the Strategic Plan for Biodiversity 2011–2020, will be considered for adoption as decisions by CoP-12.



2.2

CoP President Mr. Prakash Javadekar addressing WGRI-5 delegates through video at Montreal

CHAIRING OF CBD WORKING GROUP MEETINGS

India, as President of CoP-11, chaired the 8jWG-8 meeting held in Montreal from 7 to 11 October 2013 and the WGRI-5 meeting, also held in Montreal, from 16 to 20 June 2014. The CoP President, Mr. Prakash Javadekar, addressed the delegates at the WGRI-5 meeting through a video message at the opening session on 16 June 2014. These intergovernmental meetings were chaired by Mr. Hem Pande, as the representative of the President of CoP.

Chairing of CBD Working group meetings



Chairing of CBD Working group meetings



3

SUPPORTING CBD PROCESSES



CBD meetings hosted by India
at Chennai in December 2013





CBD meetings hosted by India at Chennai in December 2013

HOSTING OF CBD MEETINGS



The MoEFCC in collaboration with National Biodiversity Authority (NBA) hosted the following three meetings of CBD in Chennai:

- High Level Panel on Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity 2011-2020, from 2-4 December 2013;
- Expert Group on Biodiversity for Poverty Eradication and Development, from 4-6 December 2013; and
- Sub-regional capacity building workshop on the Nagoya Protocol for Access and Benefit Sharing, from 3-6 December 2013.

A special joint session for delegates of the three meetings was also held on 4th December 2013, which was presided over by the CoP President.



CBD meetings hosted by India at Chennai in December 2013



3.2 INTERSESSIONAL WORK ON RESOURCE MOBILISATION

India has co-sponsored the High Level Panel on resource mobilisation since its establishment in 2012 including its underpinning research. In pursuance to a decision of CoP-11, and with a view to make progress towards finalisation of resource mobilisation targets at CoP-12, the work of the High Level Panel was continued with a broadened composition. India supported the work of the High Level Panel in its second phase also. The Panel has estimated that between USD150-440 billion per year would be required to allow for effective implementation of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets.

India also supported and co-sponsored the Second Dialogue Seminar on Scaling up Finance for Biodiversity held in Quito, Ecuador on April 2014, which was aimed at sharing best practices and lessons learned on biodiversity financial mechanisms, exchanging country experiences in mobilising financial and non-financial resources, and providing inputs to the High Level Panel on the Global Assessment of Resources for Implementing the Strategic Plan for Biodiversity. Mr Hem Pande served as a member of the Steering Committee to design the structure and contents, and also participated as an expert in the meeting.



Chairing of CBD
Working group meetings



3.3

APPRAISAL OF EXECUTIVE SECRETARY

On the basis of a review undertaken by the Bureau, the CoP President provided performance appraisal of Dr Braulio Dias, Executive Secretary, CBD Secretariat, for consideration of extension of the term of office of Dr Dias, which is due to end by February 2015. The appraisal was communicated to the Executive Director, United Nations Environment Programme (UNEP).



3.4

MIDORI PRIZE FOR BIODIVERSITY 2014

An international Prize dedicated to biodiversity coorganised by CBD Secretariat, the MIDORI Prize honours individuals who have made outstanding contributions to the conservation and sustainable use of biodiversity, so as to encourage emulation, inspire positive action, and raise public awareness on biodiversity. As representative of CoP President, Mr Hem Pande served as a member on the judging and selection committees to select MIDORI prize winners for 2014.

CONTRIBUTING TO
ACHIEVEMENT OF
AICHI TARGET 16
ON NAGOYA
PROTOCOL ON ABS

4



16

The Nagoya Protocol on ABS was adopted by CoP-10 in 2010 after nearly six years of intense negotiations under the aegis of CBD. The protocol significantly advances the third objective of CBD on fair and equitable sharing of benefits arising from the use of genetic resources. By promoting the use of genetic resources and associated traditional knowledge, the protocol will create incentives to conserve biodiversity, sustainably use its components and enhance the contribution of biodiversity to sustainable development.

Facilitating the early entry into force of this landmark international treaty has been a priority of India as CoP President. Towards this, India made significant efforts during her presidency through political and diplomatic channels. These included sending joint letters from the CoP President and Executive Secretary of CBD to all Ministers in-charge, pursuing the matter through Indian Missions and conducting some bilateral meetings of the CoP President, MoEFCC with his counterparts. Upon ratification of the Nagoya Protocol by 51 Parties to the CBD, the protocol will come into force on 12 October 2014, and its first Meeting of the Parties will be concurrently held with CoP-12 from 13 to 17 October 2014. The coming into force of the Nagoya Protocol, more than a year before its target date, which is quite remarkable, is a major step towards achieving the first of the global Aichi Biodiversity Targets (Target 16—by 2015, the Nagoya Protocol is in force and operational). The pivotal role played by India in achieving this remarkable feat once again showcases India's leadership regarding biodiversity in the global arena.



The MoEFCC and CoP President, Mr. Prakash Javadekar, made a *suo moto* statement in the Lok Sabha (Lower House of Parliament) on 17 July 2014, and in the Rajya Sabha (Upper House of Parliament) on 18 July 2014, regarding India's role in facilitating entry into force of Nagoya Protocol on ABS. The Minister stated that the Nagoya Protocol translates and gives practical effect to the equity provisions of the CBD. The landmark treaty has received the requisite number of ratifications during India's presidency of the Conference of Parties for its entry into force. The Minister congratulated his counterparts for making this happen. The Minister further mentioned that a new era has now been ushered in for implementation of the CBD, which would contribute to achieving sustainable development and a glorious future for all living beings inhabiting our mother Earth.

5

SOUTH-SOUTH COOPERATION: INDIA'S CONTRIBUTIONS



Capacity Building
Workshops on Nagoya
Protocol, ABS and
Traditional Knowledge,
11-13 February,
Bengaluru, India



Capacity Building Workshops on Nagoya Protocol & ABS, 4-6 August, Goa, India



During the inauguration of the High Level Segment of CoP-11 on 16 October 2012, the then Prime Minister of India, Dr Manmohan Singh in his speech inter alia launched the 'Hyderabad Pledge', wherein he announced earmarking of a sum of USD 50 million by the Government during India's Presidency of CoP to strengthen institutional mechanism, enhance the technical and human capabilities for biodiversity conservation in India, and to promote similar capacity building of other developing countries.

In pursuance to this, and in furtherance to the announcement made by the Prime Minister of India during 2nd Africa India Forum Summit held in Addis Ababa during the year 2011 to further strengthen the collaboration between India and Africa, the MoEFCC, Government of India (GoI) hosted capacity building workshops on (i) Nagoya Protocol on ABS and Traditional Knowledge (TK); and (ii) Nagoya-Kuala Lumpur Supplementary Protocol (NKSLP) on Liability & Redress on 11-13 February, 2013 in Bengaluru, India. The meeting was organised with the support of NBA and the Ministry of External Affairs, GoI

The conference featured parallel sessions on issues relating to ABS and TK on the one side, and NKLSP on the other. The ABS and TK sessions traversed a wide range of issues, beginning with an overview of the Nagoya Protocol, moving on to the setting up of digital TK libraries in India, and ending with the conceptualizing of greater international collaborative efforts in the field of ABS and TK. The capacity building workshop provided a good opportunity to share country level experiences relating to ABS, deliberate on some of the implementation challenges of Nagoya Protocol, and discuss the approach to the issues which were on the agenda of the third meeting of the Intergovernmental Committee on Nagoya Protocol.

The meeting helped in developing a sense of comfort to the participating countries for ratifying the Nagoya Protocol on ABS.



Capacity Building Workshops on Nagoya Protocol, ABS and Traditional Knowledge, 11-13 February, Bengaluru, India



Capacity Building Workshops
on Nagoya Protocol, ABS and
Traditional Knowledge, 11-13
February, Bengaluru, India

The MoEFCC in collaboration with GIZ hosted an International Dialogue on Challenges and Practical Ways Forward for Implementation of the Nagoya Protocol on Access and Benefit Sharing in Goa from 4-6 Aug 2014.

Mr Prakash Javadekar, MEFCC and President of CoP addressed the delegates at this meeting through a video message in the opening session of the meeting. Mr. Prakash Javadekar highlighted the role of biodiversity and ecosystem services for maintaining the three pillars of sustainable development (namely social, economic and ecological), mentioned that Nagoya Protocol is a win-win solution for all concerned, the users (researchers and industry) and the providers of genetic resources and associated traditional knowledge.

This meeting discussed the challenges and practical ways forward in preparation for implementation of Nagoya Protocol on ABS. The meeting was being attended by over 65 delegates including nearly 40 from about 20 countries, from Africa, Asia, Europe and South America.

Hosting of this meeting by India also provided an opportunity to a GIZ appraisal mission to develop a project concept for a new intervention area on ABS under the Indo-German Biodiversity Programme.

Some other meetings of the CBD hosted by India have been mentioned in section 3.1.

India has contributed USD90,000 as a part of the cost of CBD's meeting of the Working Group on Article 8j on traditional knowledge.

India is also contributing and USD10,000 per annum during the two year Presidency to the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES).

India provided a sum of ₹ 10 lakhs (approx. USD16,520.00) to the International Institute for Sustainable Development towards coverage of Earth Negotiations Bulletin for WGRI-5 meeting.

6

HOSTING OF GBIF GB-21 MEETING

Hosting of GBIF
GB-21 Meeting



India hosted the 21st meeting of the Governing Board (GB-21) of the Global Biodiversity Information Facility (GBIF) in New Delhi from 15–19th September, 2014. Shri Prakash Javadekar, Minister for Environment, Forests and Climate Change in his opening address to the delegates representing 35 countries and organizations that collaborate to share biodiversity data through GBIF, said “While India has emerged as a global powerhouse of information technology we have not yet used its full potential in the science of biodiversity informatics”. However, we now stand committed to developing 'biodiversity informatics' as an essential element of India's economic, environment and social well-being. He said that India is in the process of building a comprehensive and decentralized biodiversity information infrastructure to serve the national interests and to provide inter-operability with regional and global initiatives. He further said that a lot of biodiversity data of Indian origin is with several natural history museums in the world and this valuable legacy data was needed by the Indian researchers. Several on-going global and regional biodiversity informatics initiatives for sharing this biodiversity data with the countries of origin are gaining momentum. He requested GBIF and its partners to expedite and institutionalize the process of digital exchange of this data.



In a message to the Governing Board meeting, the executive secretary of the Convention on Biological Diversity (CBD), Dr. Braulio Dias emphasized that GBIF's role was critical to improve the scientific knowledge needed in order to sustain healthy ecosystems. In his introduction to the three-day meeting in New Delhi, the GBIF Governing Board Chair Peter Schalk said that India had an important role to play in GBIF, and carried a global responsibility.

Book release
during GBIF
GB-21 Meeting



"India has a lot to offer to GBIF and the global biodiversity community in terms of data and biodiversity expertise," Schalk commented. "In its turn, GBIF offers a good value proposition to India in terms of open data resources, ICT tools and international collaboration."

In his opening statement to the meeting, the GBIF Executive Secretary Donald Hobern praised India for developing a National Biodiversity Information Outlook, to provide a roadmap for developing a national infrastructure for biodiversity information.

7

LEGACY OF CoP-11

7.1

COMMEMORATIVE PYLON, BOTANIC GARDEN AND NATIONAL BIODIVERSITY MUSEUM COMPLEX

India decided to set up a National Biodiversity Museum along with a garden in commemoration of CoP-11 on the site where the Prime Minister of India unveiled the commemorative pylon in Hyderabad during CoP-11. The State Government of Andhra Pradesh has earmarked an area of 15 acres for the complex comprising the pylon, garden and museum. Hyderabad is the first host city of CoP to the CBD to establish a commemorative pylon, garden and museum.



• GUATEMALA
• GUINEA
• GUINEA-BISSAU
• GUYANA
• HAITI
• HONDURAS
• HUNGARY
• ICELAND
• INDIA
• INDONESIA
• IRAN (ISLAMIC REPUBLIC OF)
• IRAQ
• IRELAND
• ISRAEL
• ITALY
• JAMAICA
• JAPAN
• JORDAN
• KAZAKHSTAN
• KENYA
• KIRIBATI
• KUWAIT
• KYRGYZSTAN
• LAO PEOPLE'S
DEMOCRATIC REPUBLIC
• LATVIA
• LEBANON
• LESOTHO
• LIBERIA
• LIBYA
• LITHUANIA
• LUXEMBOURG
• MADAGASCAR

Development of the botanic garden at the site of the commemorative pylon at Hyderabad



The Prime Minister planted the first tree, during CoP-11, on behalf of India, after which trees were planted by the representatives of participating countries. For those countries that were not able to do so at CoP-11, the MoEFCC, with support from the Ministry of External Affairs, arranged for planting by inviting their ambassadors and coordinating with the Government of Andhra Pradesh so as to complete the planting by the first anniversary of CoP-11.



Unveiling of commemorative pylon by the Prime Minister of India at CoP-11



The process is under way for the establishment of the National Biodiversity Museum through the preparation of a detailed project report (DPR) by Creative Museum Designers (CMD), a company of the National Council of Science Museums, Ministry of Culture. Consultations were held with experts and organisations. An MoU was entered into between MoEFCC and CMD. A Technical Expert Committee has been set up to guide the preparation of the DPR for the Museum.

7.2



NEW LOGO OF MoEFCC

The circle of the logo symbolizes nature's cycle. A woman (representing Mother Earth) winnowing grains depicts linkage of biodiversity with livelihoods. The motif at the top is of a tiger, the most charismatic of all the large land animals. India is home to nearly half of the 3,500 tigers that remain in the world. The tiger is also India's national animal. At the bottom is a dolphin, one of the most intelligent animals. Dolphins display advanced social behavior and culture similar to humans. The Gangetic dolphin is India's national aquatic animal. At the center is a bird representing avifauna and a leaf representing flora. On top is the slogan in Sanskrit: 'Prakruti Rakshati Rakshita', translated in English as 'Nature Protects if She is Protected'.

With a view to creating a lasting legacy of CoP-11, as the largest conference hosted by India, the logo and slogan of CoP-11 were adopted as the new logo and slogan of MoEFCC during India's presidency of CoP-11. The new logo now adorns the new building of the MoEFCC.

Inauguration of new building of MoEFCC with new logo in the backdrop



New logo and slogan of MoEFCC

8

CoP PRESIDENT AT INTERNATIONAL CONFERENCES

Delegates at Trondheim
Conference on Biodiversity



Delegates at Trondheim
Conference on Biodiversity



8.1



Delegates at Trondheim
Conference on Biodiversity

TRONDHEIM CONFERENCE ON BIODIVERSITY

The Seventh Trondheim Conference on Biodiversity, with the theme 'Ecology and Economy for a Sustainable Society', took place from 27 to 31 May 2013 and was attended by 330 participants from 120 countries. At the invitation of the Norwegian Minister for Environment, the CoP President, Ms Jayanthi Natarajan, co-chaired the Trondheim Conference. An Indian delegation also participated in the conference, which saw rich discussions on the implementation of the Strategic Plan for Biodiversity 2011–2020 and the achievement of the Aichi Biodiversity Targets, focusing on Goal A of the Strategic Plan, which

addresses the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society. The conference emphasised the point that biodiversity and ecosystem services play such a fundamental role in human well-being that they should be reflected in the Sustainable Development Goals. The first meeting of the second phase of the High Level Panel on Resource Mobilization was also held on the margins of the Trondheim Conference. The panel has assessed the range of costs needed for implementing the Strategic Plan and identified opportunities for mobilizing these resources, as an important input for discussions on resource mobilisation at CoP-12.

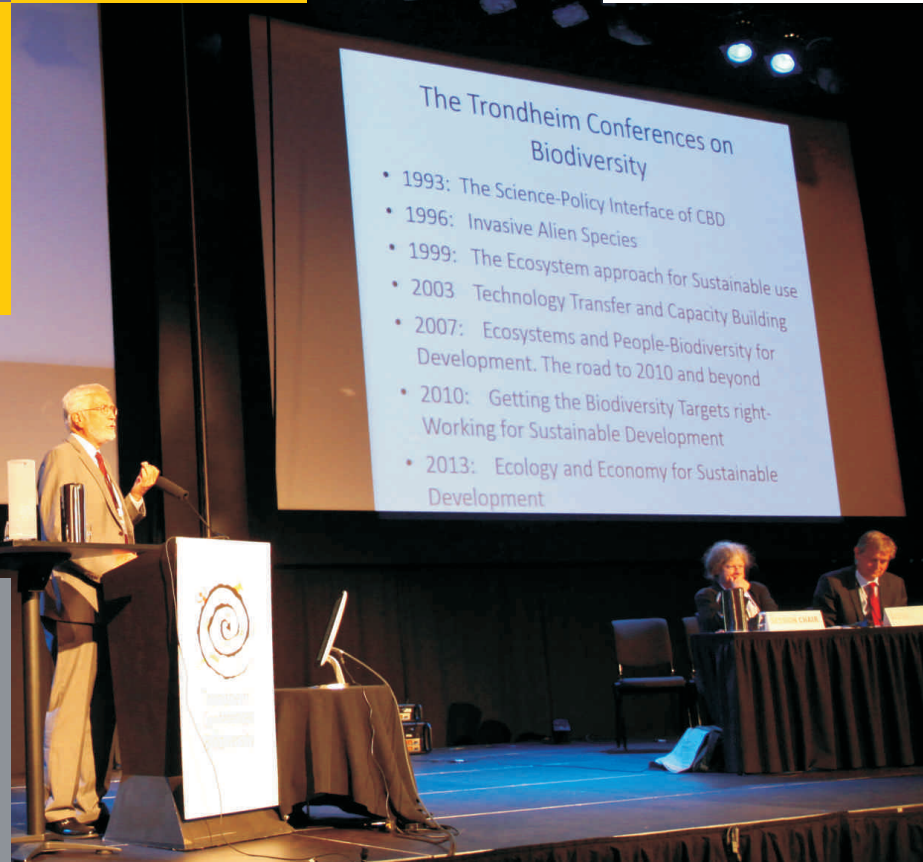


Delegates at Trondheim
Conference on Biodiversity





Delegates at Trondheim
Conference on Biodiversity



The Trondheim Conferences on Biodiversity

- 1993: The Science-Policy Interface of CBD
- 1996: Invasive Alien Species
- 1999: The Ecosystem approach for Sustainable use
- 2003: Technology Transfer and Capacity Building
- 2007: Ecosystems and People-Biodiversity for Development. The road to 2010 and beyond
- 2010: Getting the Biodiversity Targets right-Working for Sustainable Development
- 2013: Ecology and Economy for Sustainable Development

As was decided at the Trondheim meeting, the outcomes of the conference, along with a request to expedite ratification of the Nagoya Protocol on ABS, were transmitted through a covering letter jointly signed by the CoP President, Norwegian Minister for Environment and CBD Executive Secretary to the ministers-in-charge of all countries, urging them to ratify the Nagoya Protocol on ABS to facilitate its entry into force.

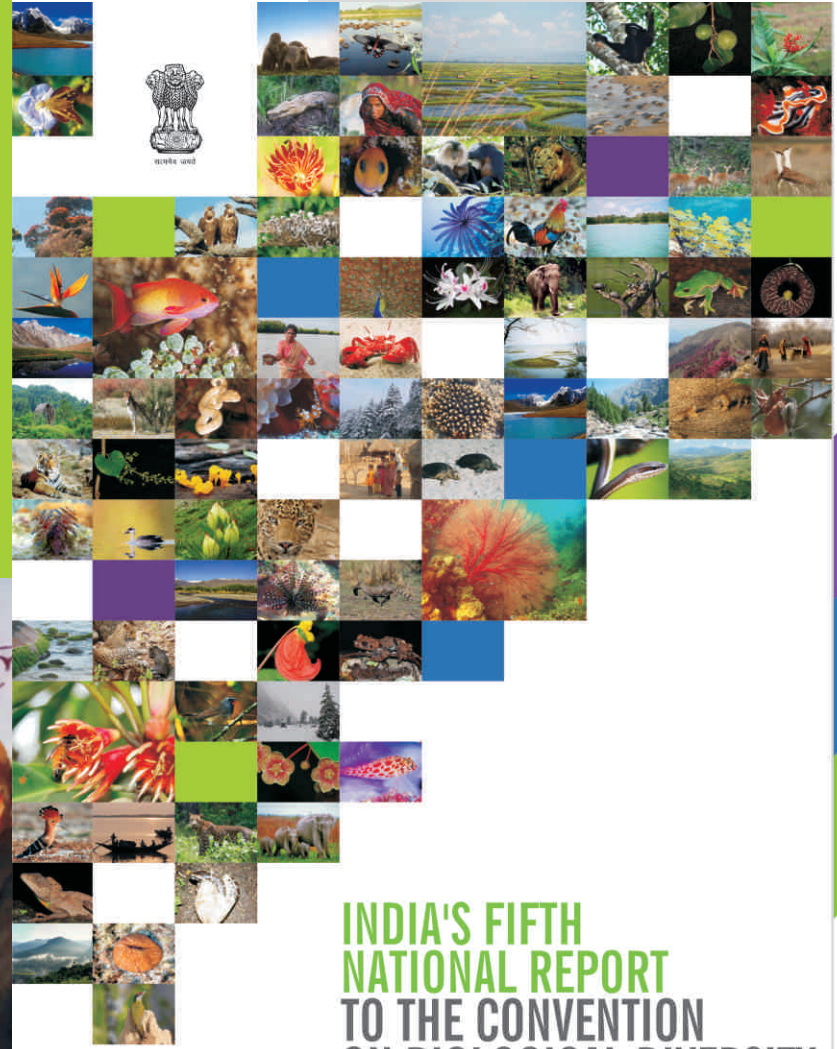
8.2

INTERNATIONAL MARINE PROTECTED AREAS CONFERENCE

The Third International Marine Protected Areas Congress, IMPAC3, gathered over 1500 participants from 87 nations, including managers of marine protected areas, scientists, decision-makers and representatives of local authorities, communities, civil society and industry, to propose solutions for conservation and sustainable development of our oceans. The congress took place from 21 to 25 October 2013 in Marseille, France and was followed by a high-level ministerial meeting at Ajaccio, Corsica on 26 and 27 October 2013. At the invitation of the French Minister of Ecology, Sustainable Development and Energy, the CoP President, Ms Jayanthi Natarajan, participated in the ministerial conference, wherein ministers from 19 other nations were also present. The conference reaffirmed the urgency and determination to reach the target of protecting at least 10% of the world's oceans by 2020, a target agreed to by most of the world's governments in 2010.

9

FULFILLING REPORTING OBLIGATIONS UNDER CBD: INDIA'S FIFTH NATIONAL REPORT AND UPDATING NATIONAL BIODIVERSITY ACTION PLAN



**INDIA'S FIFTH
NATIONAL REPORT
TO THE CONVENTION
ON BIOLOGICAL DIVERSITY
2014**



Ministry of Environment and Forests
Government of India

Release of India's Fifth National Report to the CBD by Mr. Prakash Javadekar, MoEFCC and CoP President, on World Environment Day, on 5 June 2014



National Stakeholder Consultation on preparation of Fifth National Report to the CBD and updating National Biodiversity Action Plan on 30 July 2013 at New Delhi

In accordance with Article 26 of the CBD, all Parties are required to submit national reports to the CBD on measures taken for implementation of the Convention and the effectiveness of these measures. As per the guidelines provided by CoP-10, the focus of the Fifth National Report (NR5) is on biodiversity status, trends and threats; updating the National Biodiversity Strategy and Action Plan (NBSAP) through development of National Biodiversity Targets (NBTs); and progress towards 20 Aichi Biodiversity Targets.

The CoP also urged Parties to develop national targets, using the Strategic Plan and its targets as a flexible framework, in accordance with national priorities and capacities. Parties were also required to review, and as appropriate update and revise, their NBSAPs or equivalent instruments (in India's case it is the National Biodiversity Action Plan, NBAP) in line with the Strategic Plan by integrating their NBTs into their NBSAPs, and report thereon to CoP-12. Since India has prepared her NBAP rather recently, in 2008, it was decided that the NBAP need not be completely overhauled or revised, but an exercise of updating the NBAP by developing NBTs, keeping in view the Aichi Biodiversity Targets as a framework, may be undertaken.

India initiated the process of preparing NBTs through a high-level meeting with the concerned ministries/departments in November 2011. This was followed by a series of inter-ministerial meetings and stakeholder consultations, organised in April 2012 and July 2012. Thereafter, under the Global Environment Facility (GEF) Direct Access project 'Strengthening the Enabling Environment for Biodiversity Conservation and Management in India', consultations with stakeholders were continued for preparation of NR5 and updating NBAP.



Workshop on Integrating Biodiversity Conservation and Climate Change Mitigation Strategies in Development Planning, 17 December 2013, Dehradun

	Aichi Biodiversity Targets	India's National Biodiversity Targets
Strategic Goal A		
Strategic Goal B		
Strategic Goal C		
Strategic Goal D		
Strategic Goal E		

Relationship between 20 Aichi Biodiversity Targets and 12 National Biodiversity Targets

The NBTs were identified on the basis of an extensive review of Result Framework Documents of the 52 ministries/departments of the GoI and information available in annual reports/web sites of the ministries/departments and institutions, as well as discussions and written submissions provided by officials, scientists and other stakeholders at the individual level and a range of organisations in the country.

A National Stakeholder Consultation for discussing the contents of NR5 was held on 30 July 2013. The consultation evoked an enthusiastic response and comprised extensive interactions with 135 participants representing government bodies, non-governmental organisations, scientific institutions and corporate houses, as well as individuals from across the country. Inputs, comments and suggestions generated through the consultation were used appropriately in preparing NR5 and updating NBAP.

A series of workshops were also organised in 2013–2014 with the aim of seeking to harmonise biodiversity conservation strategies with strategies for climate change mitigation, gender equality and technology needs assessment.

A consultative workshop, 'Integrating Biodiversity Conservation and Climate Change Mitigation Strategies in Development Planning', was held on 17 December 2013 at the Wildlife Institute of India (WII), Dehradun with the aim of enhancing understanding of the NBAP and the process of updating it and the National Action Plan on

CMS Vatavaran
Award ceremony



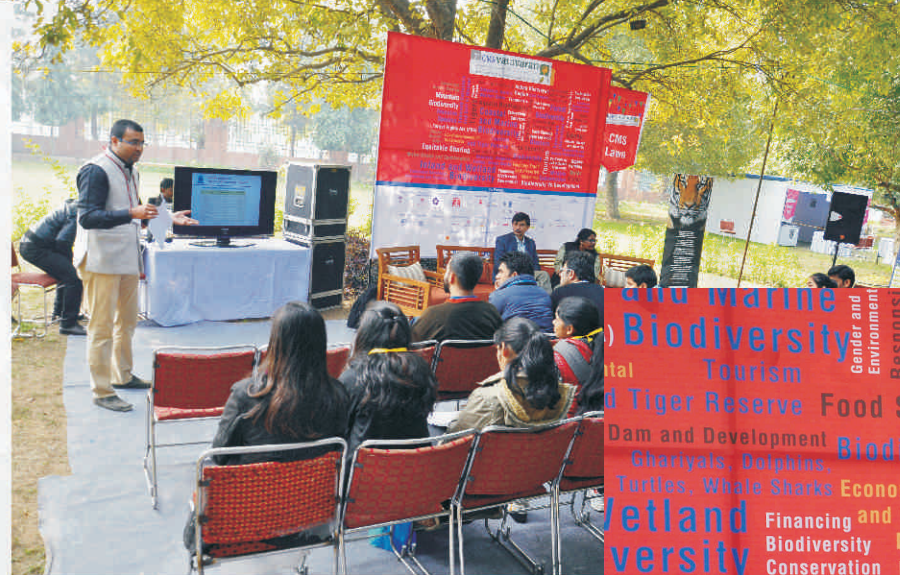


Awareness outreach programme on India's National Biodiversity Targets at the Seventh CMS Vavavaran International Environment and Wildlife Film Festival and Forum, 31 January to 3 February 2014

Climate Change (NAPCC) for mainstreaming biodiversity conservation and climate change mitigation in development planning. The workshop involved intensive interaction with the Uttarakhand State Biodiversity Board, which had undertaken the preparation of the State Climate Change Action Plan, and the Centre for Public Policy, Doon University. The participants also included representatives of the India Meteorological Department (IMD), State Forest Departments (SFDs), Non Governmental Organisations NGOs (including the People's Science Institute and Himalayan Environmental Studies and Conservation Organisation) and scientific institutions (including the Indian Institute of Remote Sensing (IIRS) and Indian Council of Forestry Research and Education (ICFRE)).

With a view to promoting mainstreaming of gender concerns in biodiversity conservation strategies, a consultative workshop was held on 18 February 2014 at the WII, in Dehradun, with participation from representatives of national and state-level government organisations and NGOs as well as individual citizens. The workshop provided an enhanced understanding of the rationale and need for gender considerations in biodiversity conservation in relation to the NBAP and guided the development of a road map for mainstreaming gender considerations in biodiversity conservation strategies and actions.

A consultative workshop was held on technology needs assessment for biodiversity conservation on 18 February 2014 at the WII, in Dehradun, for improving understanding of Aichi Biodiversity Targets, NBTs and NBAP; assessing the current use and application of technology;



Awareness outreach programme on India's National Biodiversity Targets at the Seventh CMS Vavavaran International Environment and Wildlife Film Festival and Forum, 31 January to 3 February 2014



identification of gaps; and assessment of technology needs for biodiversity conservation. The participants included representatives of organisations such as the Central Pollution Control Board, Central Soil and Water Conservation Research and Training Institute, Indian Institute of Public Administration, Indian Institute of Remote Sensing and WII.

Following these consultations, the revised drafts of NBTs and NR5 and updating of NBAP were reviewed by a Technical Review Committee set up by MoEFCC for this purpose. The NBTs were also discussed and communicated through an outreach and communication programme as part of the Seventh CMS Vatavaran International Environment and Wildlife Film Festival and Forum, held between 30 January 2014 and 3 February 2014 at New Delhi, supported by the MoEFCC. WII, as the knowledge partner for CMS Vatavaran 2014, conducted panel discussions and public outreach sessions to create awareness and deliberate upon and communicate to the public about the development of India's NBTs, in harmony with the CBD's Strategic Plan 2011–2020 and Aichi Biodiversity Targets.



Awareness outreach programme on India's National Biodiversity Targets at the Seventh CMS Vatavaran International Environment and Wildlife Film Festival and Forum, 31 January to 3 February 2014



Awareness outreach programme on India's National Biodiversity Targets at the Seventh CMS Vatavaran International Environment and Wildlife Film Festival and Forum, 31 January to 3 February 2014



Shri Prakash Javadekar, MECC
presenting a sapling to Shri Narendra
Modi, Honorable Prime Minister of
India on the occasion of World
Environment Day.



Based on consultations with a range of stakeholders and a review of the programmes and activities being undertaken by ministries/departments in the GoI and by State Biodiversity Boards (SBBs), 12 NBTs and associated indicators and a monitoring framework that provides a road map for achieving the Aichi Biodiversity Targets have been developed. Icons for the NBTs have also been developed with a view to enhancing their recall value and outreach.

The NR5 thus was released by the ME FCC on World Environment Day, on 5 June 2014. On the occasion of World Environment Day, Shri Prakash Javadekar, ME FCC presented a sapling to Shri Narendra Modi, Honorable Prime Minister of India. A sapling was also presented to all members of Parliament.



Shri Prakash Javadekar, ME FCC presenting saplings to all members of Parliament.



Release of India's Fifth National Report to the CBD by Mr. Prakash Javadekar, MoEFCC and CoP President, on World Environment Day, on 5 June 2014





Workshop on National Biodiversity Targets, 26-27 June 2014, New Delhi.

Following the submission of India's NR5, a two-day workshop was organised on 26 and 27 June 2014 at New Delhi for the Indian National Committee members of the International Union for Conservation of Nature-India (IUCN-India), with a view to discuss the development and implementation of strategies and actions to achieve progress towards the 12 NBTs and how INC members can contribute to achieving the NBTs.



Workshop on National Biodiversity Targets, 26-27 June 2014, New Delhi.

India's NBT 4 highlights the need for management of invasive alien species. In order to deliberate on human-wildlife interactions and management of invasive alien species, a national workshop was organised by the MoEFCC and WII on 23 and 24 July 2014. The workshop brought together over 150 wildlife scientists, practitioners, forest officials and researchers from across the country. Experts presented the current state and existing gaps in knowledge, which laid the foundation for further discussions under five major themes: human interactions with carnivores, herbivores, urban wildlife (monkeys), exotic invasive species and law-policy interventions to resolve these issues.



Workshop on
Human–Wildlife
Interactions and
Management of Invasive
Alien Species, 26–27 June
2014, Dehradun

As regards updating NBAP, India has prepared Addendum 2014 to NBAP, containing *inter alia* the 12 NBTs, along with indicators and a monitoring framework developed for these targets, also highlighting the synergies between NBAP 2008, 12 NBTs, Programme of Work on Protected Areas, and Global Strategy for Plant Conservation (GSPC). The document has been finalised and approved and is now being printed. It will be formally released at CoP-12 in October 2014.



10

Fishermen fishing in Chilika Lake

CONSERVATION SUCCESS STORIES

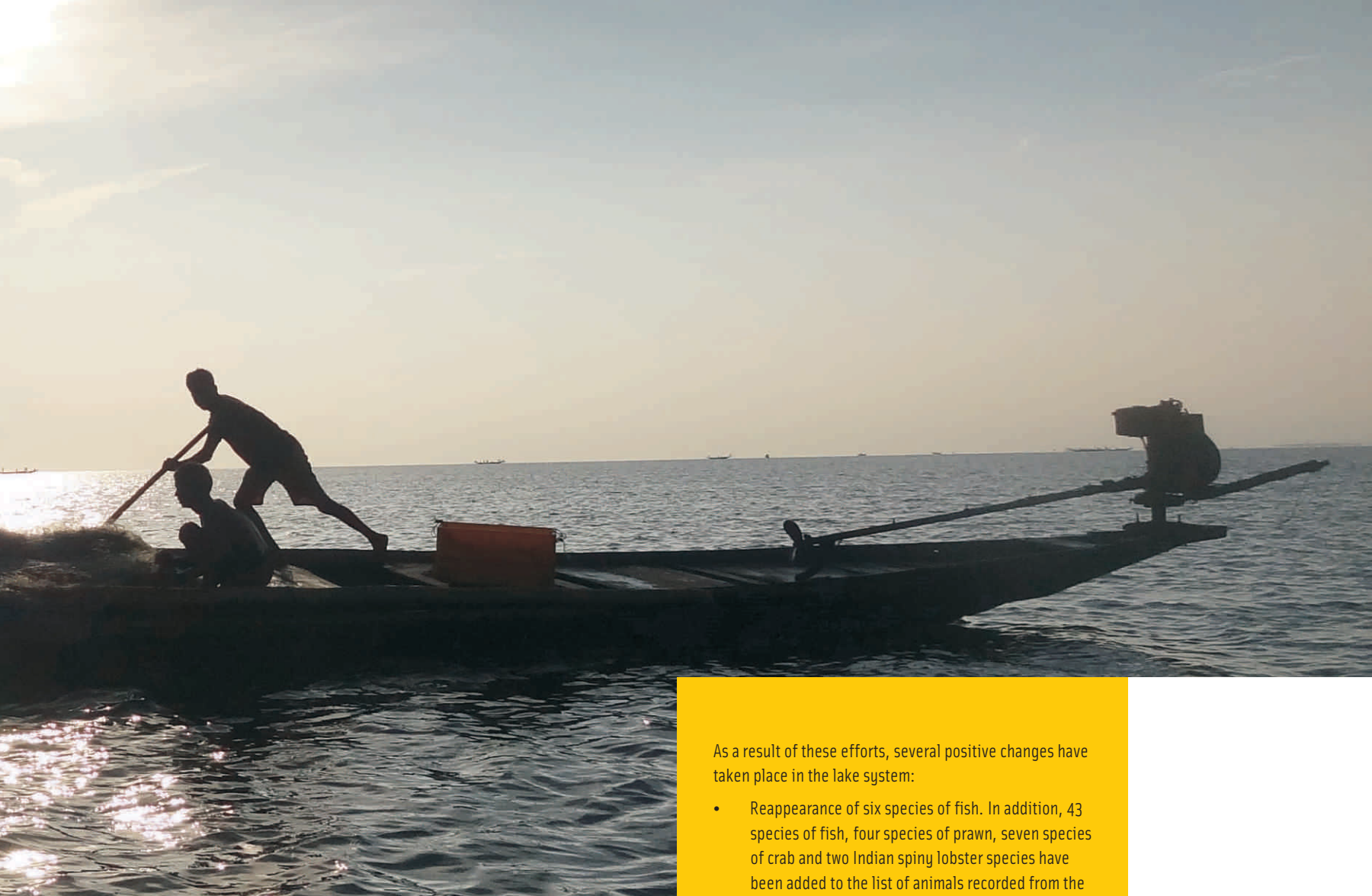


10.1

ECOLOGICAL RESTORATION OF CHILIKA LAGOON

The brackish water lagoon of Chilika, a Ramsar site, is situated on the east coast in the state of Odisha in India. It is a key wintering ground for more than 1 million migratory birds. Chilika lagoon is also the natural abode of the globally threatened Irrawaddy dolphin (*Orcaella brevirostris*). The wetland forms the basis of the livelihood security of more than 2,00,000 fishers and 4,00,000 farmers living in and around the wetland and its adjoining catchments. Over a period of time, siltation from degraded catchments had choked the connection of the lagoon with the Bay of Bengal, leading to a rapid decline in fisheries (from 8000 million tonnes annually to less than 1000 million tonnes), proliferation of invasive weeds and shrinkage of the area and volume of the lagoon. This had a tremendous impact on the livelihoods of communities, especially fishers, who depended on the lake for sustenance. Introduction of shrimp culture also led to pressures on the ecology of the lake.

The Chilika Development Authority was constituted to restore Chilika lagoon through an ecosystem approach, conserve its biodiversity and secure the livelihoods of the dependent communities. Hydrological intervention was undertaken in the form of the creation of a new mouth. Programmes for watershed management, development of fisheries, ecotourism development, education and outreach were also initiated.



As a result of these efforts, several positive changes have taken place in the lake system:

- Reappearance of six species of fish. In addition, 43 species of fish, four species of prawn, seven species of crab and two Indian spiny lobster species have been added to the list of animals recorded from the lake.
- Decrease in area under the freshwater weed *Eichhornia crassipes* (water hyacinth).
- Expansion of sea grass meadows and increase in species diversity.
- Increase in population and habitat of Irrawaddy dolphin, from 70 in 2003 to 152 in 2013.

Building on the recovery of the ecosystem, the lake fisheries have revived significantly. The annual catch grew from 1747 million tonnes in 2000 to 14,228 million tonnes in 2012. The tourist inflow to Chilika has also increased substantially.





10.2

VULTURE RECOVERY

Millions of vultures used to occur across the Indian subcontinent due to the large numbers of livestock reared in this region and an availability of carcasses. However, sharp declines in the populations of vultures of Gyps species were reported in the mid-1980s in all regions across northern India when extensive surveys were conducted by the Bombay Natural History Society (BNHS). Responding to the urgent need for action to prevent the extinction of the vultures, MoEFCC prepared the Vulture Action Plan in 2006 to take steps needed for conservation of the vulture species. Since then, vultures have been successfully bred in captivity at captive breeding centres in the country. A network of provisional vulture safe zones has been established. The efforts of the GoI, state governments, BNHS and other governmental/non-governmental organisations in cooperation with international organisations such as the Royal Society for the Protection of Birds to save the vultures from extinction are showing positive results. Recent research publications suggest that there are signs of recovery of the populations of the Oriental white-backed vulture *Gyps bengalensis*, Egyptian vulture (*Neophron percnopterus*) and red-headed vulture (*Sarcogyps calvus*) (http://www.save-vultures.org/save_resources_scientificpapers.html). IUCN-India has formulated a regional project on vultures and sought funding support from GEF.

BUSTARD RECOVERY

The bustards (including the floricans) are an extremely endangered group of birds that are dependent on grassland ecosystems. There are four species of bustard in India: the great Indian bustard (GIB), the lesser florican, the Bengal florican and the houbara bustard. The population of the GIB has been declining, and the bustards have disappeared from about 90% of their range. The present population of the GIB (according to the 2011 census) is made up of 209 individuals in six states in India. Currently, the Bengal florican is found only in Uttar Pradesh (70–80), Assam (180–220) and Arunachal Pradesh (40–50). In order to address the decline in the bustard population, the MoEFCC has formulated the Resident Bustards Recovery Programme-2013, advocating a holistic conservation approach that integrates research and monitoring; protection and management; local livelihood concerns; conservation awareness; and the possibility of a conservation breeding programme.

10.3



10.4

TIGER RECOVERY

The tiger *Panthera tigris* is an umbrella species for conservation of the biota of a majority of the eco-regions in Asia. Its role as a top predator is vital in regulating and maintaining ecological processes and systems. India is home to over 50% of the world's wild tigers in spite of having a growing human population of over a billion. India is playing an important role in conserving tigers by accomplishing the objectives of the Global Tiger Recovery Plan, which was ratified at the meeting of world leaders held at St. Petersburg in 2010. The country has also established the National Tiger Conservation Authority (NTCA), a statutory body for dealing with all matters related to tiger conservation. India is monitoring the tiger on a national scale—in the 17 states where tigers occur in the country. The NTCA (www.projecttiger.nic.in) prepared the Standard Operating Procedure (SOP) in 2014 to deal with emergencies arising due to the straying of tigers in human-dominated landscapes in the most appropriate manner to avoid casualties or injury to human beings, tigers and cattle and loss of property.





Satellite tagged on Amur falcon
being released

ENSURING A SAFE HAVEN FOR THE AMUR FALCON

10.5

The Amur falcon (*Falco amurensis*) is a small bird of prey, weighing around 160 g. It is known to breed in parts of eastern Russia, China and Mongolia and spend winters in distant southern Africa. These trans-equatorial migratory birds are known to make a round trip of at least 20,000 km every year, travelling between their breeding and wintering grounds, including a nonstop flight over the Arabian Sea after passing across India. During their south-bound migration, Amur falcons are known to arrive in large numbers in October to Nagaland, in India, and a few other regions in north-eastern India. While the falcons have been performing this journey from time immemorial, there was hardly any talk of this bird till late 2012. Amur falcons stop only briefly along their migratory route in India, forming what is probably the single largest congregation of Amur falcons recorded anywhere in the world, roosting on trees or high electric wires in large numbers. Some time back, it was reported that thousands of falcons were being trapped at their roost sites by local villagers in Nagaland for consumption as well as for commercial trade.



The Amur falcon is covered under the Convention on the Conservation of Migratory Species of Wild Animals and is also protected by national legislation in India. The issue was brought to the notice of the MoEFCC and the CoP President after a meeting of the Standing Committee of the National Board for Wildlife on 31 October 2012 in New Delhi. Subsequently, the GoI, along with the Nagaland State Forest Department, took immediate actions to prevent the mass hunting. Soon a global publicity campaign on the large-scale killings of falcons was carried out by Conservation India, which instantly brought the issue to the notice of authorities at both the national and state levels. An armed forest protection force was deployed at the roost sites by the Nagaland Forest Department to ensure that no birds were harmed till they safely departed on their migration. Nagaland, being a tribal state, has nearly 90% of the land under the direct control of local communities, including the falcon roost sites. Managing the issue of hunting was thus a herculean task for the forest department. However, the forest department worked closely with the local communities, supported by non-governmental organisations such as Natural Nagas, Wildlife Trust of India and Nagaland Wildlife and Biodiversity Conservation Trust and engaged with the local people to promote conservation of the falcons. Remarkably, the local church, village and student councils and other villagers came forward in support and declared that they would provide safe passage and protect the falcons. And, true to their word, no falcons were killed when they arrived as scheduled, in October 2013.

Migratory route of Amur falcon





In September 2013, the WII and the Coordinating Unit of the Raptors MoU developed a mission to deploy modern technology in the form of lightweight satellite tags. These were fitted to a small number of Amur falcons trapped in Nagaland to track their migration and to gain a better understanding of the behaviour and ecology of the Amur falcon during its presence in Nagaland, along its migration route and in the wintering areas in Africa. Other objectives were to actively apply the information gained to raise awareness about the international importance of the Amur falcon and to promote falcon conservation activities, particularly amongst local communities in Nagaland. One of the falcons, named Naga, was the first of three birds to reach Somalia, on the east African coast, after a nonstop flight lasting five days and 10 hours, from Nagaland, covering a distance of about 5600 km.

These efforts produced positive results in conserving Amur falcons in this area. The engagement of local communities in falcon conservation and positive conservation activities undertaken by the Gol, at both the national and state levels, with the support of NGOs, thereby contributed to achieving Aichi Biodiversity Target 12 and India's National Biodiversity Target 6. Since then, Nagaland has provided a safe haven for the Amur falcons on their long journey to southern Africa. There are sustained efforts and commitments to ensure that this positive situation is maintained in the future.

Tracking the Amur falcon:
Satellite tag on Amur falcon
(T) and community
participation in Amur falcon
conservation (B)



Flag-off of the III phase of
Science Express Biodiversity
Special

11

AWARENESS AND OUTREACH



SCIENCE EXPRESS BIODIVERSITY SPECIAL

11.1

*A unique science exhibition,
focusing on biodiversity and
climate change, running on
the Indian rail network*

The Science Express Biodiversity Special (SEBS) is an innovative mobile exhibition mounted on a specially designed 16-coach train, travelling across India. It is a unique collaborative initiative of the Department of Science & Technology (DST), MoEFCC, and Ministry of Railways, GoI. Out of the 16 coaches, MoEFCC has included exhibitions in eight coaches that are solely dedicated to showcasing the myriad biodiversity spread across the bio-geographical zones in India, such as the Trans-Himalaya, Himalaya, Gangetic Plain, North-east, Western Ghats, Indian Desert, Semi-arid Zone, Deccan Peninsula, coasts and islands. These eight coaches highlight the biodiversity in the country, with their focus on the range of biological diversity; critically endangered species (IUCN Red List); biodiversity hotspots; domesticated biodiversity (agricultural diversity and animal husbandry); biodiversity and livelihoods; bioculture; threats/challenges (climate change, other anthropogenic pressures); conservation measures; and success stories/experiences/unique stories.



Flag-off of the III phase of Science Express Biodiversity Special

The exhibition also covers various other facets such as marine life, coastal forests, microbial forms and agrobiodiversity and their linkages with livelihoods, along with the challenges of conservation. The other eight coaches have exhibition on themes including Climate Change, Biodiversity and Water, Sustainable Environment and Energy Conservation.

Positioned as the Brand Ambassador of CoP-11, the SEBS was flagged off on World Environment Day, on 5 June 2012. Travelling across India to cover 57 stations, the train received 2.3 million visitors. Following the resounding success of SEBS in creating large-scale awareness on biodiversity issues, it was continued in its second phase in 2013, when it received over 2.3 million visitors. The SEBS, which is presently on its third run, in 2014, has successfully showcased the wide array of biodiversity in India and the conservation measures adopted thereof. The SEBS has become the largest, longest-running and most-visited mobile science exhibition in India.



Shr Prakash Javadekar, MECC inside SEBS



11.2

CELEBRATING BIOLOGICAL DIVERSITY DAY 2013 AND 2014

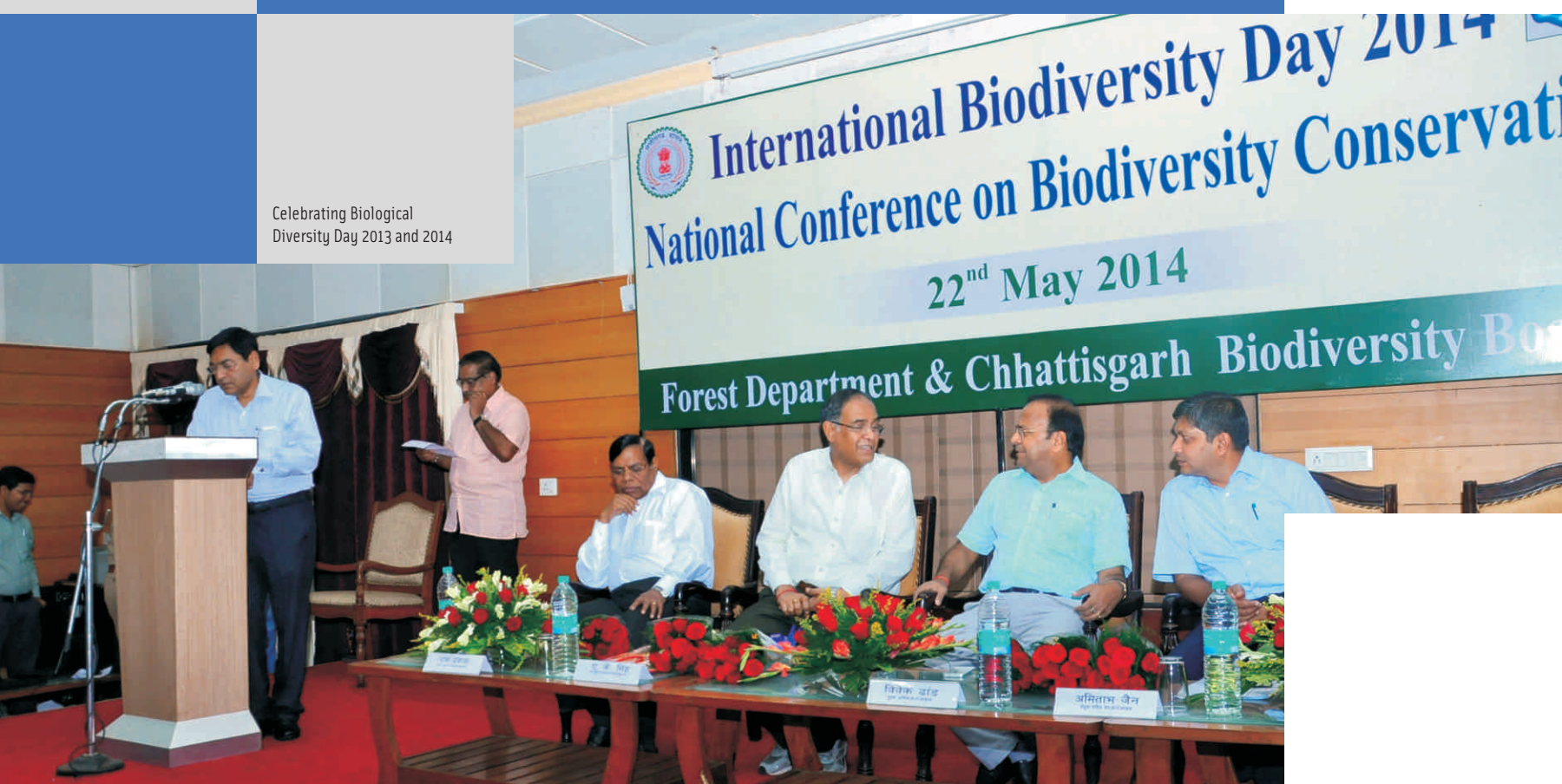
The theme for International Biodiversity Day (IBD) for 2013 was 'Water and Biodiversity', and for 2014 it was 'Island Biodiversity'.

The MoEFCC organised the main event for IBD 2013 at WWF-India in New Delhi, with enthusiastic participation from various stakeholders from over 30 organisations representing the Central sectoral ministries concerned and their agencies, state government agencies, universities/research organisations, national and international NGOs, UN agencies, international organisations and industry. An interactive poster developed on the theme of IBD by the Centre for Environment Education was released and distributed to thousands of schools all over the country.

Several state governments also celebrated the day in a befitting manner. For example, the Government of the National Capital Territory (NCT) of Delhi organised a workshop on water and biodiversity for eco-club students and teachers in New Delhi.

Mr. Hem Pande, Additional Secretary, MoEFCC was invited by an FM radio channel, Rainbow, for a discussion on IBD, which was broadcast during their all-India morning programme, for creating awareness. The discussion lasted almost 15 minutes.

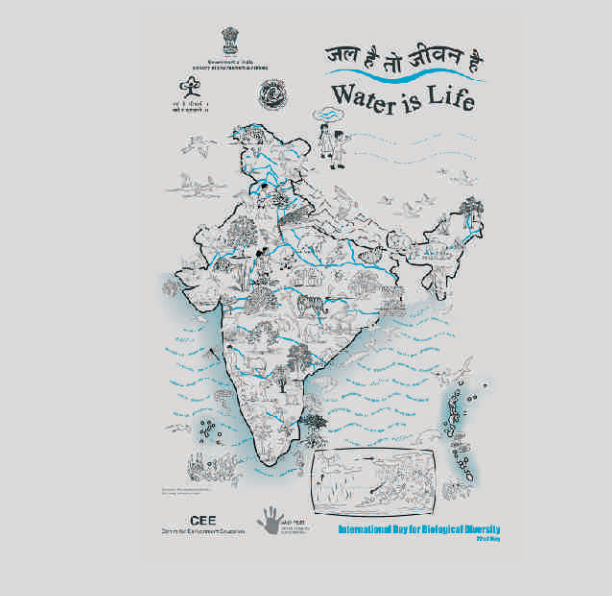
Celebrating Biological
Diversity Day 2013 and 2014





In 2014, the MoEFCC and NBA, in association with the Forest Department of the Andaman and Nicobar Islands and United Nations Development Programme (UNDP-India), celebrated IBD on 22 May 2014 at Port Blair, capital of one of India's two groups of islands, namely the Andaman and Nicobar Islands, in keeping with the year's theme, 'Island Biodiversity'. On this occasion, the MoEFCC, in partnership with UNDP, presented the second India Biodiversity Awards (2014) for honouring inspiring examples in four categories: Community Stewardship, Decentralised Governance, Co-management and Protected Areas. A compilation of case studies nominated for these awards is proposed to be brought out at CoP-12. Several SBBs at the provincial level also celebrated IBD 2014 by organising events such as painting and photography competitions for school children on that day. An event was also organised in New Delhi on 22 May 2014 to formally launch the India Business and Biodiversity Initiative.

Celebrating Biological Diversity Day 2013 in New Delhi



International Biodiversity Day 2014, Port Blair, Andamans, India



11.3

CMS VATAVARAN ENVIRONMENT & WILDLIFE FILM FESTIVAL AND FORUM



Seventh CMS Vatavaran—Environment and Wildlife Film Festival and Forum 2014, New Delhi

The seventh edition of CMS Vatavaran—Environment and Wildlife Film Festival and Forum was organised at Indira Gandhi National Centre for the Arts, New Delhi from 30 January to 3 February 2014. The theme of the festival was 'Mainstreaming Biodiversity Conservation at Different Levels to Promote Living in Harmony with Nature'. With new formats and proactive programming, the Seventh CMS Vatavaran aligned its efforts in the context of implementation of the Strategic Plan for Biodiversity and its Aichi Biodiversity Targets, following India's hosting of CoP-11. The Seventh CMS Vatavaran contributed to deliberations on India's NBTs by seeking to promote mainstreaming of biodiversity conservation through talks, discussions, interactive sessions, documentaries and films. This was one of the largest public outreach programmes ever in India for celebrating the presidency of CoP-11. Over 11,000 participants attended the event, of which around 2500 participants were from schools, over 800 were from colleges, and 7500 were from the general public. There were 157 invited speakers, 52 media houses, 45 jury members, 86 nominated film-makers, 31 expert advisory board and film-maker advisory group members, 11 steering committee members and 100 partners. The WII team organised awareness generation workshops on the 12 National Biodiversity Targets.

11.4 NATIONAL ENVIRONMENT AWARENESS CAMPAIGN

The National Environment Awareness Campaign (NEAC) is one of the largest programmes of the MoEFCC to create public awareness about the environment. Launched in 1986 with the aim of creating awareness on environmental issues among a wide group of stakeholders, NEAC has established a network of around 14,000 participating agencies, facilitated by 33 Regional Resource Agencies, and has reached out to large sections of society across the country. Several non-governmental organisations, educational and training institutions, professional associations, scientific bodies, community organisations and a whole range of other agencies participate in the campaign. These bodies, singularly or in partnership with other organisations, organise programmes for creating environmental awareness, which are followed by field action at the local, regional and national levels. Following India's hosting of CoP-11, the theme for NEAC for the years 2012–2013 and 2013–2014 was 'Biodiversity Conservation'. The success of the programme on this theme and its outreach can be gauged by the numbers of participants during these two years, which were 13,676 and 13,921, respectively.

11.5 NATIONAL NATURE CAMPING PROGRAMME

MoEFCC launched the National Nature Camping Programme (NNCP) for schools in 2013–2014 with the objective of providing at least one camping experience of 2–3 day for every school child (6th to 8th standard) in a school covered by the Ministry's National Green Corps (NGC) programme. NNCP is aimed at creating greater awareness understanding of and empathy for the environment, including biodiversity, among children. A total of 100 camps were sanctioned in January 2014, spread over 10 organisations, with an outlay of ₹ 90,10,000.

11.6



INTERNATIONAL DAY FOR THE PRESERVATION OF OZONE LAYER 2014

National Museum of Natural History (NMNH) in association with MoEFCC celebrated the International Day for the Preservation of Ozone Layer on 16 September, 2014. On this occasion an awareness generation programme was also organised for school students in the form of painting and model making competition on three themes viz Ozone Layer Protection: the Mission goes on, Effects of Climate Change (Global Warming) and Pollution and Life. Shri Prakash Javadekar, MEFCC emphasized the need to make students aware of sustainable development and environment protection. He reiterated the importance of making the planet livable and to maintain a sustainable lifestyle.

11.7

UTTARAKHAND SPRING BIRD FESTIVAL

Cultural activities
during Uttarakhand
Spring Bird Festival



The Asan Conservation Reserve, a marvelous wetland near Dehradun, Uttarakhand State, and India's first Conservation Reserve played host to Uttarakhand's first ever bird festival from 5 to 9 th February 2014. The festival was organised by the Ecotourism Wing of the Uttarakhand Forest Department in collaboration with Titli Trust and Nature Science Initiative, two Dehradun-based NGO's. The Ministry of Environment, Forests & Climate Change, sponsored the festival along with other organisations. The seeds for the bird festival were actually sown earlier. The Uttarakhand Forest Department has been conducting birdwatching camps all across Uttarakhand for the last two years. These birdwatching camps have been conducted in 21 destinations in Garhwal and Kumaon regions during which nearly 500 local nature guides, forest staff and members of the local community have been trained in the nuances of bird and nature watching.

The First Uttarakhand Spring Bird Festival (USBF) was organized with the primary objectives of raising Uttarakhand's profile as a birding destination, increasing awareness about bird conservation and improving birdwatching skills. The USBF brought together Uttarakhand's community-based bird tourism ventures and introduced birding to the uninitiated, in the hope of creating more bird watchers and nature lovers amongst the public in large. The festival was a huge success attracting more than 1,200 visitors over five days. Activities during the festival including guided birdwatching conducted by bird guides from all over Uttarakhand, a photography workshop, a technical workshop, a rural community-based travelmart and exhibition, a bird calls workshop and a cultural performance. Participants from Himachal Pradesh, Punjab and Jammu and Kashmir were also present at the festival along with birdwatchers, students, forest staff, general public and tourism personnel from across Uttarakhand. Building on the success of the Asan bird festival, Uttarakhand's 2nd Spring Bird Festival will be organized at Pawalgarh Conservation Reserve from 4 to 8 th February 2015.



12

INITIATIVES ON BIODIVERSITY TAKEN UP BY OTHER PARTNER ORGANISATIONS

BOTANICAL SURVEY OF INDIA

12.1

The Botanical Survey of India (BSI), through its headquarters and regional centers, has undertaken many activities during India's presidency of CoP in various parts of the country, including efforts aimed at exploring biodiversity and documenting traditional knowledge, *ex situ* conservation with a focus on threatened and endemic plants, discovering and rediscovering plants, digitisation of herbarium specimens and conducting awareness programmes and disseminating information.

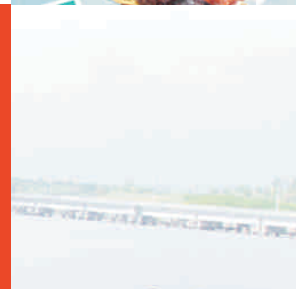
To disseminate details of the research work carried out by BSI scientists, a number of publications were brought out (see Section 15). A total of 15 articles in Hindi and five articles in English relating to biodiversity - richness/documentation/utilities/conservation were published to create awareness among the people on the importance of biodiversity conservation.

The BSI conducted many training courses: Capacity Building Training Course in Plant Taxonomy, at Central National Herbarium, 22–23 March 2014; Botanical Nomenclatural Course, 11–13 January 2013; and Brainstorming Session on Plant Taxonomy, 25 April 2013. In 2013, BSI scientists participated in UNEP-GEF biodiversity projects 'Strengthening the Implementation of the Biological Diversity Act and Rules with Focus on Access and Benefit Sharing'; National Dialogue on Orchid Conservation and Sustainable Development for Community Livelihoods; Transboundary Biodiversity Management in Kanchenjunga Landscape; and National Seminar on Environment Management and Biodiversity Conservation.

Several awareness programmes were conducted, including Biodiversity Conservation Awareness Programme, with school children participating: International Day for Biological Diversity, 22 May 2013; 'The Wonderful Life of Orchids: Exhibition of Live Orchid Plants and Blooms from the North-eastern States of Himalayas and Their Rapid Multiplication Techniques', 31 January to 8 February 2014; Prospective Research Areas in Taxonomy and Ethnobiology in Next Ten Years; and National Environmental Awareness Programme.

12.2

ZOOLOGICAL SURVEY OF INDIA



Awareness and outreach activities on biodiversity conservation undertaken by Zoological Survey of India

The Zoological Survey of India (ZSI), since its participation in CoP-11, at Hyderabad in October 2012, conducted several training programmes, workshops and various activities related to biodiversity conservation, including animal discoveries and rediscoveries. The Training and Extension Division conducted training programmes on the scheduled animals of India for the staff of various departments such as the Customs, Forest, Central Excise and Port Authorities of India.

Two training programmes, Geographical Information System in Faunal Studies & Data Basing and Digitisation of Faunal Collections, were conducted for the scientists of ZSI during 21–22 January 2013 and 15–16 January 2014. A training programme on Collection, Maintenance, and Identification of Zoological Specimens with Special Reference to the Scheduled Mammals, was conducted from 6 to 8 March 2013 at ZSI, Kolkata. Further, the Environmental Information System (ENVIS) Centre of ZSI conducted a programme, Need Based Taxonomy for Conservation of Faunal Diversity, on 27 and 28 March 2014. Workshops ('Wetlands and Waterfowl' and 'Common Birds Monitoring Programme') were organised in Kerala with the support of the Kerala Forests & Wildlife Department on 7 March 2013 and 13 February 2014, respectively. Three training programmes, Integrated Coastal Zone Management, were conducted for state government officials and for the local communities (the primary stakeholders) from 11 to 17 December 2012, from 24 February to 1 March 2013 and from 7 to 13 February 2014, respectively. The ZSI, Port Blair organised a workshop, Value of Biodiversity in Island Biosphere, on 13 and 14 September 2013 exclusively for higher secondary students of the Andaman and Nicobar Islands.



12.3

INDIAN COUNCIL OF FORESTRY RESEARCH AND EDUCATION

The ICFRE has been conducting various training programmes and workshops to create awareness about biodiversity and its conservation. The programmes conducted between October 2012 and October 2014 includes the following:

- A one-week workshop, Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation Strategies, conducted in December 2012 for the Department of Science & Technology, New Delhi
- A two-day workshop, Conservation of Biodiversity and Sustainable Livelihood in Watershed Management, conducted in September 2013 for the Directorate of Watershed Management, Uttarakhand
- A one-week workshop, Climate Change, Forest Ecosystems and Biodiversity: Vulnerabilities and Adaptation Strategies, conducted in December 2013 for the Department of Science & Technology, New Delhi

12.4

CENTRE FOR ENVIRONMENTAL EDUCATION

The Centre for Environment Education (CEE) has been facilitating educational programmes to promote awareness about the Aichi Biodiversity Targets, particularly Aichi and National Biodiversity Target 1. CEE is facilitating global, regional and national educational initiatives aligned with the concepts of Education for Sustainable Development (ESD) by formulating educational strategies to achieve the Aichi Biodiversity Targets.

The CEE (with over 30 years of multidimensional experience in environmental education and education for sustainable development), with the support of MoEFCC and United Nations Educational, Scientific and Cultural Organisation (UNESCO), has developed a draft document, A Comprehensive Framework for an Educational Strategy for Biodiversity Conservation and Sustainable Use, through extensive desk research and analysis, discussions and meetings with experts at various forums in India and outside. The draft document was widely circulated in UNESCO and CBD networks, including at WGRI-5. UNESCO set up an online virtual working space to develop the document further. CEE is now finalising this document with the inputs received, for presentation at COP-12, in Korea, in October 2014.

CEE is working towards an exclusive global web site on education for biodiversity conservation (<http://educationcbd.org/>). It is presently in a static state, and it is being improved before it goes in for a beta version. The web site will include features such as education initiatives around the world; a database of tools and materials available to support education initiatives; info-graphics (education database) of Parties; case studies on impacts of education on Aichi Biodiversity Targets; a resource catalogue; and a hand print calculator.



Shri Hem Pande chairing
NBA meeting

27 08 2014

12.5

NATIONAL BIODIVERSITY AUTHORITY

Delegates during NBA
meeting in Chennai



The National Biodiversity Authority (NBA) organised the Eighth National Meeting of State Biodiversity Boards (SBBs) on 15 and 16 March 2013 at Chennai. Twenty-six SBBs were represented at the meeting. Ms Jayanthi Natarajan, ME FCC, CoP President, was the chief guest. Dr. V. Rajagopalan Secretary, MoEFCC also participated in the event. The meeting, which is an annual event, was convened by NBA to discuss the challenges in implementing the Biological Diversity Act (BD Act), 2002 and to establish interaction among the SBBs, along with Biodiversity Management Committees (BMCs).

The Ninth National Meeting of SBBs was organised on 20 and 21 January 2014 at Chennai to mark and commemorate an important milestone in its history, i.e. 10 years of its establishment, to implement the BD Act, 2002 and Rules, 2004. The meeting discussed exhaustively and deliberated upon the elements of strengthening the BD Act, including preparation of Peoples Biodiversity Registers (PBRs). The meeting also discussed updating the NBAP.



NBA meeting
in progress

The NBA organised a one-day interactive meeting with the Consultative Group on International Agricultural Research (CGIAR) centres operating in India so as to discuss their current set of activities in the country and its interface with the BD Act of India. The interactive meeting deliberated on the access to and fair and equitable sharing of benefits arising out of the utilization of biological/genetic resources, knowledge and matters connected therewith in the backdrop of India being a Party to the CBD, Nagoya Protocol on ABS and the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGFRA).

The interactive meeting was attended by representatives drawn from NBA, Indian Council of Agricultural Research, National Bureau of Plant Genetic Resources and CGIAR centers such as Biodiversity International, World Agro Forestry Centre, International Rice Research Institute, International Water Management Institute, International Maize and Wheat Improvement Centre, International Food Policy Research Institute, International Crops Research Institute for the Semi-Arid Tropics and Commonwealth Agricultural Bureaux International.

The NBA, in collaboration with Indira Gandhi National Forest Academy, Dehradun, organised a one-day brainstorming meeting on the draft National Working Plan Code (NWPC-2012) on 23 February 2013, with the aim of deliberating on the code so as make it reflect India's legal obligation to various international treaties, including CBD and the Nagoya Protocol on ABS, as well as to reflect various national legislative measures such as PESA (1996), Forest Rights Act (2006) and the BD Act (2002) that were enacted in the last few years to govern various aspects of forest biodiversity.

Several SBBs have been undertaking biodiversity-related activities, some of which are mentioned in the following section.



12.6

STATE BIODIVERSITY BOARDS

12.6.1

ANDHRA PRADESH BIODIVERSITY BOARD

With Andhra Pradesh being the state of the host city of CoP-11, the Andhra Pradesh Government and the Andhra Pradesh SBB have undertaken a number of initiatives towards conservation of biodiversity in Andhra Pradesh, in the city of Hyderabad in particular, as a follow-up of CoP-11. The direct effect of CoP-11 is that the host city of Hyderabad improved its City Biodiversity Index (a self-assessment tool of biodiversity in urban areas, with 23 indicators in three components, that is native biodiversity, ecosystem services, and governance and management of biodiversity) from 36 points in October 2012 to 59 points by June 2013, with a target of 65 in October 2014.

12.6.2

ARUNACHAL PRADESH BIODIVERSITY BOARD

A popular talk series on the theme Water and Biodiversity was organised by the Arunachal Pradesh SBB as a part of the IBD celebrations on 22 May 2013 at the State Forest Research Institute, Itanagar. The Chief Secretary of Arunachal Pradesh, PCCF and Principal Secretary (Environment and Forests), PCCF (Wildlife and Biodiversity), senior forest officials of the state, members of the State Biodiversity Board, faculty members from Rajiv Gandhi University, Rono Hills, Itanagar and North Eastern Regional Institute of Science and Technology (NERIST), Nirjuli, scientists from BSI and SFRI, faculty members from state colleges, BMC members and school children attended the programme. In this popular talk series, presentations on the status of the aquatic resources of Arunachal Pradesh, biodiversity loss and water crisis and the relation between water and survival of life on Earth were made.



Biodiversity conservation awareness activities undertaken by Kerala State Biodiversity Board

12.6.4

UTTAR PRADESH BIODIVERSITY BOARD

KERALA BIODIVERSITY BOARD

12.6.3

The Kerala SBB organised capacity building programmes for local people and members of BMCs, eco-restoration projects and tuber diversity conservation projects activities. The Kerala SBB has established a biodiversity research centre that which will promote applied research through collection, collation, management, analysis and dissemination of data on Kerala's biological diversity. The research centre will provide scientific support to the Kerala SBB in decision making on matters related to biodiversity so as to enable the board to advise the state government on critical environmental and conservation issues.



Biodiversity conservation awareness activities undertaken by Kerala State Biodiversity Board





The Uttar Pradesh SBB celebrated World Wetlands Day on 2 February 2014 in collaboration with the Department of Zoology, University of Lucknow and Regional Science City, Aliganj, Lucknow. The programme aimed at creating awareness about wetland conservation among students of schools and colleges and local people of Lucknow to protect the bio-resources of the state. An exhibition of paintings was organised for school children so that a desire to understand the ecosystem of their state and others would be inculcated early in their lives.



Biodiversity conservation awareness activities undertaken by Uttar Pradesh State Biodiversity Board



Biodiversity conservation awareness activities undertaken by West Bengal State Biodiversity Board

12.6.5

WEST BENGAL BIODIVERSITY BOARD

The West Bengal SBB organised awareness programmes in schools throughout the state. School children, staff members of schools and officials from government departments participated in large numbers. The awareness programmes were given good coverage by the media.



12.7

CENTRE FOR ENVIRONMENTAL MANAGEMENT OF DEGRADED ECOSYSTEMS

The Centre for Environment Management of Degraded Ecosystems (CEMDE) has developed site-specific restoration technologies that are being successfully used in restoring degraded and barren, mined-out landscapes and Over Burden Dumps (OBDs) and cut benches to their original state so that the biodiversity regains its original characteristics and values. Fifty-year-old OBDs and cut benches with a total extent of 250 acres in mined-out land owned by Steel Authority of India Limited (SAIL) at Purnapani (Odisha) have been successfully restored within a period of 10 years. They had been mined for limestone, and they have been restored to the original three-storeyed closed moist tropical ecosystem that used to exist before mining took place. This restored forest ecosystem harbours 140 tree and shrub species and has been generating ecological services and goods for the local communities. The 200-acre 40-m deep void has been restored to a biologically productive aquatic ecosystem that is providing protein-rich fish to the local communities.

A

B

Mined-out (limestone) site of SAIL at Purnapani (Odisha) before restoration (A) and after 10 years of ecological restoration (B and C), showing luxuriant three-storeyed tropical moist forest ecosystem having the same ecosystem functions and biodiversity characteristics and values as before mining

C





Restored mine in mined-out (limestone) area of SAIL at Purnapani (Odisha) showing fishing by locals (A) and harvested fish (B)

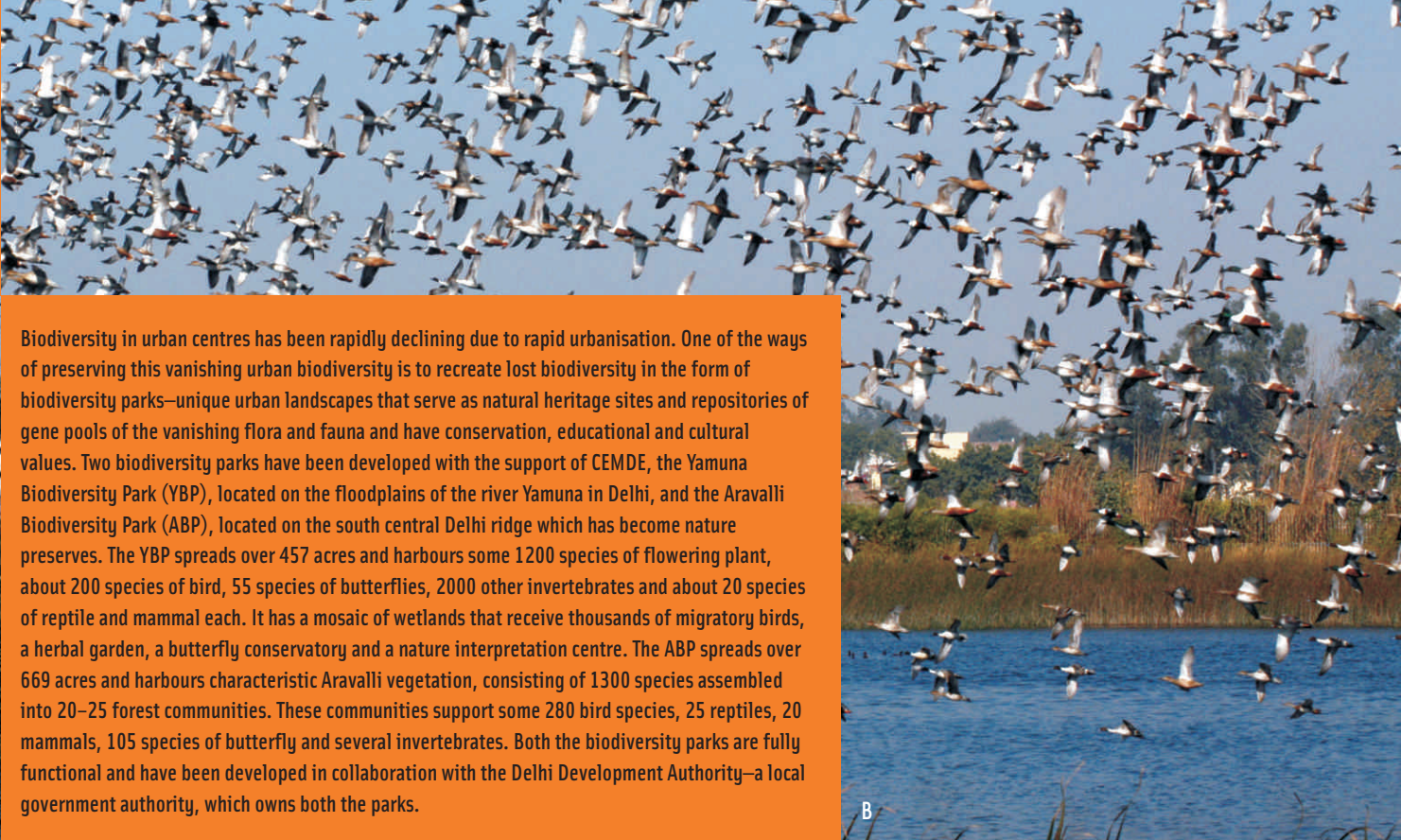
The CEMDE has also been working on the biology and ecology of *Lantana* and its invasive strategies. Based on field biological and ecological studies conducted over more than 5 years, a simple, cost-effective innovative technology known as the 'cut rootstock method' was developed to remove *Lantana*. A new management strategy has also been developed that involves the removal of *Lantana* by the cut rootstock method, followed by ecological restoration of the weed-free landscapes to the original state of the forest/grassland ecosystem. The implementation of this new management strategy at Corbett Tiger Reserve has led to (i) regeneration of underwoods after eradication, which serves as cover for wildlife and (ii) luxuriant grasslands that support rich wildlife. The Corbett model is now replicated by the forest departments of many states in India to reduce biodiversity losses drastically.



Lantana invasion on grasslands in Corbett Tiger Reserve before restoration



Restored grasslands, after the removal of Lantana by the cut rootstock method at Corbett Tiger Reserve



Biodiversity in urban centres has been rapidly declining due to rapid urbanisation. One of the ways of preserving this vanishing urban biodiversity is to recreate lost biodiversity in the form of biodiversity parks—unique urban landscapes that serve as natural heritage sites and repositories of gene pools of the vanishing flora and fauna and have conservation, educational and cultural values. Two biodiversity parks have been developed with the support of CEMDE, the Yamuna Biodiversity Park (YBP), located on the floodplains of the river Yamuna in Delhi, and the Aravalli Biodiversity Park (ABP), located on the south central Delhi ridge which has become nature preserves. The YBP spreads over 457 acres and harbours some 1200 species of flowering plant, about 200 species of bird, 55 species of butterflies, 2000 other invertebrates and about 20 species of reptile and mammal each. It has a mosaic of wetlands that receive thousands of migratory birds, a herbal garden, a butterfly conservatory and a nature interpretation centre. The ABP spreads over 669 acres and harbours characteristic Aravalli vegetation, consisting of 1300 species assembled into 20–25 forest communities. These communities support some 280 bird species, 25 reptiles, 20 mammals, 105 species of butterfly and several invertebrates. Both the biodiversity parks are fully functional and have been developed in collaboration with the Delhi Development Authority—a local government authority, which owns both the parks.



A

Overview of Yamuna Biodiversity Park, on the floodplains of the river Yamuna, showing terrestrial communities (A) and a wetland with migratory birds (B). An aerial view of Aravalli Biodiversity Park, in the South Central Ridge (C) of Delhi



C

12.8

Inauguration of Regional
Museum of Natural History,
Sawai Madhopur, Rajasthan, 1
March 2014



Shri Hem Pande inaugurating
Regional Museum of Natural
History, Sawai Madhopur,
Rajasthan, 1 March 2014

NATIONAL MUSEUM OF NATURAL HISTORY

The National Museum of Natural History (NMNH), New Delhi is an institution devoted to environmental education (EE). During the two years of India's CoP presidency, NMNH organised many outreach programmes, such as temporary exhibitions, mobile exhibitions and a large number of nature camps. Through its main museum in New Delhi and its network of regional museums, NMNH has been implementing the policies of the MoEFCC on environment information, education and awareness, and biodiversity and intangible natural heritage. The latest natural history museum to be established in the country is the Regional Museum of Natural History, Sawai Madhopur, Rajasthan (or the Rajiv Gandhi Regional Museum of Natural History, Sawai Madhopur), which was inaugurated on 1 March 2014. It is the country's fourth regional museum of natural history and has exhibits on the plants, animals and geology of the western region of India.

NMNH also arranged many local and national-level competitions to mark the International Day for Biological Diversity, World Heritage Day, Earth Day and Environment Day, leading to Young Environmentalist of the Year Awards (YEYAs) on themes ranging from 'Green Cities' to 'The Face of Climate Change'.



12.9

SOCIETY OF INTEGRATED COASTAL MANAGEMENT

The Society of Integrated Coastal Management (SICOM) is the nodal agency for implementing the ambitious Integrated Coastal Zone Management (ICZM) Project, with a budget outlay of ₹ 1155.63 crores (USD262 million), funded by the World Bank. SICOM is implementing four components of this project: (i) the National Coastal Management Programme, (ii) ICZM West Bengal, (iii) ICZM Orissa and (iv) ICZM Gujarat. The national component includes (a) demarcation of the hazard line and mapping the entire coastline of the mainland of the country, which has been assigned to the Survey of India (Sol) (an MoU was signed between Sol and MoEFCC on 12 May 2010 and the project is being carried out) and (b) establishment of the National Centre for Sustainable Coastal Management (NCSCM) within the campus of Anna University, Chennai. This centre will be linked to 11 collaborating regional centers in each of the coastal states/union territories.

The key activities under the National ICZM Capacity Building programme are (i) capacity building of administrative departments, Coastal Zone Management authorities and R&D institutions involved in ICZM and conducting a nation-wide training programme on ICZM; (ii) establishing the NCSCM; (iii) mapping, delineating and demarcation of hazard lines and delineation of coastal sediment cells and (iv) mapping, delineation and demarcation of coastal Ecologically Sensitive Areas (ESAs).

Mangroves in
Andaman Islands





Green Action for National Dandi Heritage Initiative (development of Dandi): Enhancement of water resources, stakeholder consultations



The NCSCM, established within Anna University, Chennai, has undertaken activities in collaboration with 15 identified research institutions. These activities include the following:

- (i) Analysing ICZM practice and developing suitable applications in India;
- (ii) Evaluating and monitoring the implementation of the ICZM approaches, programmes and projects;
- (iii) Advising the governments and other stakeholders on policy, legal and scientific matters related to ICZM;
- (iv) Serving as an interface between coastal communities, experts and governments; and
- (v) Promoting applied research, education and awareness with respect to ICZM, including ecological literacy.

SICOM, through Gujarat Ecological Commission (GEC) and Gujarat Vidyapith, has initiated the Green Action for National Dandi Heritage Initiative (GANDHI) at Dandi. This project is being implemented on the completion of 80 years after Gandhiji's Dandi march. The project is an initial but important step in recognising Gandhiji's vision for the environment and biodiversity. The components of the project are conservation of the coast and coastal resources; adopting nature-based development of resources; promoting integrated village and community development; and promoting eco-tourism and 'environment-positive' branding of Dandi as a destination.





ICZMP Gujarat Marine National Park & Sanctuary (MNP&S): Development of mangrove nursery and plantation; village sanitation works



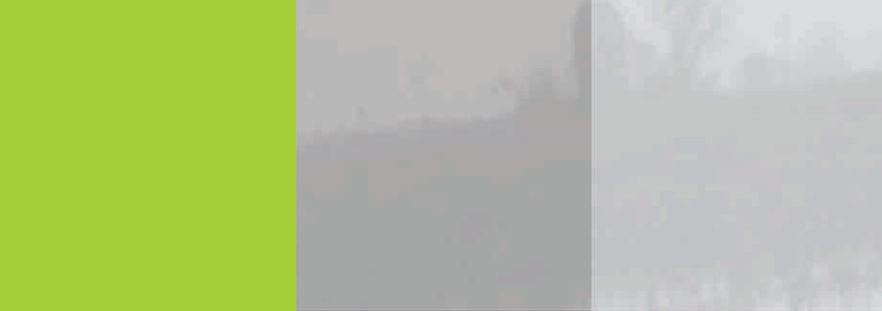


Coral transplantation
undertaken by Gujarat
Ecological Education
and Research (GEER)
Foundation



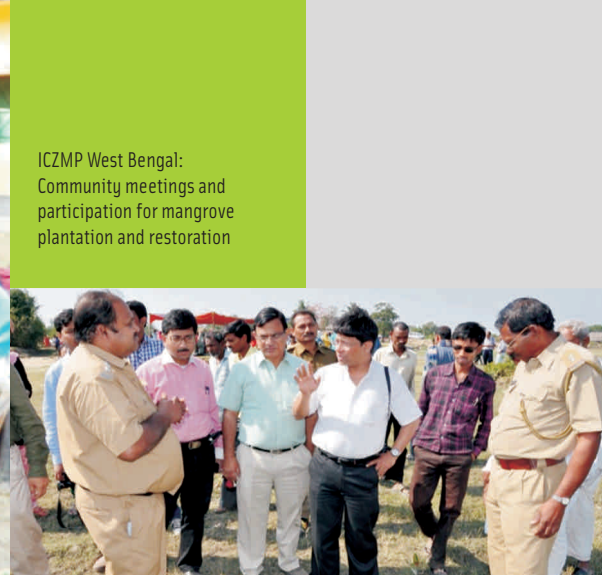
NCSCM meetings and workshops, 2013–2014, on integrated coastal zone management





ICZMP Odisha: Mangrove restoration, monitoring and conservation of avifauna, saltwater crocodiles





ICZMP West Bengal:
Community meetings and
participation for mangrove
plantation and restoration



12.10

CPR ENVIRONMENTAL EDUCATION CENTRE

The CPR Environmental Education Centre (CPREEC) has conducted biodiversity conservation education programmes for teachers, students, women and villagers in the states of Andhra Pradesh, Karnataka, Kerala and Tamil Nadu, and the union territories of the Andaman & Nicobar Islands and Puducherry. Some of the programmes conducted during 2012–2014 are a workshop, 'Orchid Biology: The Science of Orchids and Biology of Carnivorous Plants'; a workshop for teachers; field trips to lakes and sacred groves in Tamil Nadu for preparing biodiversity registers; and exhibitions. As a part of CPREEC's work on conserving and restoring sacred groves, tree plantation and maintenance works were undertaken in the sacred groves of some temples.



12.11

NATIONAL BUREAU OF PLANT GENETIC RESOURCES

The National Bureau of Plant Genetic Resources (NBPGR) conducted a five-day workshop, 'Biosafety and Detection of Genetically Modified (GM) Crops', between 11 and 16 August 2014 in New Delhi, in recognition of the importance of ensuring that all biosafety issues are adequately addressed before commercialisation of GM crops and that scientists and researchers are fully aware of the strategies and knowhow required to evaluate biosafety issues and regulatory mechanisms. The workshop was inaugurated by Mr Hem Pande, Additional Secretary, MoEFCC and Chairman, Genetic Engineering Approval Committee (GEAC). NBPGR is constantly making efforts to update expertise in this area, build capacity and disseminate knowhow through workshops and interactions. The GM Detection Laboratory at NBPGR has developed excellent infrastructure and GM detection technology at par with international standards. Such efforts towards national capacity building in frontier research areas of GM crops will not only be continued but also intensified.

Workshop on
Biosafety and
Detection of
Genetically
Modified (GM)
Crops, 11–16 August
2014,
New Delhi



12.12

NATIONAL CENTRE FOR SUSTAINABLE COASTAL MANAGEMENT

The National Centre for Sustainable Coastal Management (NCSCM), MoEFCC has undertaken comprehensive collection and collation of biodiversity data, i.e., species richness, associated fauna and flora, presence of endangered, endemic and threatened fauna/flora, etc. from ESA/Coastal Regulation Zone I (CRZI) areas in order to assess their conservation value and subsequently identify 'highly sensitive areas' for conserving and managing them effectively. Another important effort undertaken by NCSCM is the development of the Coastal and Marine Biodiversity Integration Network (CoMBiNe), which is a unique web portal that combines multiple databases on a platform for searching a huge wealth of information from multiple independent, heterogeneous data sets on the Indian coastal and marine flora and fauna, housed in biological repositories. The database will include all macro plants (sea grasses, mangroves, seaweeds) and animals (phyla Porifera to Chordata) inhabiting the Coastal Regulation Zone (I to IV) as defined in the CRZ 2011 notification. NCSCM plans to develop a mobile portal of CoMBiNe so as to provide a broad base for dissemination of knowledge relating to biodiversity. CoMBiNe will help identify taxonomic and biological data gaps so as to steer focused research on coastal and marine biodiversity. It is envisaged that the CoMBiNe portal will emerge as the national repository for coastal and marine biodiversity.

12.13

CENTRAL ARID ZONE RESEARCH INSTITUTE

The Central Arid Zone Research Institute (CAZRI), Jodhpur has been actively engaged in assessing the status of the natural vegetation, its distribution pattern, utilisation trends, economic importance and degradation status in the arid zone. Vegetation mapping has been completed in all the 12 districts of western Rajasthan and arid districts of Gujarat. CAZRI has one of the oldest herbaria of desert plants and the Desert Botanical Garden (which has been conferred the status of Lead Garden by MoEFCC), which have been playing an important role in enhancing knowledge and creating awareness about desert biodiversity. The Desert Botanic Garden has undertaken a major initiative towards conservation of threatened plants of the Indian arid zone. The distribution of 17 threatened species has been mapped, and these have been regenerated for ex situ conservation in the Desert Botanical Garden. Work on similar lines is in progress on other threatened plant species.

12.14

INTERNATIONAL UNION FOR CONSERVATION OF NATURE—INDIA



During India's presidency of CoP, the International Union for Conservation of Nature—India (IUCN—India) has commenced programmes for conservation of biodiversity and ecosystems including coastal and marine biodiversity, rivers and wetlands. Conservation of endangered species and engaging relevant stakeholders to build support for nature conservation are among the programmes' activities. IUCN—India's Mangroves for the Future (MFF) programme is based on an ecosystem approach of 'ridge to reef', which encompasses restoration of coastal and marine ecosystems, along with improvement of livelihoods of communities. Initiatives undertaken include conservation of species, building the capacity of communities for adaptation and resilience, performing gap analysis of information on marine and coastal biodiversity issues and developing knowledge products for awareness and policy support. Amongst the highlights and successes are identification of the distribution range, habitat requirements and conservation issues of the whale shark along the west coast of India, on the basis of which conservation actions have been initiated at the local level. Studies on sea grass management in the Gulf of Mannar, Palk Bay and Vembanad Kol backwaters, in southern India, have also been undertaken, and conservation actions have been developed. These initiatives contribute towards national efforts towards achieving Aichi Biodiversity Targets 1, 2, 4, 6, 10 and 11.

Under the thematic area 'Conservation of Aquatic and River Biodiversity', IUCN—India and IUCN—Bangladesh are jointly implementing a programme named 'Ecosystems for Life: A Bangladesh India Initiative' for developing a knowledge base and partnership among scientists, institutions and eminent individuals on both sides. Joint research projects, joint forums for strategic actions and dialogues have been undertaken. Significant outcomes of these efforts include the following:

- Situational analyses in the thematic areas of biodiversity conservation, inland navigation, environmental security, food security, water productivity and poverty, climate change, flood management have been completed. These studies have a direct bearing upon ecosystems and livelihoods in the Ganga—Brahmaputra and Meghna region to identify gaps in the knowledge base.
- A joint curriculum on water resource management in the region has been developed.
- Conservation action has been taken to conserve the hilsa fish.



This collaborative effort is epitomized in the gazette notification of the GoI issued on 9 April 2013 to regulate hilsa catching during the spawning and breeding season and the establishment of the Hilsa Conservation Research Centre at Diamond Harbour, in West Bengal, India. The initiative thus contributes towards achieving Aichi Biodiversity Target 6.

India and IUCN are joint chairs of the Steering Committee for Vulture Conservation, which follows up on the regional declaration by India, Nepal, Pakistan and Bangladesh for vulture conservation. The IUCN-India Country Office provides technical and secretarial support to the committee. Efforts have resulted in signs of recovery of vulture populations in the Indian subcontinent (see Section 10.2). This conservation programme contributes to efforts towards achieving Aichi Biodiversity Target 12.

IUCN-India has initiated a programme, 'Leaders for Nature', to mobilise the private sector to mainstreaming biodiversity conservation among businesses and motivate companies to move towards a 'net positive impact' on biodiversity and 'net biodiversity gain'. So far six major companies, namely Wipro Ltd., Cairn India Ltd., Hindustan Unilever Ltd., ACC Ltd., Tata Steel Ltd. and Rio Tinto Ltd., have signed a declaration. As part of this initiative, IUCN-India is conducting an ecosystem services review of eight mining sites of Tata Steels, a first-of-its-kind study on identifying and augmenting ecosystem services at the landscape level.

12.15 MINISTRIES/ DEPARTMENTS OF GOI

DEPARTMENT OF SPACE

12.15.1

The Indian Space Research Organisation (ISRO), Department of Space, has been making sustained advances in space research applications for biodiversity conservation. Some of the recent and ongoing initiatives and activities include the development of the Indian Bioresource Information Network (IBIN; www.ibin.gov.in), which is a web portal with a distributed network of databases, working as a single-window gateway for providing access to distributed bioresource databases of the country to professionals involved in research, bio-prospecting, marketing, bio-piracy protection and conservation of bioresources. Since the release of IBIN during CoP-11, at Hyderabad, the network is being expanded through bioresource information centres and the addition of new individuals/institutions/organisations.

ABOUT JOIN SPECIES MAPS CHEMICALS CHECKLISTS FIELD GUIDES USES

Register Sign In Language

IBIN Indian Bio-resource Information Network

HOME ABOUT JOIN CONTACT

GO

BIODIVERSITY

BIORESOURCES

CONSERVATION

TOOL KITS

SPECIES

MAPS

CHEMICALS

CHECKLISTS

FIELD GUIDES

USES

NEWS / UPDATES

Department of Biotechnology (DBT), Government of India, launched a national level program on developing a digital repository of the bioresources of the country. Based on the data collected by almost 400 scientists from over 150 units

STATUS

9233 Species
7887 Maps
1 Checklists
352 Chemicals
8 Uses

Dist. Map

Funded by: Department of Biotechnology, Government of India

Under this nationwide project, which is also supported by the Department of Biotechnology, the phytodiversity of India was modeled at the landscape level to generate spatially explicit species distribution maps and statistics. A customised software package, SPLAM (Spatial Landscape Modelling), was developed for landscape analysis and integration of spatial data. This first-of-its-kind, unique study, spanning over 12 years, has resulted in a large baseline spatial database on vegetation types, porosity, patchiness, interspersions, juxtaposition, fragmentation, disturbance regimes, ecosystem uniqueness, terrain complexity and species richness. A biodiversity information system (BIS) has also been developed for effective online data dissemination (www.bis-iirs.gov.in).

As part of its research on trees species diversity in the Himalayan region, ISRO has been making efforts towards improved forest tree species identification and mapping in the temperate zone of the Himalaya, between 1750 and 2200 m msl.

Responding to the need for information on invasive species threats in India as recognised in Aichi Target 9 and India's National Biodiversity Target 4, ISRO has generated spatial information on bushmint (*Hyptis suaveolens*), the rapidly spreading invasive species, and identified the potential distribution in the country in order to support a rapid response to and control of this invasive species.

In efforts that contribute towards India's NBT 6 and Aichi

Indian Space Research Organisation
Department of Space, Government of India

FAQ IIRS ISRO Wednesday August 13th, 2014

Home Methodology & Approach Results & Outputs Collaborating Organizations Data Download Site Search

BIODIVERSITY INFORMATION SYSTEM
Indian Institute of Remote Sensing

» Welcome to Biodiversity Information System

National Biodiversity Characterization: at Landscape Level, a project jointly sponsored by Department of Biotechnology and Department of Space, was implemented to identify and map the potential biodiversity rich areas in India. This project has generated spatial information at three levels viz. Satellite-based primary information (Vegetation Type map, spatial locations of road & village, Fire occurrence); geospatially derived or modeled information (Disturbance Index, Fragmentation, Biological Richness) and geospatially referenced field samples plots. This relatively large spatial information on the above-mentioned facets of biodiversity has been organized in a web based Biodiversity Information System (BIS) for prioritization, conservation and bio-prospecting. **The major products are:**

- Spatial Data on 1:50,000 scale for entire India
 - Vegetation Type
 - Fragmentation
 - Disturbance Index
 - Biological Richness
- Species Database: Phytosociological database for 16,000+ sample plots for entire India

The study provides information of high disturbance and high biological richness areas suggesting future management strategies and formulating action plans. The study has generated for the first time baseline database which will be a valuable input towards climate change study in the Indian Subcontinent.

More

6,363 Views

QUICK LINKS

- BIODIVERSITY SPATIAL VIEWER
- NATIONAL ASSESSMENT REPORT
- METADATA CATALOGUE
- OGC WMS SERVICES
- IBIN
- BIOCONDSS

IMAGE GALLERY

Targets 11 and 12, potential habitat for the globally threatened swamp deer (*Rucervus duvaucelii* or *Cervus duvauceli duvauceli*) in Jhilmil Jheel Conservation Reserve, in Uttarakhand, northern India, was modelled using multi-criteria analysis, and spatial information on moderately to highly suitable areas of habitat was generated.

The work on 'Plant Species Diversity and Endemism in Dihang, Dibang Biosphere Reserve and Its Surroundings in Himalaya Biodiversity Hotspot' reported 88 endemic species in six forest types, with the highest number of endemics being from sub-tropical evergreen forests that are also facing high anthropogenic disturbance.

ISRO's present work on inventorying and monitoring of biosphere reserves has generated geospatial layers in five-year intervals that will be used to assess the effectiveness of biodiversity conservation measures at the landscape level in four biosphere reserves, namely Nilgiri, Agasthyamala, Similipal and Kachchh. The study will be completed in 2015.

12.15.2

DEPARTMENT OF LAND RESOURCES

The Department of Land Resources (DoLR), through its 'Integrated Watershed Management Programme for Development of Rain-Fed/Degraded Land Including Wastelands' scheme, has provided financial assistance to States for activities such as drainage line treatment, soil and moisture conservation, rainwater harvesting, raising nurseries, afforestation, horticulture and development of pastures. Over 7204 projects covering 34.06m ha have been sanctioned till March 2014.

12.15.3

MINISTRY OF PANCHAYATI RAJ

With a view to encouraging and rewarding the works undertaken by panchayats, the local-level elected bodies, the Ministry of Panchayati Raj initiated in 2011–2012 awards for the best-performing panchayats in different states. In 2012–2013, an amount of ₹ 28.85 crores was released to 193 award-winning panchayats in 21 states. In 2013–2014, an amount of ₹ 37.82 crores was released to 194 panchayats in 22 states. The works undertaken by of the award-winning panchayats include water conservation, raising plantations and construction of irrigation wells. These works have contributed to promotion of biodiversity conservation.

12.15.4

MINISTRY OF POWER

Some of the activities undertaken by the Ministry of Power for biodiversity conservation as part of the Nathpa Jhakri and Rampur hydro projects are maintaining nurseries for developing green areas in and around the project sites, planting the surge shaft areas with fruit trees, developing avenue plantations afforestation and mass plantation and restoration of dumping sites.

12.15.5

MINISTRY OF URBAN DEVELOPMENT

The Ministry of Urban Development has been promoting environmental sustainable development with focus on maintaining biodiversity, in various towns and cities of the country through its various schemes and programmes.

12.15.6

MINISTRY OF NEW AND RENEWABLE ENERGY

The Ministry of New and Renewable Energy is implementing renewable energy-based cooking energy programmes (biogas, improved stoves and solar cooking), thereby contributing to the protection of the country's biodiversity by reducing the dependence on forests for fuelwood. With an installed capacity of over 30 GW as on 31 March 2014, renewable power represents around 13% of the total installed capacity of electricity in India. In addition, 1.1 million Indian households are using solar energy to meet their lighting energy needs. A similar number of households meet its cooking energy needs from biogas plants.

Renewable energy installations (as on 31 March 2014) have ended the release of the CO₂ equivalent of around 94 million tons of anthropogenic greenhouse gases per year. This is around 7% of the total greenhouse gas emission of the country from energy-related activities in 2014.

12.15.7

DEPARTMENT OF AYURVEDA, YOGA & NATUROPATHY, UNANI, SIDDHA AND HOMOEOPATHY

The National Medicinal Plants Board (NMPB), Department of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH) is undertaking several activities for developing the medicinal plant sector through the 'Conservation, Development and Sustainable Management of Medicinal Plants' and 'National Mission on Medicinal Plants' schemes, wherein inter alia financial assistance is provided for surveys, inventorying, conservation and developing herbal gardens to joint forest management committees for livelihood augmentation. During 2012–2014, the NMPB supported 500 joint forest management committees for augmenting livelihoods. Some other relevant activities include strengthening state medicinal plant boards, raising awareness and initiatives for setting up a certification mechanism.

12.15.8

MINISTRY OF SHIPPING

With a view to address the concerns relating to introduction of harmful aquatic organisms to new environments via ships' ballast water, the Ministry of Shipping is undertaking a ballast water management programme through the National Institute of Oceanography. Towards this, environmental and biological databases have been established, and ballast water risk assessment is being undertaken in various ports of the country.

12.15.9

MINISTRY OF COAL

The Ministry of Coal has been promoting eco-balance and sustainable development, with a focus on maintaining the biodiversity of the country, through various schemes and programmes. These include construction of an artificial wetland to promote an avifaunal habitat, establishment of a mini zoo in a reclaimed mine area, creation of a deer park in a reclaimed land in Neyveli, Tamil Nadu, ash pond reclamation, slope stabilisation, green belt development and environmental education at Singareni Collieries Company Limited.



Shri Ashok Lavasa
planting a sapling

12.15.11

12.15.10

PLANNING COMMISSION

After the hosting of CoP-11, the Planning Commission of India brought out a report on development in hill states arising from management of forest lands, with a special focus on the creation of infrastructure, livelihoods and human development. The report recognises that the development process cannot afford to neglect environmental consequences of economic activity or allow unsustainable depletion and deterioration of natural resources. The report also lays significant emphasis on the issue of sustainability and biodiversity conservation.

MINISTRY OF CIVIL AVIATION

The Ministry of Civil Aviation through Airports Authority of India launched a 'Tree plantation drive by school children' on August 14, 2014 at Safdarjung Airport in association with Delhi Pollution Control Committee and Hotel Lalit. The Chief Guest on this occasion was Shri Ashok Lavasa, Secretary of Ministry of Civil Aviation, GoI. He stressed on sustainable development by planting more trees and on the importance of participation of children in such programmes and to make them aware of the ramifications. Around 200 school children of different schools participated in the tree plantation programme with great enthusiasm and fanfare. About 1200 saplings of different varieties including various fruits and herbs were planted by the school children.

12.16

FEDERATION OF INDIAN CHAMBERS OF COMMERCE AND INDUSTRY

The Federation of Indian Chambers of Commerce and Industry (FICCI) joined the Hyderabad Pledge on the occasion of CoP-11, with 21 companies signing the pledge, 'Sustainable Biodiversity Means Sustainable Business'. FICCI is planning to run the pledge this year as a run-up to CoP-12 to enrol more companies for sustainable biodiversity.

SMALL GRANTS PROGRAMME INDIA OF GLOBAL ENVIRONMENT FACILITY

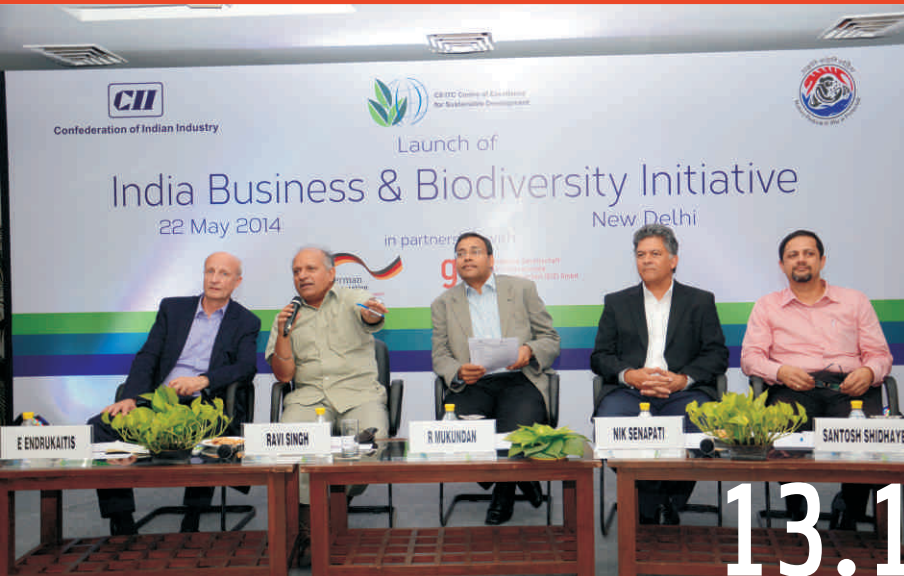
The GEF Small Grants Programme India, hosted by the CEE India, has made sincere investments in conservation and protection of the biological diversity in remote, inaccessible tribal areas, natural grasslands and fringe areas of wildlife sanctuaries and national parks in India.

Nearly 174 projects have been undertaken through civil society organisations, in about 3,19,755 ha in arid and semi-arid regions in eastern and central India and in biodiversity hotspots in the Himalaya, Western Ghats and Eastern Ghats. The projects are community-led initiatives in strengthening and integration of *in situ* and on-farm conservation; augmentation of natural resource base and its sustainable utilization of local resources; improved regulation of invasive species; assessment of vulnerability and adaptation to climate change and desertification; and integration of biodiversity concerns in economic and social development. These initiatives have created nearly 74 business models through more than 1900 women self-help groups, in which more than 35,000 women members are directly and indirectly engaged in sustainably harvesting, processing and marketing products based on the local biodiversity.

The projects are managed by local communities with intricately interwoven and prudent resource management arrangements to evolve/strengthen/rejuvenate community-led conservation practices that complement the protected area-centric approach to conservation. The projects promote conservation of threatened species such as the lesser florican in the grasslands of the Deccan plateau; conserving the Vechur cow and Vembur sheep in southern India; and regenerating guggal (a medicinal plant) and harvesting it sustainably in the ravines of Chambal.

12.17

JOINT BIODIVERSITY INITIATIVES – INTERNATIONAL



Round table on business and biodiversity on 18 April 2013, New Delhi

INDIA BUSINESS AND BIODIVERSITY INITIATIVE

With a view to explore the setting up of an India Business and Biodiversity Initiative (IBBI) during India's presidency, MoEFCC, in partnership with the CBD Secretariat, organised a round table on business and biodiversity on 18 April 2013 in New Delhi, bringing together major stakeholders such as industrial associations and relevant national and international organisations. The round table allowed participants to share their experiences in integrating biodiversity concerns into business and to look for ways of collaborating and exploring the possibility of forming a joint national initiative that could then be integrated into the larger Global Partnership on Business and Biodiversity. Participants included the Confederation of Indian Industries (CII), FICCI, the Ayurvedic Drug Manufacturers Association, WWF-India, the Wildlife Trust of India, Research and Information System, Wetlands International, UNDP, GIZ, the World Bank and IUCN. As a follow-up, another workshop on designing the IBBI was held in partnership with GIZ on 5 September 2013. The CII offered to host the IBBI with the support of GIZ. The IBBI was formally launched on IBD, on 22 May 2014, in New Delhi. The business-led IBBI is now a member of the CBD's Global Partnership for Business and Biodiversity.



13.2

KAILASH SACRED LANDSCAPE INITIATIVE

The Kailash Sacred Landscape Conservation and Development Initiative (KSLCDI) is a trans-boundary collaborative programme between India, Nepal and China that has evolved through a participatory, iterative process among various local and national research and development institutions. The programme aims to achieve long-term conservation of ecosystems, habitats and biodiversity while encouraging sustainable development, enhancing the resilience of communities in the landscape and safeguarding the cultural linkages between local populations.

Recognising the importance of the area, India, Nepal and China, as member countries, have come together with a vision for a long-term conservation initiative based on regional trans-boundary cooperation and an ecosystem management approach. The KSLCI, on completion of a three-year preparatory and start-up phase, began the five-year implementation phase in January 2013, facilitated by the International Centre for Integrated Mountain Development (ICIMOD), in collaboration with the United Nations Environment Programme (UNEP) and with support from the Department for International Development (DFID), UK Aid, the German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ) and the Government of Norway. The goals of the KSLCI focus on biodiversity conservation, environmental sustainability, sustainable development, climate change adaptation and enhanced socio-ecological resilience of mountain communities within the Kailash Sacred Landscape. The objectives of the projects are:

- To strengthen regional trans-boundary cooperation by institutionalising the elements of the regional cooperation framework;
- To mainstream sustainable ecosystem management approaches and practices in the context of climate change adaptation in the Kailash Sacred Landscape and in national policies and plans at all levels;
- To build the capacity of key institutions for long-term environmental monitoring and socio-economic research for better planning and decision making; and
- To establish a regional knowledge-sharing platform to support evidence-based decision making at regional and national levels.

The KSLCI is a good example of trans-boundary cooperation initiated by India during her presidency of CoP-11.

13.3

BIODIVERSITY CONSERVATION AND RURAL LIVELIHOOD IMPROVEMENT PROJECT

The Biodiversity Conservation and Rural Livelihood Improvement Project (BCRLIP) aims at conserving biodiversity in selected landscapes, including protected areas/critical conservation areas while improving rural livelihoods through participatory approaches. Development of joint forest management and eco-development in some states are models of new approaches to provide benefits to both conservation and local communities. The project intends to build on these models and expand lessons to other globally significant sites in the country to strengthen linkages between conservation and improving livelihoods of local communities that live in the neighborhood of biodiversity-rich areas as well as to enhance the local and national economy.

The project also aims to enhance institutional capacity for integrating sustainable livelihoods and biodiversity conservation at the landscape level. This is to be achieved by improving policies, tools and methodologies, knowledge and skills for developing multi-stakeholder partnerships that support mainstreaming of biodiversity conservation objectives, improving rural livelihoods, enhancing learning and replication of successful participatory conservation models and improving the cost-effectiveness and sustainable funding for conservation of biodiversity at the landscape level.



Researchers working in Darma Valley, Askot Landscape, Uttarakhand

The project is being implemented in two landscape sites in different bio-geographic zones, the Rann of Kutch/Wild Ass Landscape, in Gujarat, and the Askot Landscape, in Uttarakhand. In addition, three learning sites, namely Periyar, in Kerala, Kalakad, in Tamil Nadu, and Gir, in Gujarat, will receive support as centres of learning and excellence to support the scaling up and replication of the lessons and experiences from the two demonstration landscapes and other conservation initiatives in the country, including the GEF/IDA Eco-development Project.

With a GEF grant and contributions from GoI, state governments and beneficiaries amounting to USD30.52 million (around ₹ 137.35 crores) spread over six years, this project is to be completed by July 2017. The BCRLI Project is an appropriate example of how to achieve the twin objectives of biodiversity conservation and rural livelihood protection, taken up by India during the presidency of CoP11.

13.4

UNITED NATIONS DEVELOPMENT PROGRAMME—INDIA

India Biodiversity Awards 2014,
Port Blair, Andaman Nicobar



During India's CoP-11 presidency, the United Nations Development Programme (UNDP) contributed to efforts towards achieving Aichi and National Biodiversity Targets through its innovative and high-impact projects. These projects include mainstreaming conservation and sustainable use of medicinal plants diversity; mainstreaming coastal and marine biodiversity conservation into production sectors in the East Godavari River Estuarine ecosystem, Andhra Pradesh; mainstreaming coastal and marine biodiversity into production sectors in Sindhudurg Coast, Maharashtra; the Small Grants Programme; Strengthening Natural Resource Management; Biodiversity Conservation Through Community Based Natural Resource Management; Natural Resource Conservation Outside Protected Areas; Sustainable Industrialization; Capacity Building for Addressing Climate Change; and Demonstrating and Promoting Best Techniques and Practices for Reducing Healthcare Waste to Avoid Environmental Releases of Dioxins and Mercury. UNDP, through its core and GEF funds, has provided policy and technical support on issues pertaining to conservation of biological diversity and sustainable natural resource management to eminent government and non-government institutions.

Amongst the key outcomes of UNDP's activities are the establishment of the India Biodiversity Awards to recognise and honour outstanding models of biodiversity governance—the first awards were presented during CoP-11, in October 2012, and the second awards on the International Day for Biological Diversity, on 22 May 2014. UNDP supported the Global e-Network to help countries build capacities for the implementation of the Nagoya Protocol, launched by the Executive Secretary to the CBD Secretariat on 26 February 2014. UNDP contributed to the development and finalisation of a national inter-sectoral strategy on conservation, cultivation and sustainable use of medicinal and aromatic plants; the establishment of a network of 20 Medicinal Plants Conservation and Development Areas, covering 24,000 ha in three states; assessment of the threats faced by 47 threatened endemic medicinal plants for inclusion in the IUCN Red List; provision of improved health security of 12,000 households in Chhattisgarh; and development of sustainable harvest protocols for 12 globally significant medicinal plants. UNDP has facilitated the setting up 16 Biodiversity Management Committees in the three project states and developed 15 People's Biodiversity Registers and 10 Bio-cultural Community Protocols. Several innovative communication tools, such as shadow puppet shows, street theatre performances, live mascots, radio programmes, jingles, wall paintings and documentaries, related to biodiversity conservation were also developed. An eco-tourism policy and homestay guidelines were developed for the state of Arunachal Pradesh, and a comprehensive eco-tourism plan was prepared for Sindhudurg district, Maharashtra.

UNDP has supported 52 Small Grants Projects using GEF funds, including eight grants from the Government of Japan. The various projects undertaken include soil and water conservation measures, integrated farm development on jhum (shifting cultivation) lands, setting up self-help groups, participatory resource mapping and preparation of participatory land use plans for sustainable land use practices.

UNDP has planned key activities in the future that include the preparation of a road map for strengthening institutions created under the Biological Diversity Act, 2002 and identification of opportunities for South-South cooperation on matters relating to the CBD.



Training of Trainers
Workshop on SEA, 2-4
September 2014,
Dehradun

13.5

**GERMAN AGENCY FOR
INTERNATIONAL COOPERATION
(DEUTSCHE GESELLSCHAFT FÜR
INTERNATIONALE ZUSAMMENARBEIT)**



Shri Hem Pande with delegates from GIZ

The German Agency for International Cooperation (Deutsche Gesellschaft für Internationale Zusammenarbeit, GIZ). GIZ is working towards fulfilling the aims of the Indo-German Biodiversity Programme (<http://www.indo-germanbiodiversity.com>), with its overarching goal of sustainable use of biological diversity to support livelihoods for future generations. The programme addresses the challenges of biodiversity conservation in two complementary areas: 'Incentives for Sustainable Management of Biodiversity and Ecosystem Services (ISBM)' and 'Sustainable Management of Existing and Potential Coastal and Marine Protected Areas (CMPA)'. The overall objective of the ISBM project is to use the economic value of ecosystem services and biodiversity to enhance the effectiveness of conservation and management of three priority ecosystems (forests, inland wetlands, and coastal and marine ecosystems). The project supports the implementation of two initiatives, namely, The Economics of Ecosystems and Biodiversity (TEEB) and the India Business and Biodiversity Initiative (IBBI). On the international platform, the first TEEB Brazil India Germany Dialogue was organised in September 2013 in Berlin, Germany, followed by the second dialogue in Brasilia in May 2014. India has offered to organise the Third TEEB Dialogue in India in March 2015. At the national level, the Scientific and Technical Advisory Group (STAG) and the Project Steering Committee were constituted to provide guidance and orientation to the TEEB India Initiative. During the second STAG meeting, some 200 case study proposals were reviewed, of which 12 studies were approved by the Project Steering Committee of the TEEB India Initiative (TII). MoEFCC, Gol and the GIZ will present the TII interim report at a side event at COP-12, in Korea, highlighting the commitments of TII towards accomplishing the Aichi Biodiversity Targets. To engage businesses in biodiversity-related issues, the Indian Business and Biodiversity Initiative (IBBI) was launched in May 2014, with the Confederation of Indian Industries (CII) as host. So far, 17 companies have signed the IBBI declaration. The initiative is currently documenting good business practices of Indian companies in biodiversity management, which will be showcased at the side event Mainstreaming Biodiversity: Innovative Opportunities for Business at COP-12, in Korea.



Shri Hem Pande chairing GIZ Meeting



Delegates during Training of Trainers Workshop on SEA, 2-4 September 2014, Dehradun

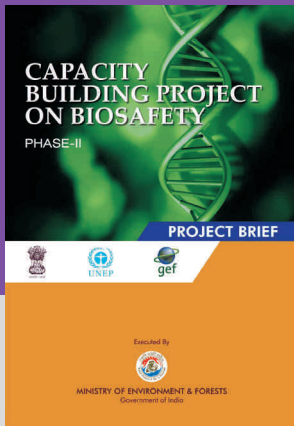
The CMPA Project, commissioned by the German Ministry for Environment, Nature Conservation, Building and Nuclear Safety (BMUB) and jointly implemented by GIZ and MoEFCC, GoI, is currently operating in four states of India, namely, Goa (Dr. Salim Ali Bird Sanctuary), Gujarat (Gosabara-Madhavpur and Khijadia Wildlife Sanctuary), Maharashtra (Thane Creek, Velas Anjarle coastal stretch and Ansure Creek) and Tamil Nadu (Palk Bay). In the initial phase, the project commissioned numerous studies such as baseline studies, Strategic Environment Assessment (SEA) for management planning of marine protected areas and capacity needs assessment for forests, fisheries and the media sector. At the national level, strategic alliances were established with major training institutions to develop new curricula or adapt existing ones for improved management of coastal and marine resources. Concepts for comprehensive information, education and communication activities were developed and tested at both national and state levels.

Considering the potential usefulness of the SEA approach in the Indian context, GIZ and the Federal Agency for Nature Conservation (BfN) of Germany have funded a project, 'Land-Use Planning and Strategic Environmental Assessment Within the Frame of India's Presidency of COP-11 to the CBD', of WII, Dehradun. The objective of this project is to raise awareness and develop human capacities in India for better application of integrated planning instruments, in particular SEA, in the context of land-use/spatial and socio-economic development planning in order to contribute to more environment-/nature-compatible planning, integrating aspects relevant to biodiversity. The duration of the project is from October 2012 to November 2014, and it is to be carried out in two phases. Phase I consisted of a 'scoping study and needs assessment'. Phase II, which began in April 2013, had the broad objective of 'implementation of awareness raising and capacity development (CD) measures'. The specific objectives are the establishment of a small core group of takers/ambassadors for SEA for steering the CD programme and scaling up the process; execution of a series of awareness raising activities; targeting the national and state expert appraisal committees of different sectors (such as mining, coal & thermal, hydropower, industries, infrastructure and nuclear); finalisation of a customised master short-term course/training module to be offered to interested training providers, with one training-of-trainers module; and initiating an Indo-German experts exchange, with BfN experts participating, including a concrete pilot case study with the results. A side event will be organised during CoP-12, at Korea, in October 2014, in which the outcomes of the project will be shared.



14

CARTAGENA PROTOCOL ON BIOSAFETY



Some important activities undertaken by MoEFCC relating to the Cartagena Protocol on Biosafety during the CoP Presidency are listed in the following.

The Minister, MoEFCC and President of CoP conveyed his greetings to the global community on the 10th anniversary of the Cartagena Protocol on Biosafety through a message posted on CBD's web site.

MoEFCC supported the South Asia Biosafety Conference, organised in New Delhi on 18–20 September 2013.

The e-Learning Module on Conduct of Confined Field Trials, prepared jointly by Biotech Consortium India Limited and South Asia Biosafety Programme, was launched by Mr. Hem Pande.

CBD's meeting of the ad hoc technical expert group on socio-economic considerations held in Seoul from 17 to 21 February 2014 was co-chaired by India.

India also chaired the Regional Online Real-time Conferences on Socio-economic Considerations, held on 13 June 2013.

MoEFCC has supported the Second South Asia Biosafety Conference (an annual event), being held at Colombo, Sri Lanka from 15 to 17 September 2014.

The UNEP-GEF-supported Phase-II Capacity Building Project on Biosafety is under implementation in the MoEFCC. Activities related to four thrust areas are under way: (1) Risk Assessment and Risk Management; (2) Handling, Transport, Packaging and Identification; (3) Socio-economic Considerations; and (4) Public Awareness.

Biosafety Newsletter, a quarterly publication, is being brought out regularly to highlight activities carried out under the Cartagena Protocol on Biosafety and developments in biotechnology and biosafety.



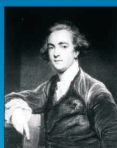
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KEY PUBLICATIONS

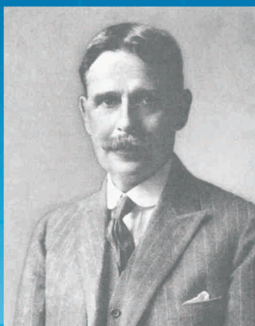
Some important publications relating to biodiversity that have been brought out by MoEFCC and partner organisations during 2012-2014 are shown in the accompanying collages.



Animal Discoveries 2013 New Species and New Records



Sir William Jones



Dr. Thomas Nelson Annandale
Founder Director
Zoological Survey of India



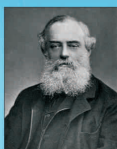
Godwin Austen



Edward Blyth

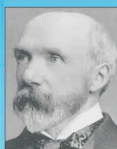


Ferdinand Stoliczka



William T. Blandford

Government of India
Ministry of Environment and Forests
Zoological Survey of India
5th June, 2014



John Anderson

FASCICLES OF FLORA OF INDIA FASCICLE 25 ERICACEAE



Edited by
M. Sanjappa & A.R.K. Sastry


Botanical Survey of India



Endemic Animals of India (Vertebrates)

Edited by
K. Venkataraman
A. Chattopadhyay
K. A. Subramanian



Zoological Survey of India



FOREST BIODIVERSITY IN INDIA



THREATENED AMPHIBIANS OF INDIA

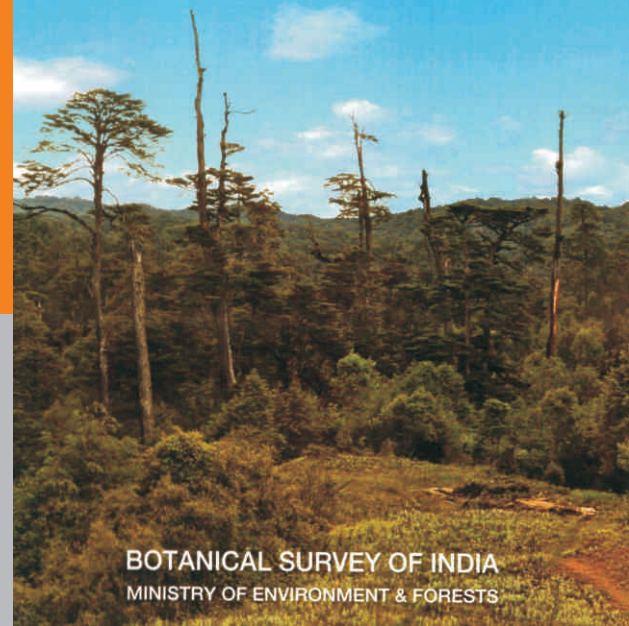


K. VENKATARAMAN
KAUSHIK DEUTI

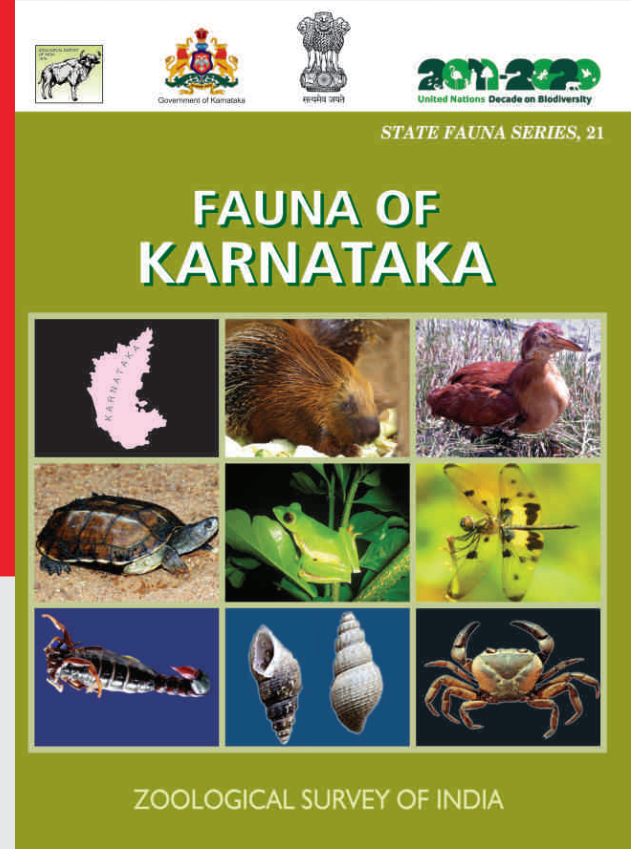
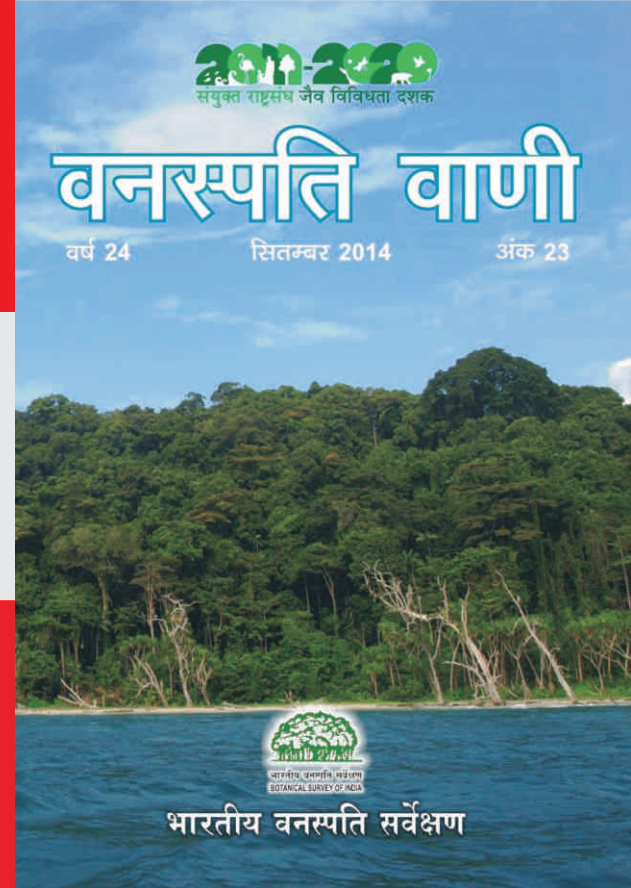
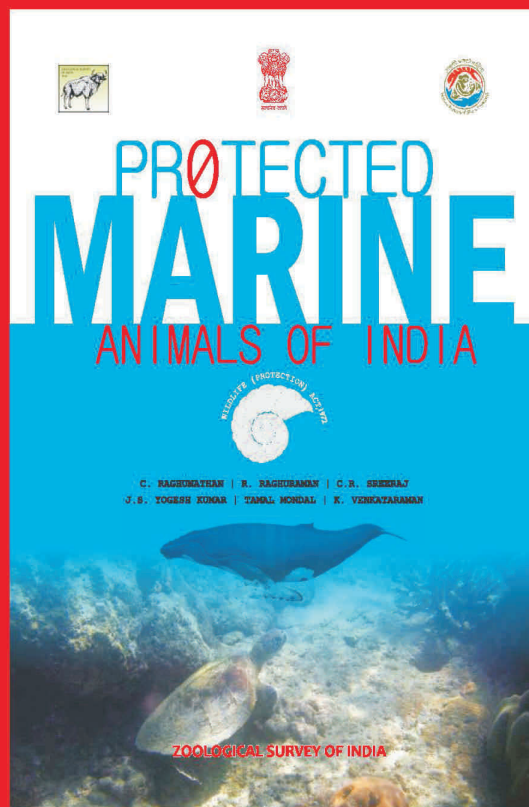
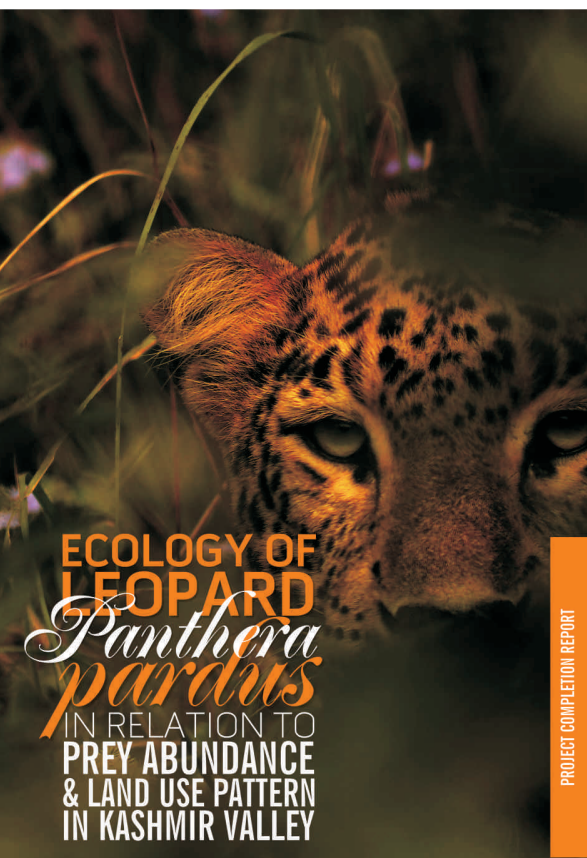
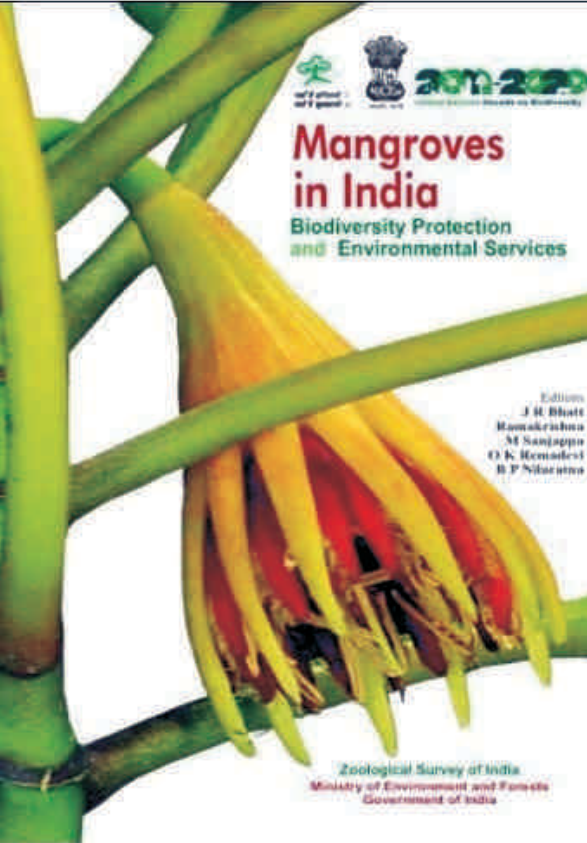
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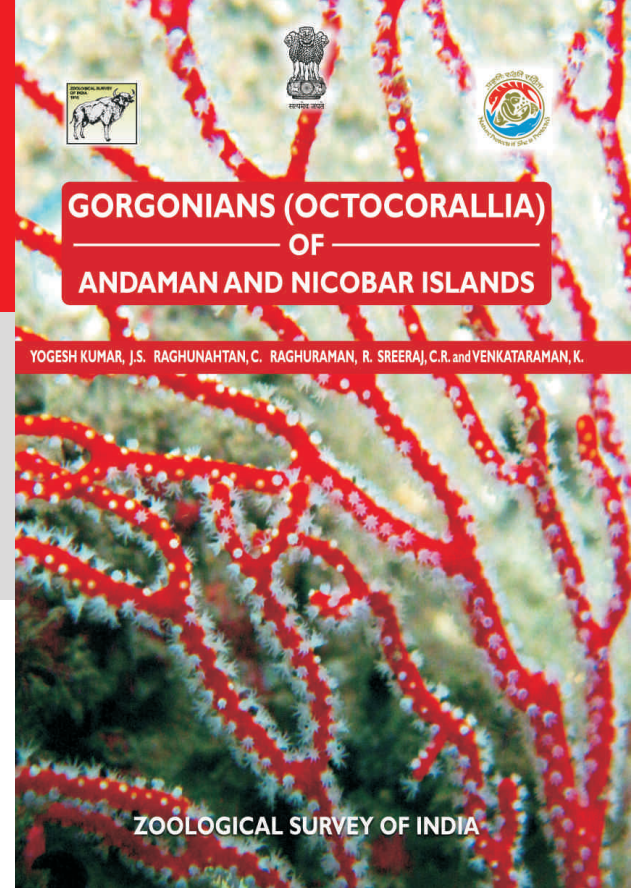


BOTANICAL SURVEY OF INDIA
MINISTRY OF ENVIRONMENT & FORESTS





LAND USE
LAND COVER
DYNAMICS AND IMPACT OF
HUMAN
DIMENSIONS IN
**LOWER
GANGA
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GORGONIANS (OCTOCORALLIA)
OF
ANDAMAN AND NICOBAR ISLANDS

YOGESH KUMAR, J.S. RAGHUNAHTAN, C. RAGHURAMAN, R. SREERAJ, C.R. and VENKATARAMAN, K.

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AN UPDATED
CHECKLIST OF THE BIRDS
OF UTTARAKHAND

Compiled by
Dhananjai Mohan
Sanjay Sondhi



Published by
UTTARAKHAND FOREST DEPARTMENT

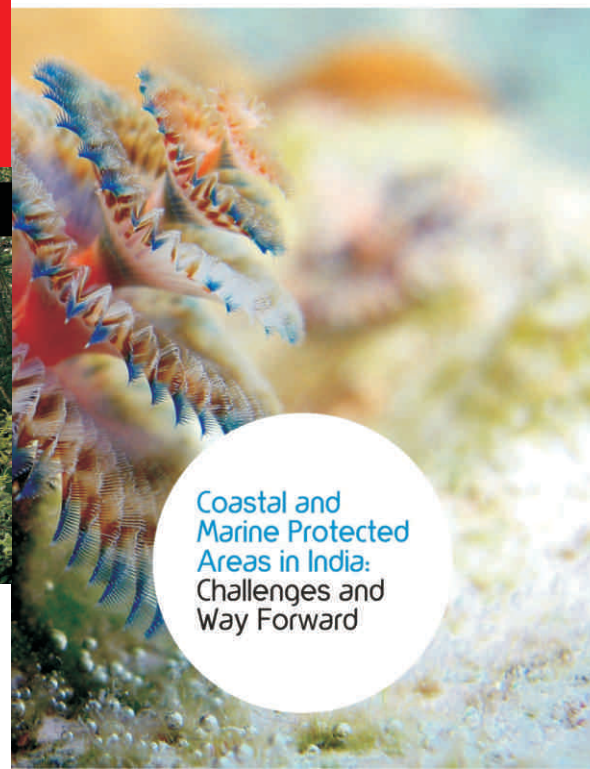


MACROECOLOGY OF TERRESTRIAL
HERPETOFAUNA IN ANDAMAN & NICOBAR
ARCHIPELAGO

Edited by
R. C. SINGH, S. K. DUTTA & J. S. RAGHUNAHTAN



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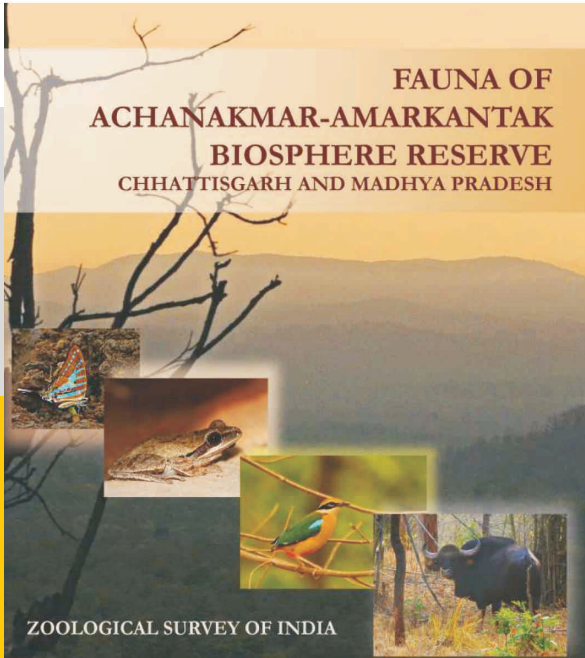


Coastal and
Marine Protected
Areas in India:
Challenges and
Way Forward



Conservation Area Series, 49

FAUNA OF ACHANAKMAR-AMARKANTAK BIOSPHERE RESERVE CHHATTISGARH AND MADHYA PRADESH



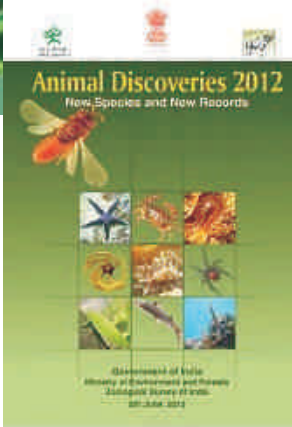
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NATIONAL BIODIVERSITY ACTION PLAN (NBAP)



ADDENDUM
2014
TO NBAP
2008



ARTHROPODS AND THEIR CONSERVATION IN INDIA (INSECTS & SPIDERS)

Threatened Birds of Uttarakhand

Asad R. Rahmani and Dhananjai Mohan



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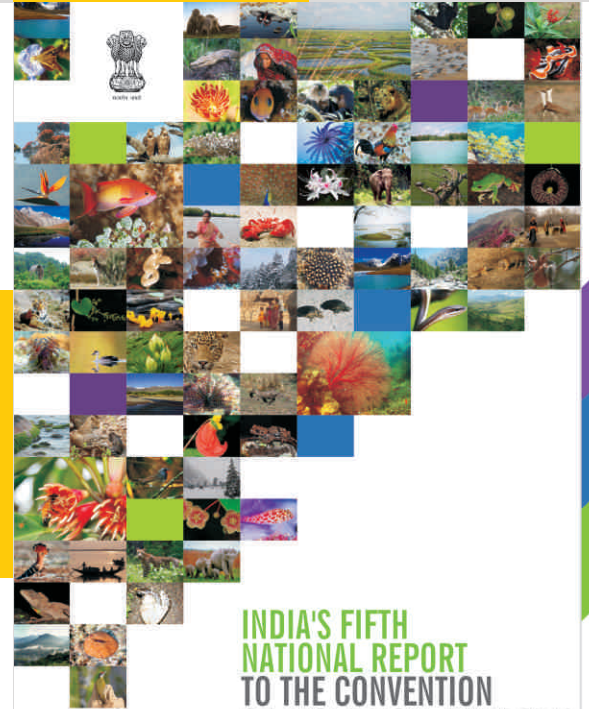
Occasional Paper No. 363

FRESHWATER CRABS (CRUSTACEA; DECAPODA; BRACHYURA; GECARCINUCIDAE) IN THE COLLECTION OF THE WESTERN REGIONAL CENTRE, PUNE

S.K. PATI
R.M. SHARMA



ZOOLOGICAL SURVEY OF INDIA



INDIA'S FIFTH
NATIONAL REPORT
TO THE CONVENTION
ON BIOLOGICAL DIVERSITY
2014



Ministry of Environment and Forests
Government of India



INDIA BEYOND CoP PRESIDENCY

Hosting CoP-11 provided an opportunity for India to consolidate, scale up and showcase its strengths to the world in the field of biodiversity. Domestically, this has led to an enhanced focus on strengthening the implementation of biodiversity programmes in the country and stimulated country-wide awareness on biodiversity issues.

As a megadiverse country with a strong institutional, legal and policy framework, India has made sustained efforts in conserving her rich biodiversity heritage, recognising its crucial linkages with the livelihoods and well-being of millions of people of the country, especially the poor and vulnerable.

Holding the CoP presidency is but a step in India's journey towards conservation of her rich biodiversity. As India cedes the CoP presidency to the Republic of Korea in October 2014, India stands committed to the implementation of the three objectives of the CBD, conservation, sustainable use and fair and equitable sharing of benefits arising from the use of biodiversity in a balanced manner. India also reaffirms the resolve to continually make positive and meaningful contributions to the biodiversity agenda at the international level.

ANNEXURE I

Books published by MoEFCC Institutions, 2012 - 2014 Botanical Survey of India

Sl No	Name of the title	Year of publication
1.	Algae of India (Vol -II), Check list of Chlorophyta, Xanthophyceae, Chrysophyceae, Euglenophyta,	2012
2.	Algae of India (vol-1), check list of Cyanobacteria	2012
3.	Bibliography of Indian Poaceae	2012
4.	BSI Calendar 2013.	2012
5.	Flora of India vol. 23 .	2012
6.	Flora of Mizoram, Vol II.	2012
7.	Nelumbo, Vol 54	2012
8.	Pharmacognosy of Negative listed plant	2012
9.	Plant discoveries 2011	2012
10.	Trees of Hyderabad a pictorial guide.	2012
11.	Vanaspati Anveshan 2011	2012
12.	Vanaspati vani vol. 21	2012
13.	Aphylliphorales of Himalaya	2013
14.	Bamboos in AJCIBG, Howrah	2013
15.	Bamboos of Megalaya	2013
16.	BSI Calender 2014	2013
17.	Epiphyllous liverworts of Eastern Himalaya	2013
18.	Flora of Gangotri National Park, Uttarnchal	2013
19.	Flora of Lower Subansiri, Arunachal Pradesh Vol 1	2013
20.	Flora of Lower Subansiri, Arunachal Pradesh Vol 2	2013
21.	Flora of Molem National Park, Goa	2013
22.	Flora of Rajiv Gandhi National Park, Karnataka	2013
23.	Flora of Venketeswar National Park, Andhra Pradesh	2013
24.	Gymnosperms of India: A check list	2013

Sl No	Name of the title	Year of publication
25.	Nelumbo Vol 55	2013
26.	Paschim Bangar Udvid Vol 6	2013
27.	Plants discoveries 2012(Bilingual)	2013
28.	Vanaspati Vani, Vol 22	2013
29.	Census to the Plants in AJCIBG A Report	2014
30.	Mammal, Reptiles and Amphibian in AJCIBG	2014
31.	Natural Dyes: Destination India	2014
32.	Plants discoveries 2013 (Bilingual)	2014
33.	Flora of West Bengal Vo 2	2014 (In Press)
34.	Flora of West Bengal Vo 3	2014 (In Press)
35.	Flora of West Bengal Vo 4	2014 (In Press)
36.	Endemic Vascular Plants of India	2014 (In Press)
37.	Indian Marine Algae : A check list	2014 (In Press)
38.	Flora of Uttar Pradesh Vol 1	2014 (In Press)
39.	Fascicles of Flora of India, Fascicle - 25 (Family Ericaceae)	2014 (In Press)
40.	Fascicles of Flora of India, Fascicle - 26 (Tribe : Cercideae) Ericaceae)	2014 (In Press)
41.	Fascicles of Flora of India, Fascicle - 27 (Sub-tribe : Goodyerinae)	2014 (In Press)
42.	Vanaspati Vani, Vol 23	2014 (In Press)
43.	Nelumbo. Vol 56	2014 (In Press)
44.	Plant Diversity in Botanic Gardens of India	2014 (In Press)

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2012-13

1. State Fauna of Andaman and Nicobar Islands (Part-1)
2. State Fauna of Maharashtra Part-1
3. State Fauna of Maharashtra Part-2
4. Animal Discoveries 2011
5. Annual Report 2010-11
6. National and State Animals of India
7. Marine Biodiversity in India
8. Coral Identification Manual
9. Marine Ecosystems and Marine Protected Areas in India
10. Guide to Dangerous and Venomous Marine Animals of Andaman and Nicobar Islands
11. Paschim Bango ke Sadharan Samudric Prani (Bangla)-Marine Animals of West Bengal
12. Hand Book on Scleratinia of Andaman and Nicobar Islands
13. Status Survey of Black Buck in Odisha
14. Himalayan Ecosystem Series, 2 : Faunal Diversity of Pangri Valley
15. Wetland Ecosystem Series, 16, Faunistic and Limnological studies of Wyrta Lake, Andhra Pradesh
16. Estuarine Ecosystem Series, 8 : Studies of Fauna of Nauni Estuary
17. Conservation Area Series, 45, Faunal inventory of Nokrek Biosphere Reserve
18. Conservation Area Series, 46, Fauna of Bhadra National Park and Tiger Reserve
19. Records of the ZSI Vol. 111 (Part-4); Vol. 112 (Part-1); Vol. 112 (Part-2); Vol. 112 (Part-3)
20. Memoirs of ZSI Vol. 21 (No. 1)
21. Occasional Paper No. 333; 335; 339; 341; 345

2013-14

1. Endemic Animals of India
2. Mangroves in India
3. Animal Discoveries 2012
4. Annual Report 2011-12
5. Wetland Ecosystem Series, 15, Faunal diversity of Khijadiya Lake and Bird Sanctuary
6. Wetland Ecosystem Series, 17, Faunal Diversity of Aquatic Invertebrates Deeper Beel, Assam
7. Estuarine Ecosystem Series, 7, Fauna of Brahmani-Baitarani Estuarine Complex w.s.r. to Crabs and Fishes
8. Guide to Common Echinoderms of Andaman and Nicobar Islands
9. Pictorial Guide of Grasshoppers of Himachal Pradesh
10. Handbook on Major Hemipteran Predators of India
11. Programme and Abstract on National Biodiversity Conference (WBBB)
12. State Fauna Series, 21, Fauna of Karnataka
13. Conservation Area Series, 47, Kumbalgarh WLS
14. Conservation Area Series, 48, Kalesar NP & WLS
15. Fauna of India – Dermaptera (Part-3)
16. Animal Discoveries – 2013
17. Faunal Inventory of Uttar Pradesh
18. Handbook – Agariciids of Andaman and Nicobar Islands
19. Status of Holothurians of Andaman and Nicobar Islands
20. Threatened Amphibians of India
21. Protected Marine Animals of India
22. Faunal Diversity of Churdhar WLS, Himachal Pradesh
23. Proceedings on Traditional Knowledge and Social Practices

INDIAN COUNCIL OF FOREST RESEARCH EDUCATION

S.No	Title	Year	Institute
1	Forest Types of India - Revisited (2 volumes)	2013	FCCD, ICFRE
2	Eco friendly approaches for rehabilitation of mine spoils	2013	IFGTB, Coimbatore
3	Field Guide on Insect pests of some important fast growing indigenous tree species	2013	IFGTB, Coimbatore
4	Atlas of Wood Decaying Fungi of Central India	2013	TFRI, Jabalpur
5	Invasive Alien Plants of Jharkhand A Guide to Common Man	2013	IFP, Ranchi
6	Community Management of Biodiversity For Sustainable Livelihood	2013	IFP, Ranchi
7	Spiders of Western Himalaya A Field Guide	2013	HFRI, Shimla
8	Rakchham Chitkul Wildlife Sanctuary Kinnaur, Himachal Pradesh: An Appraisal to its Floristic Wealth	2013	HRFI, Shimla

WILDLIFE INSTITUTE OF INDIA

2012

Midha, N.; Mathur, P.K. (2012). Land use, fragmentation and river dynamics in Dudhwa Landscape, India. LAP Lambert Academic publishing. : 300p.

Rao, C.; Talukdar, G.; Choudhury, B.C. (2012). Life of kings: factors affecting movement pattern, habitat use and distribution of king cobras - a multi scape approach. LAP LAMBERT Academic Publishing (24 May 2012)

Vidhyadar, A.; Sivakumar, K.; Johnsingh, A.J.T. (2012). Diversity distribution and conservation status of freshwater fishes in the tributaries of river Ramganga, Shivalik Himalayas, Uttarakhand, India. LAP Lambert Academic Publishing. : 76pp.

2013

Bhattacharya, T.; Sathyakumar, S.; Saha, G.K. (2013). Mountain monarchs of Khangchendzonga: spatial database and habitat models for mountain ungulates in Khangchendzonga Biosphere Reserve. LAP Lambert Academic Publishing.



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Forests & Climate Change
Government of India

www.moef.nic.in

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