

# Punjab ENVIS Newsletter

Vol 13, No. 3 (2015-16)

## International Environmental Conventions : An Indian Perspective

UNFCCC  
Ramsar Biological diversity  
Convention CITES Endangered Species  
Aichi Targets Sustainable Development Earth Summit Vienna  
Threatened Species Kyoto Protocol Access and Benefit Sharing  
Multilateral Environmental Agreements  
Ozone Layer CBD Desertification UNFCCC Climate Change  
COPs Ozone Hole UNCCD Cartagena protocol  
Nagoya Protocol Natural Resources  
Clean Development Mechanism Montreal Protocol  
Stockholm Convention



Status of Environment & Related Issues

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## EDITORIAL

*Today, our Planet is facing an unprecedented Environmental crisis. The deterioration of the earth's environment increasingly pressurizes the natural resource base and processes upon which all the life on earth depends. Consequently, conservation and sustainable use of environmental resources remains one of the major challenges of our era and an indispensable component of sustainable development.*

*The well-being of our Planet along with our present and future generations relies on the effective international cooperation to tackle the disastrous loss of environment and the degradation of ecosystems that we are observing at the global, regional and national level. Therefore, worldwide commitments are necessary to protect environmental features such as the biosphere including the ozone layer, migratory species, ecosystems, control on transboundary movement of wastes and environmentally harmful activities.*

*Hence, to fulfill these commitments the international community has developed over the years a range of legally binding agreements that tackle different aspects of this challenge. The landmark conventions for bringing about a well developed regulatory framework were the UN Conference on Human Environment held at Stockholm in 1972 and United Nations Conference on Environment and Development (Earth Summit) at Rio de Janeiro in 1992. India, along with other nations agreed on principles and the action plans to protect the environment and came under the obligation to implement these domestically. India, by becoming a party to many Multilateral International Environmental Agreements, commits to its adherence and compliance at the national level.*

*The present issue of Newsletter seeks to provide a cohesive perspective on the major Conventions/ International Environmental Agreements to which India is party, along with India's progress so far in implementing these conventions/agreements at the National level. It is hoped that this article will be useful to practitioners, academicians, NGOs, students, and others interested in the global environmental scenario and India's position therein.*

**Editors**

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ENVIS Centre, PSCST is a partner in Regional Centre of Expertise (RCE) Chandigarh on Education for Sustainable Development (ESD) of United Nations University Institute of Advanced studies, Japan. All activities of RCE, Chandigarh are being coordinated by ENVIS Centre. It is hoped that this publication will serve as a useful resource for stakeholders & support for their growing work in the field of environment and sustainable development.

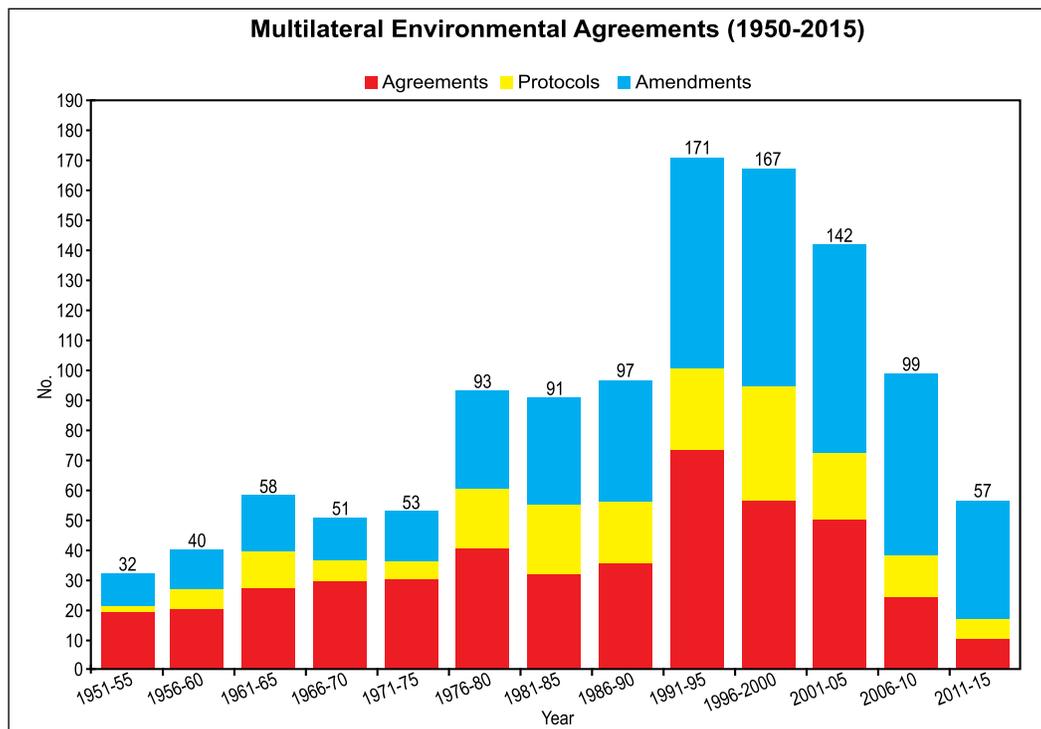
## Introduction

International Environmental Convention plays a critical role in the overall framework of environmental laws. Complementing national legislation and bilateral or regional agreements, Conventions form the overarching international legal basis for global efforts to address particular environmental issues. International environmental law aims to develop an integrated legal approach to environmental management and solve environment related conflicts at regional and global levels. Today, the world has more than 1100 multilateral agreements (Fig 1), about 1500 bilateral, and more than 200 regional legislations (Mitchell, 2015). The implementation of all these environmental laws is facilitated by institutions like the United Nations and its dedicated agencies, international non-governmental organizations (NGOs) like the International Union for Conservation of Nature (IUCN), Friends of the Earth (FOE), Green-Peace International, World Wide Fund for Nature (WWF), Regional institutions like the European Union (EU), the Commonwealth, Association of South East Asian Nations (ASEAN), South Asian Association for

Regional Cooperation and so on, as also special purpose institutions like the International Whaling Commission (IWC), International Seabed Authority (ISA), International Tribunal on Law of the Sea (ITLOS). These Institutes guide the behavior of particular countries and regions for their effective and timely implementation of these laws.

The main method available under international law for countries to work together on global environmental issues is the Multilateral Environmental Agreement (MEA). MEAs are agreements between states (countries) which may include obligations varying from more general principles about a particular environmental issue, through to definitive actions to be taken to achieve an environmental objective. The broad areas where international agreements on environment have focused include the atmosphere, hazardous substances, marine environment, terrestrial resources, nature conservation, and nuclear safety and transboundary resources. Likewise, the key principles followed comprise Sustainable Development, Intergenerational Equity, Common but Differentiated Responsibility, Precautionary Principle, Polluter Pays Principle and Sovereignty over Natural Resources (Box 1).

**Fig 1 : Multilateral Environmental Agreements (1950-2015)**



Source: Adapted from <http://iea.uoregon.edu>

This issue contains an overview of important international environmental conventions, agreements & protocols. The conventions, agreements and protocols covered in the article are chosen due to their global importance

and weight in relation to the major global environmental issues. The worldwide used terminology w.r.t MEAs is explained in Box 2.

### Box 1: Key Sustainability Principles

**Sustainable development:** is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

**Intergenerational equity:** is a concept that says that humans 'hold the natural and cultural environment of the Earth in common both with other members of the present generation and with other generations, past and future.' It means that we inherit the Earth from previous generations and have an obligation to pass it on in reasonable condition to future generations.

**Common but differentiated Responsibility:** This principle can be traced to Principle 7 of the 1992 Rio Declaration which states that 'States should co-operate in a spirit of global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystem. In view of the different contributions to global environmental degradation, states have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command.'

**Precautionary Principle:** This principle got formal recognition in Principle 15 of the Rio Declaration, which provides that 'where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'

**Polluter pays Principle:** The polluter-pays principle is the requirement that the costs of pollution should be borne by the person who is responsible for causing pollution and its consequential costs. According to Principle 16 of the 1992 Rio Declaration 'National authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and environment.'

**Sovereignty over natural resources:** The principle of state sovereignty allows states within limits established by international law to conduct or authorize such activities as they choose within their territories including activities which may have adverse effects on their own environment.

Source : <https://www.iisd.org>

### Box 2: MEA Terminology

**Protocol:** An agreement that diplomatic negotiators formulate and sign as the basis for a final convention or treaty. The treaty itself may not be completed for many years.

**Treaty:** An agreement where the parties to it negotiate to reach common ground and avoid further conflict or disagreement. It is normally ratified by the lawmaking authority of the government whose representative has signed it.

**Convention:** begins as an international meeting of representatives from many nations that results in general agreement about procedures or actions they will take on specific topics (e.g., wetlands, endangered species etc.). Convention is a formal agreement between States.

**Signature:** an act by which a State provides a preliminary endorsement of the instrument. Signing does not create a binding legal obligation but does demonstrate the State's intent to examine the treaty domestically and consider ratifying it. While signing does not commit a State to ratification, it does oblige the State to refrain from acts that would defeat or undermine the treaty's objective and purpose.

**Ratification:** is an act by which a State signifies an agreement to be legally bound by the terms of a particular treaty. To ratify a treaty, the State first signs it and then fulfils its own national legislative requirements.

**Accession:** is an act by which a State signifies its agreement to be legally bound by the terms of a particular treaty. It has the same legal effect as ratification, but is not preceded by an act of signature.

Source: <https://treaties.un.org>

## Historical Background

Although international environmental treaties originated at the end of 19th century, vast majority of existing MEAs have been adopted since 1972 when the international community met during the two major International Conferences namely United Nations Conference on Human Environment and United Nations Conference on Environment and Development (Earth Summit, 1992) to consider global environment and development needs. The major deliberations held during these landmark conferences along with key outcomes are summarized below.

- **United Nations Conference on Human Environment**

In 1972, the International Conferences on Environment i.e. the United Nations Conference on the Human Environment (Stockholm Conference) was held from 5<sup>th</sup> to 6<sup>th</sup> June at Stockholm, Sweden. The Conference in Stockholm was the first time that attention was drawn to the need to preserve natural habitats to produce a sustained improvement in living conditions for all, and the need for international cooperation to achieve this. The emphasis was on solving environmental problems, but without ignoring social, economic and developmental policy factors. It laid the foundation for global environmental governance.



**Stockholm Conference, Stockholm, Sweden**

The final declaration of the Stockholm Conference was an environmental manifesto that was a forceful statement of the finite nature of Earth's resources and the necessity for humanity to safeguard these. This conference had led to the creation of the United

Nations Environment Programme (UNEP), an Environment Fund, Action Plan and Stockholm Declaration. Adopted by all 113 States including India present at the Conference, the Declaration was the first universal document of importance on environmental matters (Source: [www.unep.org](http://www.unep.org)). It placed environmental issues visibly on the international political agenda. Its 26 Principles give prominence to a number of concepts that later found their place in various MEAs.



**Late Mrs. Indira Gandhi, then Hon'ble Prime Minister of India, addressing the Stockholm Conference**

- **United Nations Conference on Environment and Development**

In 1983, the UN convened the World Commission on Environment and Development (WCED) This commission was comprised of representatives from both the developed and developing countries. It was created to address the growing concern over the "accelerating deterioration of the human environment and natural resources and the consequences of this deterioration for economic and social development."

Four years later, the WCED produced the landmark publication "Our Common Future" (also known as the Brundtland Report) that provided a stark diagnosis of the state of the environment. The report popularized the most commonly used definition of Sustainable Development. The Brundtland Report later provided the momentum for the United Nations Conference on Environment and Development (UNCED)/Rio Summit (June 3–14, 1992 at Rio de Janeiro, Brazil) that laid the foundations for the global institutionalization of Sustainable Development (Source: [www.un.org](http://www.un.org)).

## Multilateral Environmental Agreements (MEAs): An Indian Perspective



Photo Credit : www.unmultimedia.org

### Earth Summit, Rio de Janeiro, Brazil

At UNCED, the concept of Sustainable Development gained broad international support as the key element to consider in developing international environmental policy. The Rio Conference was attended by around 172 parties including India. The difference between environmental concerns and economic development had been outlined in its 27 principles. While many of these Principles deal with issues previously discussed in the Stockholm Declaration, the Rio Declaration highlighted the concept of sustainable development and a number of other important issues and facilitated future environmental negotiations, such as common but differentiated responsibilities, precautionary principle, polluter pays principle, environmental impact assessment etc. The landmark outcomes of UNCED are as under:



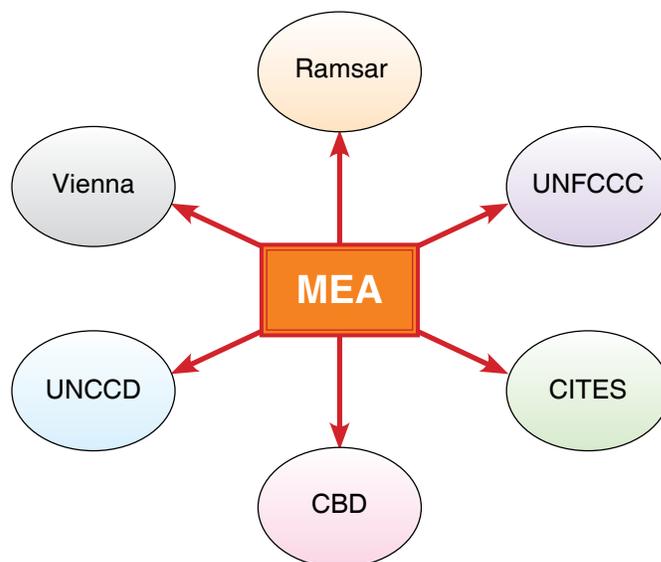
Photo Credit : www.unmultimedia.org

### People signing the Earth pledge at UNCED, 1992

- Agenda 21
- Rio Declaration on Environment and Development
- Statement of Forest Principles
- United Nations Framework Convention on Climate Change (UNFCCC)
- United Nations Convention on Biological Diversity (CBD)

In India, focus on environment is not new, environmental considerations have been an integral part of its culture since long. The importance and need for conservation and sustainable use of natural resources has been expressed in Indian scriptures and is reflected in the constitutional, legislative and policy framework as also in the international commitments of the country.

India has played a major role in the international arena relating to environmental protection. India became the first country to change its constitution to protect its environment. During the past decade, the country has ratified many of the international conventions related to environment protection and has taken a number of initiatives to implement them at the domestic level. The major MEAs, to which India is a signatory, are listed in Table 1. Out of these some important MEAs namely the Ramsar Convention on Wetlands, Convention on Trade of Endangered species, Convention for the protection of the Ozone layer, United Nations framework Convention on Climate Change, Convention on Biological Diversity and United Nations convention to Combat Desertification are discussed in detail in succeeding paragraphs.



Major Multilateral Environmental Agreements / Conventions covered in present Newsletter.

**Table 1 : Multilateral Environmental Agreement Calendar of India**

<b>A. Nature Conservation</b>	
1948	International Union for Conservation of Nature and Natural Resources (IUCN), Fontainebleau, France
1971	Ramsar Convention on Wetlands, Ramsar, Iran
1973	Convention on International Trade in Endangered Species of Fauna and Flora (CITES), Washington DC, USA.
1976	The Wildlife Trade Monitoring Network (TRAFFIC), Cambridge, UK
1979	Convention on the Conservation of Migratory Species (CMS), Bonn Germany
1985	International Tropical Timber Organization (ITTC), Yokohama, Japan
1992	Convention on Biological Diversity (CBD), Montreal, Canada
1994	Global Tiger Forum (GTF), New Delhi, India
2000	Cartagena Protocol on Biosafety, Montreal, Canada
2000	United Nations Forum on Forests (UNFF), New York, USA
2005	Coalition against Wildlife Trafficking (CAWT), Washington, D.C., USA
2010	Nagoya Protocol on Access and Benefits sharing, Nagoya, Japan
<b>B. Hazardous Material</b>	
1989	Basel Convention on the Control of Trans-boundary Movement of Hazardous Waste and Their Disposal, Basel, Switzerland
1998	Rotterdam Convention on Prior Informed Consent (PIC) for certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, Netherlands
2004	Stockholm Convention on Persistent Organic Pollutants (POPs), Stockholm, Sweden
2006	Strategic Approach to International Chemicals Management (SAICM), Dubai, United Arab Emirates
<b>C. Atmospheric Emissions</b>	
1985	Vienna Convention (For Protection & Maintenance of Ozone Layer), Vienna, Austria
1987	Montreal Protocol (on Ozone Depleting Substances), Montreal, Canada
1992	UNFCCC (United Nations Framework Convention on Climate Change), New York, USA
1994	UNCCD (United Nations Convention to Combat Desertification), Paris, France
1997	Kyoto Protocol, Japan
<b>D. Marine Environment</b>	
1946	IWC (International Whaling Commission), Washington DC, USA
1973	International Convention for the Prevention of Pollution from Ships, London, UK

Source: MoEFCC, Gol

## A) The Ramsar Convention on Wetlands

Headquarters	Gland, Switzerland	<p>Aim: To promote the conservation and wise use of all wetlands through local, regional, and national actions and international cooperation, as a contribution towards achieving Sustainable Development worldwide.</p> <p>It is the only global environment agreement dealing with a particular ecosystem.</p>
Place and Date of Signature	Ramsar, Iran 02.02.1971	
Date of Entry into force	01.12.1975	
Number of Parties (as of Oct 2015)	169	
Number of Ramsar Sites:	2,218	
Total surface of designated sites	214,131, 110,.18 ha	
India (Year of signature and Enforcement)	01.02.1982	



Source: <https://treaties.un.org>, <http://iea.uoregon.edu> and <http://www.ramsar.org>

### India: Progress so far

- The Ministry of Environment, Forests & Climate Change (MoEFCC), Government of India (GoI) is the administrative authority for implementation of the Ramsar Convention in India.
- A regulatory framework for wetlands was introduced in the form of Wetland (Conservation and Management) Rules, 2010 under the provisions of the Environment (Protection) Act, 1986. The rules stipulate prohibition and regulation of a range of developmental activities within a wetland notified under its provision by the State / UT Governments.
- A Central Wetlands Regulatory Authority (CWRA) was constituted for the purpose of enforcement of the rules; evaluate proposals for wetland notification sent by the State Governments and set thresholds for activities to be regulated. Besides, several State Governments (notably West Bengal, Odisha, Kerala, Manipur & Assam) have also enacted their own legislations pertaining to wetlands.
- Twenty-six sites have already been designated as Ramsar sites in India (Map 1) till date. Ramsar Conservation Award had conferred to Chilika Development Authority in 2002 for ecological intervention of Chilika Lake. This is for the first time that any Asian country has been given such an award ([envfor.nic.in](http://envfor.nic.in)).
- National Water Policy of 2012 includes conservation of wetlands as a means to address water availability, flood management and related issues.
- The national programme on conservation of mangroves and coral reefs brings in specific focus on the needs of coastal and marine wetland ecosystems.

Source: [www.ramsar.org](http://www.ramsar.org)

### Ramsar Sites in Punjab

**Harike Wetland**



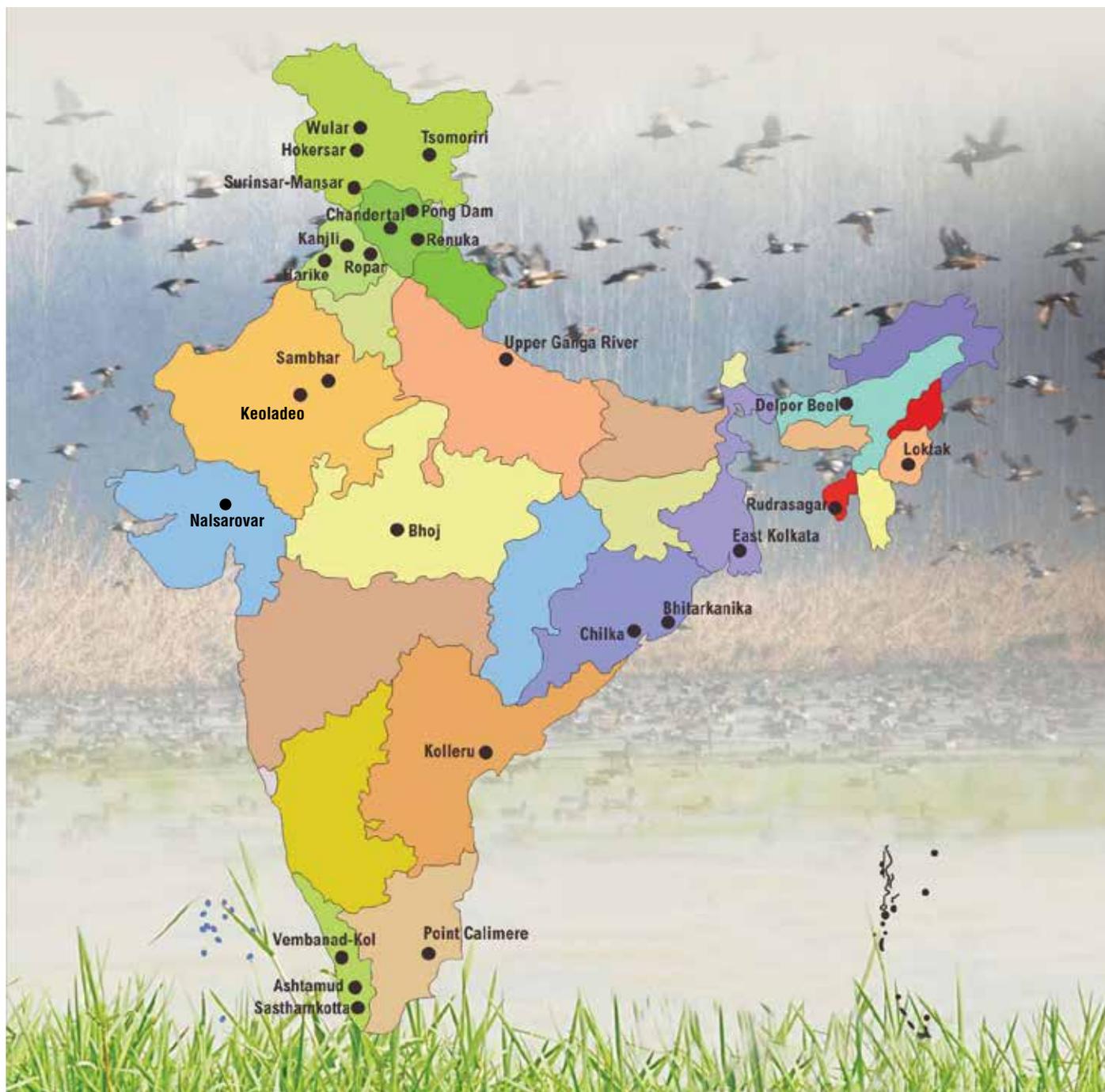
**Ropar Wetland**



**Kanjli Wetland**



**Map 1: Ramsar Sites in India**



Wetland Name
Ashtamudi Wetland, Kerala
Bhitarkanika Mangroves, Odisha
Bhoj Wetland, Madhya Pradesh
Chandertal Wetland, Himachal Pradesh
Chilika Lagoon, Odisha
Deepor Beel, Assam
East Calcutta Wetlands, West Bengal
Harike Lake, Punjab
Hokersar Wetland, Jammu & Kashmir
Kanjli, Punjab

Wetland Name
Keoladeo National Park, Rajasthan
Kolleru Lake, Andhra Pradesh
Loktak Lake, Manipur
Nalsarovar Bird Sanctuary, Gujarat
Point Calimere Wildlife and Bird Sanctuary, Tamil Nadu
Pong Dam Lake, Himachal Pradesh
Renuka Wetland, Himachal Pradesh
Ropar, Punjab
Rudrasagar Lake, Tripura

Wetland Name
Sambhar Lake, Rajasthan
Sasthamkotta Lake, Kerala
Surinsar-Mansar Lakes, Jammu & Kashmir
Tsomoriri, Jammu & Kashmir
Upper Ganga River (Brijghat to Narora Stretch), Uttar Pradesh
Vembanad-Kol Wetland, Kerala
Wular Lake, Jammu & Kashmir

Source: MoEFCC, 2015

## Major decisions at meetings of Ramsar Conference of Parties

S.No	Year	Place	Major Decisions/Resolutions
COP 1	1980	Cagliari, Italy	<ul style="list-style-type: none"> <li>Adopted new criteria for identifying wetlands suitable for designation to the List of Wetlands of International Importance.</li> <li>Approved the elaboration of a protocol (Paris Protocol) to amend the treaty.</li> </ul>
COP 2	1984	Groningen, Netherlands	<ul style="list-style-type: none"> <li>Established the framework for implementing the Convention, a list of agreed commitments and priorities for the next triennium.</li> </ul>
COP 3	1987	Regina, Canada	<ul style="list-style-type: none"> <li>Adopted revised criteria for identifying wetlands of international importance.</li> <li>Adopted guidelines for the implementation of wise use of wetlands concept.</li> </ul>
COP 4	1990	Montreux, Switzerland	<ul style="list-style-type: none"> <li>Approved the framework for the implementation of the Convention.</li> <li>Established the Montreux Record (though not formally known by this name until June 1993).</li> <li>Established the Wetland Conservation Fund (later renamed "the Ramsar Small Grants Fund for Wetland Conservation and Wise Use").</li> </ul>
COP 5	1993	Kushiro, Japan	<ul style="list-style-type: none"> <li>Adopted the Kushiro Statement as the basis for the Contracting Parties priorities for coming triennium.</li> <li>Adopted management planning guidelines for wetland sites.</li> </ul>
COP 6	1996	Brisbane, Australia	<ul style="list-style-type: none"> <li>Adopted the Strategic Plan 1997-2002.</li> <li>Adopted criteria based on fish for identifying wetlands of international importance.</li> <li>Adopted working definitions of ecological character and guidelines for describing and maintaining the ecological character of listed sites.</li> </ul>
COP 7	1999	San José, Costa Rica	<ul style="list-style-type: none"> <li>Conferred the first Wetland Conservation Awards upon five recipients.</li> <li>Formally confirmed BirdLife International, IUCN-International Union for Conservation of Nature, Wetlands International, and WWF International as 'International Organization Partners' (IOPs) of the Convention.</li> </ul>
COP 8	2002	Valencia, Spain	<ul style="list-style-type: none"> <li>Adopted further guidance for the Parties, covering allocation and management of water, site management planning, integrated coastal zone management, wetland inventory, under-represented wetland types, wetland restoration, peatlands, etc.</li> <li>Adopted a new Strategic Plan for the period 2003-2008.</li> </ul>
COP 9	2005	Kampala, Uganda	<ul style="list-style-type: none"> <li>Adopted frameworks for understanding relationships among existing guidance on wise use, water-related issues, and wetland inventory, assessment and monitoring.</li> <li>Endorsed a fifth member of the Convention's International Organization Partners, the International Water Management Institute (IWMI).</li> </ul>
COP 10	2008	Changwon, Republic of Korea	<ul style="list-style-type: none"> <li>Adopted the "Changwon Declaration" on wetlands and human health and well-being.</li> <li>Adopted frameworks for guidance on Ramsar data and information needs and on detecting, reporting, and responding to change in ecological character.</li> </ul>
COP 11	2012	Bucharest, Romania	<ul style="list-style-type: none"> <li>Adopted topical Resolutions on wetlands and human health, climate change, biofuels, extractive industries, urbanization, poverty alleviation, small island states and biodiversity in rice paddies.</li> <li>Adopted a new Strategic Plan and a new Communications, Education, Participation and Awareness (CEPA) Plan for 2009-2015.</li> <li>Adopted a significant Resolution on "Tourism, recreation and wetlands".</li> <li>Adopted new procedures and guidance on describing Ramsar Sites at the time of designation and in subsequent updates, paving the way for on-line submission of site data by Parties in coming years.</li> <li>Adopted new guidelines for avoiding, mitigating and compensating for wetland losses.</li> </ul>

Source: <http://ramsar.rgis.ch>

## B) Convention on Trade of Endangered Species (CITES)

Place and Date of Signature	Washington, D.C 03.03.1973	Aim: To ensure that international trade in specimens of wild animals and plants does not threaten their survival.
Headquarters	Geneva, Switzerland	
Date of Entry into force	01.07.1975	It imposes a duty on Parties to subject international trade in specimens of selected species to certain controls via licensing of import, export, re-export, and introduction from the sea of species.
Number of Parties (as of Oct 2015)	181	
India (Year of signature and Enforcement)	20.07.1976 18.10.1976	



Source: <https://treaties.un.org> , <http://iea.uoregon.edu> and <https://www.cites.org>

### India: Progress so far

- The Ministry of Environment, Forests & Climate Change (MoEFCC) is the nodal agency for CITES.
- India, as a signatory to CITES, is obliged to take all necessary steps to implement the provisions of the treaty to ban international commercial trade in Appendix-I species of plants and animals and regulate trade in Appendix-II and III species (Box 3).
- India has played a proactive role in mobilizing international opinion for inclusion of many critically endangered species in Appendix I and other threatened species in Appendix II of CITES. India has supported inclusion of box turtles and soft shell turtles in the appendices of CITES.
- The Director, Wild Life Preservation has been designated as the CITES Management Authority for India.
- The enforcement of CITES provisions is presently being carried out by the Customs officials and Regional Deputy Directors, Wildlife Crime Control Bureau through the Customs Act, 1962 at the point of Import/Export and by the State Wildlife Departments headed by Chief Wildlife Wardens under the Wildlife (Protection) Act, 1972.
- International trade in all wild fauna and flora in general, and the species covered under CITES in particular, is regulated jointly through the provisions of the Wildlife (Protection) Act 1972, the Foreign Trade (Development Regulation) Act

1992, the Foreign Trade Policy of Government of India and Customs Act, 1962.

Source: [www.moef.gov.in](http://www.moef.gov.in)

### Box 3 CITES Appendices

**Appendix I** : Include species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.

**Appendix II** : Includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival.

**Appendix III** : Contains species that are protected in at least one country, which has asked other, CITES Parties for assistance in controlling the trade.



Threatened species of Punjab

## Major decisions at meetings of CITES Conference of Parties

S.No	Year	Place	Major Decisions/Resolutions
COP 1	1976	Bern, Switzerland	<ul style="list-style-type: none"> <li>Laid important foundation of the treaty by establishing the criteria for amending Appendix-I and II listings.</li> <li>Several species of primates, including lemurs added to Appendix I.</li> </ul>
COP 2	1979	San José, Costa Rica	<ul style="list-style-type: none"> <li>Established a permanent Standing Committee, which to this day steers the work of the treaty between CoPs.</li> </ul>
COP 3	1981	New Delhi, India	<ul style="list-style-type: none"> <li>Constituted a Technical committee to assess species worldwide.</li> <li>Transferred Sea turtles to Appendix I from Appendix II as a result of declining populations.</li> </ul>
COP 4	1983	Gaborone, Botswana	<ul style="list-style-type: none"> <li>Added all species of Musk deer to Appendix I and II, depending on their location.</li> </ul>
COP 5	1985	Buenos Aires, Argentina	<ul style="list-style-type: none"> <li>Constituted procedures for listing species in a new appendix, Appendix III.</li> <li>One of the first species included in Appendix III is giant Panglion, listed by Ghana.</li> </ul>
COP 6	1987	Ottawa, Canada	<ul style="list-style-type: none"> <li>The Technical committee, constituted in 1981, evolved to form the Animals, Plants and Nomenclature committees.</li> <li>Listed several species of fruit bats are listed in Appendix II.</li> </ul>
COP 7	1989	Lausanne, Switzerland	<ul style="list-style-type: none"> <li>Adopted a ban on ivory trade</li> <li>Decision was made to up-list the African elephant to Appendix I</li> </ul>
COP 8	1992	Kyoto, Japan	<ul style="list-style-type: none"> <li>Recommended the development of criteria to amend Appendix I and II.</li> <li>National laws for implementation of the Convention</li> <li>Use of coded-microchip implants for marking live animals in trade</li> </ul>
COP 9	1994	Fort Lauderdale, US	<ul style="list-style-type: none"> <li>Adopted the Fort Lauderdale criteria recommended in COP 8.</li> </ul>
COP10	1997	Harare, Zimbabwe	<ul style="list-style-type: none"> <li>Parties voted to move several populations of African elephant to Appendix II.</li> <li>Passed a resolution to develop a monitoring system for African and Asian elephant populations.</li> </ul>
COP11	2000	Gigiri, Kenya	<ul style="list-style-type: none"> <li>Focused mainly on species-specific issues, with the African elephant taking centre stage.</li> <li>The monitoring systems MIKE (Monitoring the Illegal Killing in Elephants) and ETIS (Elephant Trade Information System) recommended.</li> </ul>
COP12	2002	Santiago, Chile	<ul style="list-style-type: none"> <li>Conservation of and trade in tigers and other Appendix-I Asian big cat species</li> <li>Reviewed Significant Trade in specimens of Appendix-II species</li> <li>Registration of operations that breed Appendix-I animal species in captivity for commercial purposes</li> </ul>
COP13	2004	Bangkok, Thailand	<ul style="list-style-type: none"> <li>Adopted better trade controls that helped African elephants as well as key marine and rainforest species.</li> <li>Increased protection for several large marine species of dolphin, shark and other fish in Appendices I and II.</li> </ul>
COP14	2007	The Hague, Netherlands	<ul style="list-style-type: none"> <li>Listed European eels in Appendix II</li> <li>Listed seven sawfish species in Appendix I</li> <li>Adopted an ambitious new strategic vision to link CITES to the broader conservation and development agenda.</li> </ul>
COP15	2010	Doha, Qatar	<ul style="list-style-type: none"> <li>Listed number of threatened reptiles, amphibians and aromatic timbers in the CITES Appendices (Appendix I in the case of the Kaiser spotted newt).</li> <li>Maintained the position that raising tigers in captivity for trade in their parts is unacceptable.</li> </ul>
COP16	2013	Bangkok, Thailand	<ul style="list-style-type: none"> <li>Adopted 55 new listing proposals, including on sharks, manta rays, turtles and timber.</li> <li>Adopted historic provisions to: provide guidance for establishing scientifically robust criteria for sustainable trade; determine the State responsible for issuing documentation for marine species harvested in international waters; assess the impact of CITES decisions on the livelihoods of rural communities; further advance electronic permitting systems; enhance capacity-building, etc.</li> </ul>

Source: <https://www.cites.org>

## C) Convention for the Protection of the Ozone Layer

Place and Date of Signature	Vienna, Austria 22.03.1985
Headquarters	Nairobi, Kenya
Date of Entry into force	1988
Number of Parties (as of Oct 2015)	197
India (Year of signature and Enforcement)	18.03.1991 (Accession)

Aim: To establish a framework for cooperation, development of policies, and formulation of agreed measures in order to protect human health and the environment against adverse effects resulting or likely to result from human activities which modify/affects the ozone layer (Box 4).



### Universal Ratification :

On 16th September 2009, the Vienna Convention and the Montreal Protocol became the first treaty/Protocol in the history of the United Nations to achieve universal ratification.

Source: <https://treaties.un.org> , <http://iea.uoregon.edu> and <http://ozone.unep.org>

### India: Progress so far

- India signed and ratified the Vienna Convention for the Protection of the Ozone Layer in 1991 and the Montreal Protocol on Substances that Deplete the Ozone Layer in 1992, signaling the country's commitments to the global cause of addressing the harmful effects of the ozone layer depletion.
- The objectives of the Convention were for Parties to promote cooperation by means of systematic observations, research and information exchange

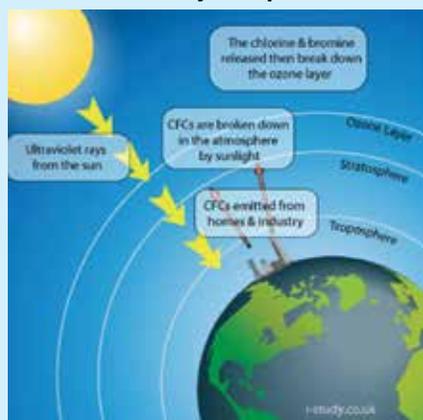
on the effects of human activities on the ozone layer and to adopt legislative or administrative measures against activities likely to have adverse effects on the ozone layer.

- The Vienna Convention did not require countries to take concrete actions to control ozone depleting substances. Instead, in accordance with the provisions of the Convention, the countries of the world agreed the Montreal Protocol (Box 5) on Substances that Deplete the Ozone Layer under the Convention to advance that goal.

### Box 4: Ozone Layer & Ozone Layer depletion

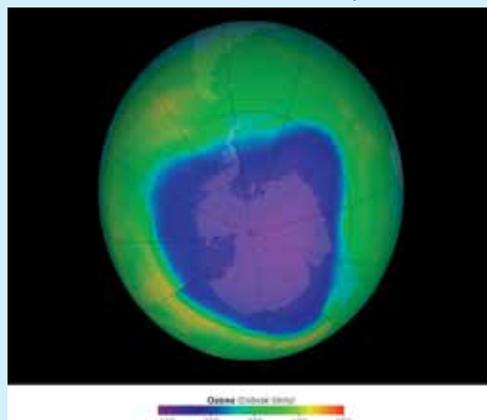
**Ozone Layer** is a region of naturally occurring ozone gas found around 15 to 30 kilometers above Earth (stratosphere) and serves as a shield from the harmful ultraviolet radiation emitted by the sun.

**Ozone Layer depletion**



The average concentration of Ozone in the atmosphere is about 300 Dobson units; any area where the concentration drops below 220 Dobson units is considered part of Ozone hole.

**Ozone hole as on Oct 4, 2015**



Ozone hole is not technically a 'hole' where no ozone is present, but is actually a region of depleted ozone in the stratosphere over the Antarctic that happens at the beginning of Southern Hemisphere spring (Aug-Oct)

Source: [www.earthobservatory.nasa.gov](http://www.earthobservatory.nasa.gov) & [www.safetywiseblog.com](http://www.safetywiseblog.com)

## Vienna Convention Conference of Parties

S.No	Year	Place	Major Decisions/Resolutions
<b>COP 1</b>	1989	Helsinki, Finland	<ul style="list-style-type: none"> <li>Adopted the rules of procedures for the meetings of the COP to the Vienna Convention for the Protection of the Ozone Layer.</li> <li>Decided that the Vienna Convention is the most appropriate instrument for harmonizing the policies and strategies on research. Also that the Montreal Protocol is the appropriate instrument for achieving the harmonization of policies, strategies and measures for minimizing the release of substances causing or likely to cause modifications of the ozone layer.</li> </ul>
<b>COP 2</b>	1991	Nairobi, Kenya	<ul style="list-style-type: none"> <li>Requested the Montreal Protocol Parties to ask the Assessment Panels to identify and report on what information on substances listed in Annex I of the Convention, can be made available from other sources, and what can and should be supplied separately by the Parties.</li> <li>Requested the Parties to the Vienna Convention as a matter of urgency to facilitate through bilateral and multilateral contributions in the expansion of the ozone observing stations network.</li> </ul>
<b>COP 3</b>	1993	Bangkok, Thailand	<ul style="list-style-type: none"> <li>Requested all Parties to make voluntary contributions to the World Meteorological Organization's Special Fund for Environment Monitoring for the Global Ozone Observing System in order to expand the station network in developing countries.</li> </ul>
<b>COP 4</b>	1996	San Jose, Costa Rica	<ul style="list-style-type: none"> <li>Welcomed the Global Environment Facility's decision to fund a number of global ozone observation stations.</li> <li>Acknowledged the important role played by the Scientific Assessment Panel in coordinating the report of the World Meteorological Organization (WMO) and the substantial contributions by the national agencies to the preparation of the report.</li> </ul>
<b>COP 5</b>	1999	Beijing, China	<ul style="list-style-type: none"> <li>Adopted 34 decisions on: the replenishment of the Multilateral Fund for the triennium 2000-2002; new adjustments and a "Beijing Amendment" to the Montreal Protocol that tighten existing phase-out schedules and add new controls and a "Beijing Declaration" reaffirming Parties' ongoing commitment to combating ozone depletion.</li> </ul>
<b>COP 6</b>	2002	Rome, Italy	<ul style="list-style-type: none"> <li>Urged all States that have not yet done to ratify, approve or accede to the Vienna Convention and the Montreal Protocol and its Amendments, taking into account that universal participation is necessary to ensure the protection of the ozone layer.</li> <li>Urged all Parties and international organizations to make voluntary contributions to the Fund</li> <li>Requested the World Meteorological Organization and the United Nations Environment Programme to draw to the attention of the Parties opportunities for meeting common objectives among conventions, in particular the United Nations Framework Convention on Climate Change.</li> </ul>
<b>COP 7</b>	2005	Dakar, Senegal	<ul style="list-style-type: none"> <li>Adopted more than 50 decisions on: the Multilateral Fund for the implementation of the Montreal Protocol; ratification; compliance; illegal trade; essential and critical-use exemptions; process agents and financial and administrative matters.</li> </ul>
<b>COP 8</b>	2008	Doha, Qatar	<ul style="list-style-type: none"> <li>Parties agreed to replenish the MLF with US\$490 million for 2009-2011 and adopted other decisions concerning, inter alia: the environmentally sound disposal of ODS; approval of 2009 and 2010 CUEs (critical-use exemptions) for methyl bromide and compliance and reporting issues.</li> </ul>
<b>COP 9</b>	2011	Bali, Indonesia	<ul style="list-style-type: none"> <li>Adopted more than 25 decisions, including: a US\$450 million replenishment of the MLF for the period of 2012-2014; issues related to exemptions; mitigation of ozone depleting substances (ODS) emissions from feedstock and process-agent uses; updating the nomination processes and recusal guidelines for the Technology and Economic Assessment Panel (TEAP); the treatment of ODS used to service ships and additional information on alternatives.</li> </ul>
<b>COP10</b>	2014	Paris, France	<ul style="list-style-type: none"> <li>Adopted eight substantive and seventeen procedural decisions. Substantive decisions adopted included: essential-use exemptions (EUEs) and critical-use exemptions (CUEs); availability of recovered, recycled or reclaimed halons and a Technology and Economic Assessment Panel (TEAP) report on alternatives to ozone depleting substances.</li> <li>Procedural decisions adopted included: budget; organizational issues related to the TEAP; the Multilateral Fund (MLF) replenishment and membership of Montreal Protocol bodies for 2015.</li> </ul>

Source: <http://ozone.unep.org>

## Box 5. Montreal Protocol on Substances that Deplete the Ozone Layer

- India has prepared a detailed Country Programme (CP) to phase-out 7 ODS (Ozone depleting substances) mainly produced and used in India out of 20 substances controlled under the Montreal Protocol. They are CFC-11, CFC-12, CFC- 113, Halon-1211, Halon-1301, Carbon tetrachloride, Methyl Chloroform and Methyl Bromide.
- MoEFCC, GoI is implementing Montreal Protocol in India and has an Ozone Cell as a national unit to look after and to render necessary services to implement the Protocol and its ODS phase-out programme in India.
- The MoEFCC has also constituted an Empowered Steering Committee, which is supported by four Standing Committees, namely the Technology and Finance Standing Committee, Standing Committee for Small Scale, Tiny and un-organized industries, Standing Committee on Implementation of ODS phase-out projects and Monitoring and Evaluation Committee.
- India has proactively phased out the production and consumption of CFCs except use in Metered Dose Inhalers (MDIs) used for treatment of Asthma and Chronic Obstructive Pulmonary Disease (COPD) ailments from 1st August, 2008. Subsequently, the use of CFCs in MDIs has been phased out from December, 2012. India has also completely phased out production and consumption of CTC and halons as of 1st January, 2010.
- Currently, the Ozone Cell is engaged in phase-out of production and consumption of next category of chemicals, Hydro chlorofluorocarbons (HCFCs) with an accelerated phase-out schedule as per the Montreal Protocol.
- India has already successfully achieved 2013 freeze and 10% reduction targets of both production and consumption of HCFCs as of 1<sup>st</sup> January, 2015.

Source: Ozone cell, MoEFCC, GoI

## D) United Nations Framework Convention on Climate Change

Headquarters Bonn, Germany

Place and Date of Signature New York, USA  
09.05.1992

Date of Entry into force 21.03.1994

Number of Parties 196  
(as of Oct 2015)

India (Year of signature and Enforcement) 10.06.1992  
01.11.1993

Aim: Aims at achieving stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with climate by setting emission limits to be accomplished within a determined timeframe to allow ecosystems to adapt naturally to climate change, to ensure the non-threat to food production and to enable economic development to proceed in a sustainable way.

Parties to UNFCCC are classified as:

- Annex I Countries : Industrialized countries and Economies in transition
- Annex II Countries : Developed countries which pay for costs of Developing countries
- Developing countries with no legal binding (including India)

The parties to the convention meet annually from 1995 in Conferences of the Parties (COP) to assess progress in dealing with Climate Change. The COP 2015 was held in Paris (Box 8).



Source: <https://treaties.un.org> , <http://iea.uoregon.edu> and <http://unfccc.int>



United Nations Framework Convention on Climate Change, COP 21 Paris

Photo Credit : <http://unfccc.int>

## India: Progress so far

- There is no legally binding commitment for India under UNFCCC till date.
- India acceded to the Kyoto Protocol on 26 August 2002 (Box 6).
- MoEFCC is the nodal agency for climate change issues in India. It has constituted Working Groups on the UNFCCC and Kyoto Protocol. Work is currently in progress on India's initial National Communication (NATCOM) to the UNFCCC.
- In 2007, the Prime Minister's Council on Climate Change (PMCCC) was constituted. A high level advisory group formed with the mandate of coordinating the national action plans for assessment, adaptation and mitigation of climate change and consisted of representatives from the government, industry and civil society.
- In 2008, the National Action Plan on Climate Change (NAPCC) was launched, outlining measures to promote sustainable development, while also yielding co-benefits to address climate change through eight national missions (solar energy, enhanced energy efficiency, sustainable habitat, water, sustaining Himalayan eco-system, green India, sustainable agriculture and strategic knowledge for climate change).
- Till date 30 Indian states and Union territories including Punjab have prepared their State Action Plan on Climate Change (SAPCC) based broadly on a framework similar to NAPCC primarily focusing on adaptation (Box 7).
- Prior to the 15th session of the Conference of the Parties (COP) in Copenhagen in December 2009, India declared a voluntary goal of reducing the emissions intensity of its GDP by 20–25%, over 2005 levels by 2020, despite having no binding mitigation obligations as per the Convention. United Nations Environment Programme (UNEP) in its Emission Gap Report 2014 has recognized India as one of the countries on course to achieving its voluntary goal.
- In January 2010, the Expert Group on Low Carbon Strategies for Inclusive Growth was established by the Planning Commission of India to provide sector specific recommendations to support the formulation of the country's 12th Five Year Plan (2012–17).
- A clean energy cess on coal, lignite and peat was introduced to be levied on both domestically produced and imported coal to contribute to the corpus of the National Clean Energy Fund (NCEF), established to finance R&D and innovative projects that promote clean energy technologies.
- To incentivize energy efficiency in industries, the Ministry of Power (MoP), in consultation with the Bureau of Energy Efficiency, notified rules for a domestic market-based mechanism called the Perform, Achieve and Trade (PAT) scheme on 30 March 2012.
- The National Electric Mobility Mission Plan (NEMMP) 2020 was launched to promote adoption of hybrid and electric vehicles in the country.
- The GoI also instituted a National Adaptation Fund for climate change.
- Under UNFCCC, India for reduction in Green House Gas emissions, in its Intended Nationally Determined Contributions (INDC) outlines to undertake following post-2020 climate actions :
  - to reduce the Emissions Intensity of its GDP by 33 to 35 % by 2030 from 2005 Level
  - to achieve 40% cumulative electricity installed capacity from non-fossil fuel based energy sources by 2030
  - to create additional Carbon Sink of 2.5 to 3 Billion Tonnes of CO<sub>2</sub> Equivalent through Additional Forest and Tree Cover by 2030
  - better adaptation with climate resilient agriculture and water conservation
- In 2015, the GoI has substantially increased India's installed renewable energy capacity target to 175 GW by 2022, to be comprised of 100 GW

of solar power, 60 GW of wind energy, 10 GW of small hydro power, and 5 GW of biomass-based power. The 175 GW target by 2022 will result in abatement of 326 million tons of CO<sub>2</sub> equivalent/year.

- The enhanced solar target by itself is anticipated to save about 165 million tonnes of CO<sub>2</sub> emissions per year.
- The National Institution for Transforming India (NITI) Aayog, a new institution that replaced the Planning Commission, has released a roadmap for accelerated renewable energy deployment as its first initiative.
- India has also substantially curtailed subsidies on petroleum products in recent years. While the removal of petrol subsidy was initiated in 2010, followed by diesel in 2014, limits have also been placed on the amount of LPG that is subsidized.

Source: [www.moef.gov.in](http://www.moef.gov.in).

### Box 6. Kyoto Protocol

The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change, which commits its Parties by setting internationally binding emission reduction targets.

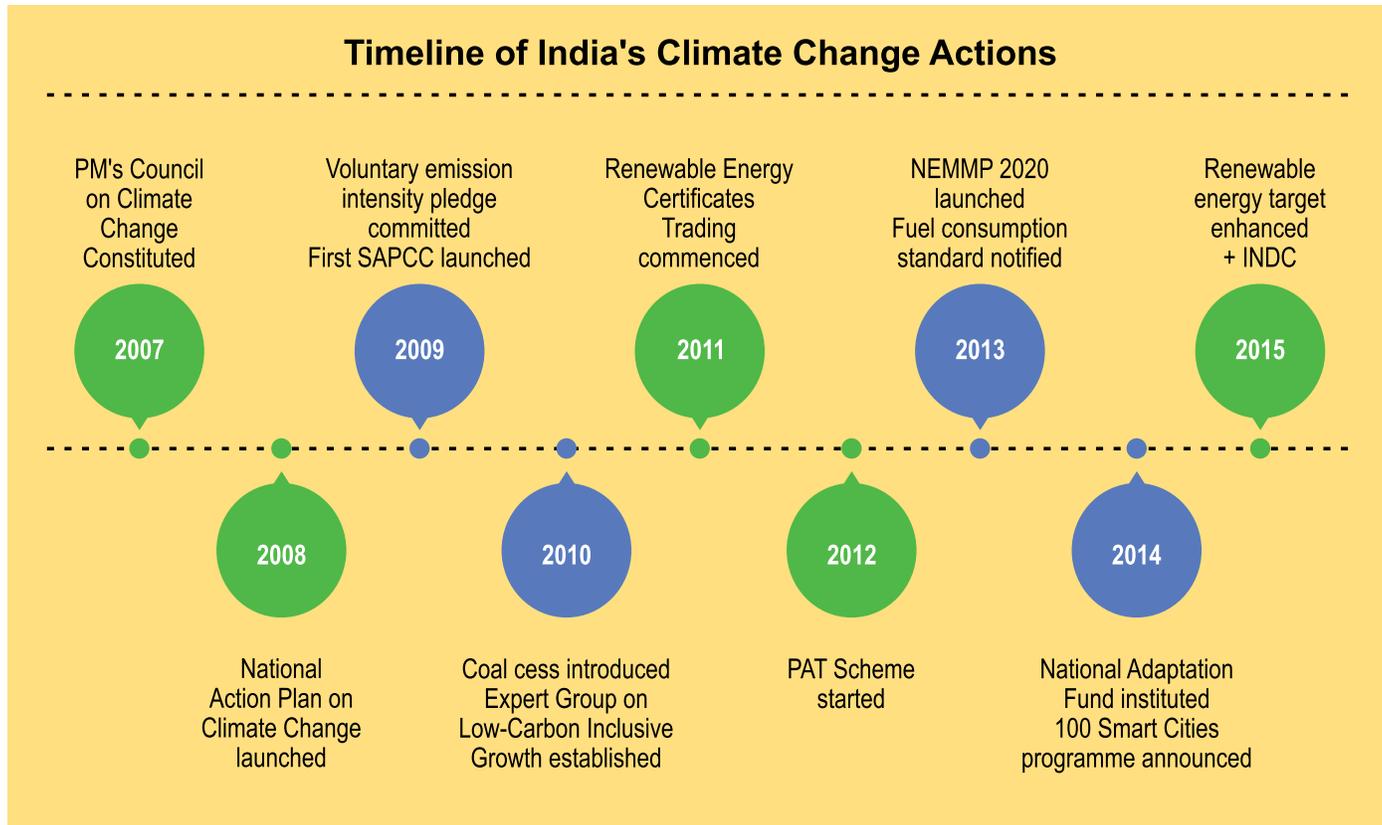
Recognizing that developed countries are principally responsible for the current high levels of GHG emissions in the atmosphere as a result of more than 150 years of industrial activity, the Protocol places a heavier burden on developed nations under the principle of “common but differentiated responsibilities.”

The Kyoto Protocol was adopted in Kyoto, Japan, on 11 December, 1997 and entered into force on 16 February, 2005. The detailed rules for the implementation of the Protocol were adopted at COP 7 in Marrakesh, Morocco, in 2001, and are referred to as the “Marrakesh Accords.”

It binds greenhouse gas emission reduction targets for 37 industrialized countries and European community. To help achieve these targets, the protocol introduced three “flexible mechanisms” –

- International emissions trading (IET)
- Joint Implementation (JI)
- Clean Development Mechanism (CDM)

Source: <http://unfccc.int>



Source: India's Climate Report, 2015

## Box 7 : Major Climate Change related Initiatives in Punjab

- Punjab has prepared its State Action Plan on Climate Change (SAPCC) identifying state specific strategies and actions under eight Missions in line with NAPCC which has been endorsed by MoEFCC, GoI.
- A State Steering Committee has been constituted under the chairmanship of Chief Secretary, Punjab for effective implementation of SAPCC.
- Punjab State Council for Science & Technology has established the Punjab State Climate Change Knowledge Centre (PSCCKC) in the state under National Mission on Strategic Knowledge for Climate Change (NMSKCC) with support from the Department of Science & Technology, Government of India (DST, GOI). DST, GOI has provided financial assistance of Rs. 2.58 crores for this Centre to take up various activities related to climate concerns of the State.
- PSCST has initiated the process of formulating projects for accessing funds from various national and international sources under Climate Change.
- MoEFCC, GoI has approved following two state projects:
  1. 'Towards Sustainable Livestock Production System in Punjab' amounting Rs 18 crores under National Adaptation Fund for Climate Change.
  2. 'Technological adaptation for gainful utilization of Paddy Straw as fuel to replace fossil fuels' amounting Rs 3.5 crores under Climate Change Action Plan.

## Box 8 : India Pavilion & Punjab at COP 21

### COP-21: India Pavillion

To showcase the domestic national and sub-national actions and programmes for mitigation and adaptation to climate change, India organised side events at India Pavilion at COP-21, Paris. Hon'ble Prime Minister and Hon'ble Minister of Environment, Forests & Climate Change led the Indian delegation. Secretary to the GoI, MoEFCC and officer from various Central and State Government departments also actively participated in the negotiations.



India Pavilion at COP-21, Paris

Photo Credit : Avik Roy



Hon'ble Prime Minister of India, Sh. N.D. Modi showcasing India's commitment to Climate Action at India Pavilion at COP 21.

Photo Credit : Avik Roy

### COP-21: Punjab

Punjab along with ten other states of India participated in COP-21, Paris. During the session on 'Climate Change Planning and Actions at Sub-National Level' hosted by United Nations Development Programme (UNDP) at India Pavillion on 5<sup>th</sup> December, 2015, Punjab gave presentation on 'Towards Smart Agriculture'. This presentation addressed the climate change concerns of Punjab with regard to the sustainable agriculture. State has also produced its resource material in the form of brochure that was circulated during the meet.

Dr Satnam Ladhar, Addl. Director (Env.), Punjab State Council for Science & Technology was the state representative who presented the climate concerns of Punjab at India Pavillion.



Dr S.S. Ladhar, Add. Director (Env.), PSCST delivering lecture on 'Towards Smart Agriculture' at India Pavilion, COP21, Paris

## Major decisions at meetings of UNFCCC Conference of Parties

S.No	Year	Place	Major Decisions / Resolutions
<b>COP 1</b>	1995	Berlin, Germany	<ul style="list-style-type: none"> <li>Agreed on "Berlin Mandate" to establish a process to negotiate strengthened commitments for developed countries.</li> </ul>
<b>COP 2</b>	1996	Geneva, Switzerland	<ul style="list-style-type: none"> <li>Noted "Geneva Ministerial Declaration"</li> <li>Agreed on decision on guidelines for the national communications to be prepared by developing countries.</li> <li>Discussed - Quantified Emissions Limitation and Reduction Objectives (QELROs) for different Parties and an acceleration of the Berlin Mandate.</li> </ul>
<b>COP 3</b>	1997	Kyoto, Japan	<ul style="list-style-type: none"> <li>Adopted "Kyoto Protocol" by consensus.</li> </ul>
<b>COP 4</b>	1998	Buenos Aires, Argentina	<ul style="list-style-type: none"> <li>Adopted the "Buenos Aires Plan of Action", focusing on strengthening the financial mechanism, the development and transfer of technologies and maintaining the momentum in relation to the Kyoto Protocol.</li> </ul>
<b>COP 5</b>	1999	Bonn, Germany	<ul style="list-style-type: none"> <li>Focused on the adoption of the guidelines for the preparation of national communications by Annex I countries.</li> </ul>
<b>COP 6</b>	2000	Hague, Netherlands	<ul style="list-style-type: none"> <li>Consensus was finally reached on the Bonn Agreements.</li> <li>Decisions on the mechanisms of land-use change and forestry (LULUCF) and compliance, remained outstanding.</li> </ul>
<b>COP 7</b>	2001	Marrakech, Morocco	<ul style="list-style-type: none"> <li>Parties agreed on a package deal, with key features including rules for ensuring compliance with commitments, consideration of LULUCF Principles in reporting of such data and limited banking of units generated by sinks under the Clean Development Mechanism (CDM).</li> <li>Adopted the "Marrakech Ministerial Declaration" as an input into the World Summit on Sustainable Development in Johannesburg.</li> </ul>
<b>COP 8</b>	2002	New Delhi, India	<ul style="list-style-type: none"> <li>The Delhi Ministerial Declaration on Climate Change and Sustainable Development reiterated the need to build on the outcomes of the World Summit.</li> </ul>
<b>COP 9</b>	2003	Milan, Italy	<ul style="list-style-type: none"> <li>Adopted decisions focused on the institutions and procedures of the Kyoto Protocol and on the implementation of the UNFCCC.</li> <li>Adopted the "New emission reporting guidelines" based on the good-practice guidance provided by the Intergovernmental Panel on Climate Change.</li> <li>Agreement on the modalities and scope for carbon absorbing forest-management projects in the clean development mechanism (CDM).</li> <li>Two funds were further developed, the Special Climate Change Fund and the Least Developed Countries Fund.</li> </ul>
<b>COP 10</b>	2004	Buenos Aires, Argentina	<ul style="list-style-type: none"> <li>Addressed and adopted numerous decisions and conclusions on issues relating to: development and transfer of technologies; land use, land use change and forestry; the UNFCCC's financial mechanism; Annex I national communications; capacity building; adaptation and response measures; and UNFCCC Article 6.</li> </ul>
<b>COP 11</b>	2005	Montreal, Canada	<ul style="list-style-type: none"> <li>Addressed issues such as capacity building, development and transfer of technologies, the adverse effects of climate change on developing and least developed countries, and several financial and budget-related issues, including guidelines to the Global Environment Facility (GEF), which serves as the Convention's financial mechanism.</li> <li>Agreed on a process for considering future action beyond 2012 under the UNFCCC.</li> </ul>
<b>COP12</b>	2006	Nairobi, Kenya	<ul style="list-style-type: none"> <li>Adopted wide range of decisions to mitigate climate change and help countries adapt to the effects.</li> <li>Agreement on the activities for the next few years under the "Nairobi work programme on Impacts, Vulnerability and Adaptation", as well as on the management of the Adaptation Fund under the Kyoto Protocol.</li> </ul>
<b>COP13</b>	2007	Bali, Indonesia	<ul style="list-style-type: none"> <li>Adopted the Bali Road Map as a two-year process towards a strengthened international climate change agreement.</li> </ul>
<b>COP14</b>	2008	Poznan, Poland	<ul style="list-style-type: none"> <li>Launched the Adaptation Fund under the Kyoto Protocol, to be filled by a 2% levy on projects under the CDM.</li> <li>Agreed that the Adaptation Fund Board should have legal capacity to grant direct access to developing countries.</li> </ul>

Major Decisions / Resolutions			
S.No	Year	Place	
<b>COP15</b>	2009	Copenhagen, Denmark	<ul style="list-style-type: none"> <li>Produced Copenhagen Accord. This included agreement on the long-term goal of limiting the maximum global average temperature increase to no more than 2 degrees Celsius above pre-industrial levels, subject to a review in 2015.</li> </ul>
<b>COP16</b>	2010	Cancun, Mexico	<ul style="list-style-type: none"> <li>Produced the Cancun Agreements.</li> <li>Agreed to: commit to a maximum temperature rise of 2 degrees Celsius above pre-industrial levels; make fully operational by 2012 a technology mechanism to boost the development and spread of new climate-friendly technologies; establish a Green Climate Fund to provide financing for action in developing countries via thematic funding windows.</li> <li>Agreed on a new Cancun Adaptation Framework.</li> </ul>
<b>COP17</b>	2011	Durban, South Africa	<ul style="list-style-type: none"> <li>Decided to adopt a universal climate agreement by 2015.</li> <li>Agreed a second commitment period of the Protocol from 1 January 2013.</li> <li>Agreed on a significantly advanced framework for the reporting of emission reductions for both developed and developing countries, taking into consideration the principle of common but differentiated responsibilities.</li> </ul>
<b>COP18</b>	2012	Doha, Qatar	<ul style="list-style-type: none"> <li>Set out a timetable to adopt a universal climate agreement by 2015, to come into effect in 2020.</li> <li>Completed work under the Bali Action Plan.</li> <li>Launched the second commitment period under the Kyoto Protocol, from 1 January 2013 to 31 December 2020, with the adoption of the Doha Amendment to the Kyoto Protocol.</li> </ul>
<b>COP19</b>	2013	Warsaw, Poland	<ul style="list-style-type: none"> <li>Decisions on further advancing the Durban Platform, the Green Climate Fund and Long-Term Finance, the Warsaw Framework for REDD Plus, the Warsaw International Mechanism for Loss and Damage etc</li> </ul>
<b>COP20</b>	2014	Lima, Peru	<ul style="list-style-type: none"> <li>Agreed that the Intended Nationally Determined Contributions (INDCs) will form the foundation for climate action post-2020 when the new agreement is set to come into effect.</li> </ul>
<b>COP21</b>	2015	Paris, France	<ul style="list-style-type: none"> <li>Reaffirmed the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees.</li> <li>Established binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them.</li> <li>Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review.</li> <li>Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones.</li> <li>Reaffirmed the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries.</li> <li>Extend the current goal of mobilizing \$100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025.</li> <li>Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation."</li> <li>Require parties engaging in international emissions trading to avoid "double counting".</li> <li>Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC.</li> </ul>

Source: <http://unfccc.int/meetings>

## E) Convention on Biological Diversity

Headquarters	Montreal, Canada	Aim: To conserve biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, taking into account all rights over those resources.	
Place and Date of Signature	Rio de Janeiro, Brazil 05.06.1992		
Date of Entry into force	29.12.1993	The two supplementary agreements to CBD are Cartagena Protocol (Box 10) & Nagoya Protocol (Box 11).	
Number of Parties (as of Oct 2015)	196		
India (Year of signature and Enforcement)	05.06.1992 18.02.1994		

Source: <https://treaties.un.org> , <http://iea.uoregon.edu> and <https://www.cbd.int/>

### India: Progress so far

- MoEFCC is the nodal agency for implementing the CBD.
- India enacted the Biological Diversity Act (BDA) in 2002 and notified the Rules in 2004, to give effect to the provisions of the CBD.
- India has been regularly submitting its National reports to the CBD Secretariat on the progress of implementation of the decisions taken by successive COP Meetings.
- The Act is being implemented through a three-tiered institutional structure: National Biodiversity Authority (NBA), State Biodiversity Boards (SBBs) & Biodiversity Management Committees (BMCs) at the local level which decentralize the implementation process.
- Government of Punjab has formed State Biodiversity Board (Box 9).
- Government of India in collaboration with the Norwegian Government has established a “Centre for Biodiversity Policy and Law (CEBPOL)” in the National Biodiversity Authority (NBA), Chennai.
- India is declaring areas of biodiversity importance as Biodiversity Heritage Sites (BHS).
- India is implementing Biodiversity Finance Initiative (BIOFIN). It’s a United Nations Development Programme’s (UNDP) global multi-country project which provides tools and methodological framework for measuring expenditure on biodiversity, for countries to use while mobilizing resources for achieving the global and national biodiversity targets.

- Under the provisions of the BDA, the Central Government, in consultation with State Governments, notified species as threatened and prohibits or regulates their collection and takes appropriate steps to rehabilitate and preserve them. The MoEFCC has notified threatened species in 16 States and two Union Territories.

Source: [www.cbd.int](http://www.cbd.int), [www.moef.gov.in](http://www.moef.gov.in), [www.nbaindia.org](http://www.nbaindia.org) & [www.pbb.gov.in](http://www.pbb.gov.in)

### Box 9: Biodiversity Conservation Activities in Punjab

- State Biodiversity Strategy and Action Plan prepared.
- Comprehensive study of Biodiversity in Shivalik Ecosystem of Punjab.
- Biodiversity assessment of Ramsar (3) and National (2) wetlands located in Punjab
- Constitution of Punjab Biodiversity Board u/s 22 of Biological Diversity Act (BDA), 2002
- Inventorization of Industries involved in utilization of bioresources in Punjab
- Constitution of District (22), Block (6) and Village (33) level Biodiversity Management Committees u/s 41 of BDA, 2002
- Notification of Threatened flora and fauna of the State.
- Identification of Biodiversity Rich Heritage Sites of Punjab
- Preparation of District (9) & Village (6) level People’s Biodiversity Registers
- District wise Capacity building & training of BMC members, personnels of relevant departments, Researchers, etc.
- Outreach activities for students and general public all across the state.

## Box 10 : Protocol on Biosafety to the Convention on Biological Diversity (Cartagena Protocol)

- The Cartagena Protocol on Biosafety is an additional agreement to the Convention on Biological Diversity. It aims to ensure the safe transport, handling and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on biodiversity, also taking into account risks to human health.
- The Protocol establishes procedures for regulating the import and export of LMOs from one country to another. There are two main sets of procedures, one for LMOs intended for direct introduction into the environment, known as the advance informed agreement (AIA) procedure, and another for LMOs intended for direct use as food or feed, or for processing (LMOs-FFP).
- The Cartagena Protocol on Biosafety was adopted on 29 January, 2000 and entered into force on 11 September, 2003. As of Oct. 2015, 170 countries have ratified or acceded to the Protocol. India signed the protocol in 2001 and enforced it in 2003.
- Nodal Agency for dealing with LMOs in India is the MoEFCC and it has set up an inter-ministerial Genetic Engineering Approval Committee (GEAC) for clearance of LMOs on a case-by-case basis.
- Entry of seeds developed through application of Genetic Use Restriction Technologies (GURTs) also known as 'Terminator Seeds' has been banned by the Union Ministry of Agriculture, the nodal agency for liaising with FAO.
- Setting up of a National Biotechnology Regulatory Authority (NBRA) for promotion and regulation of application of biotechnology in agriculture is at an advanced stage.

Source: [www.nbaindia.org](http://www.nbaindia.org)

## Box 11 : The Nagoya Protocol on Access and Benefit-Sharing

- The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the Convention on Biological Diversity is a supplementary agreement to the Convention on Biological Diversity.
- The Nagoya Protocol on ABS was adopted on 29<sup>th</sup> October, 2010 in Nagoya, Japan and entered into force on 12 October 2014. Its objective is the fair and equitable sharing of benefits arising from the utilization of genetic resources, thereby contributing to the conservation and sustainable use of biodiversity and implementing the three objectives of the CBD.
- The NBA notified the ABS Regulations on 21<sup>st</sup> November, 2014. The Regulations, called the Guidelines on Access to Biological Resources and Associated Knowledge and Benefits Sharing Regulations, 2014, contain the procedures for accessing biological resources and / or associated knowledge and mode of benefit sharing.
- The MoEFCC designated NBA as the "Competent National Authority" for the Nagoya Protocol in August, 2014. The Secretary, NBA, has also been designated as the 'National Authorized User' for the Access and Benefit Sharing (ABS) Clearing House of the Convention of Biological Diversity (CBD).



Photo Credit : [www.iisd.ca](http://www.iisd.ca)

**Dr. Manmohan Singh, then Hon'ble Prime Minister of India, announcing India's ratification to the Nagoya Protocol on ABS at COP-11 held at Hyderabad, India**

- Nagoya Protocol had set up 20, time-bound targets known as "Aichi Biodiversity Targets" to translate revised national strategies and action plans by the Parties to the Convention. Achievement of these targets will contribute to reducing, and eventually halting, the loss of biodiversity at a global level by the middle of the twenty-first century.
- India issued the first internationally recognized certificate of compliance under the Nagoya Protocol on 1<sup>st</sup> Oct, 2015.

Source: [www.nbaindia.org](http://www.nbaindia.org)

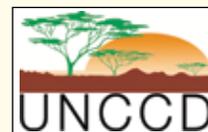
## Major decisions at meetings of CBD Conference of Parties

S.No	Year	Place	Major Decisions / Resolutions
COP 1	1994	Nassau, Bahamas	<ul style="list-style-type: none"> <li>Adopted the rules of procedures of the COP.</li> <li>Decided to adopt the policy, strategy, programme priorities and eligibility criteria for access to and utilization of financial resources.</li> </ul>
COP 2	1995	Jakarta, Indonesia	<ul style="list-style-type: none"> <li>Expanded the work agenda to research and to identify the needs for conservation and sustainable use of the marine and coastal biological diversity (Jakarta Mandate).</li> </ul>
COP 3	1996	Buenos Aires, Argentina	<ul style="list-style-type: none"> <li>Decided to establish a multi-year programme of activities on agricultural biodiversity. Updated the policies, strategies, programme priorities and eligibility criteria to access to and utilization of financial resources, in particular cooperation with the GEF.</li> </ul>
COP 4	1998	Bratislava, Slovakia	<ul style="list-style-type: none"> <li>Established an ad-hoc open-ended inter-sessional working group on Article 8 (j).</li> <li>Adopted a programme of work on biodiversity of inland water ecosystems and a programme work on forest biodiversity.</li> </ul>
EXCOP 1	1999-2000	Cartagena, Colombia & Montreal, Canada	<ul style="list-style-type: none"> <li>Adopted the Cartagena Protocol on Biosafety.</li> </ul>
COP 5	2000	Nairobi, Kenya	<ul style="list-style-type: none"> <li>Adopted the Ecosystem Approach.</li> <li>Established an ad-hoc open-ended working group on access to genetic resources.</li> </ul>
COP 6	2002	Hague, Netherlands	<ul style="list-style-type: none"> <li>Adopted guiding principle on alien species that threaten ecosystems, habitats or species.</li> <li>Decided to adopt the (voluntary) Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefit Arising out of their Utilization.</li> </ul>
COP 7	2004	Kuala Lumpur, Malaysia	<ul style="list-style-type: none"> <li>Updated the rules of procedures of the COP.</li> <li>Adopted a programme of works on mountain biodiversity; Protected areas; and on technology transfer and cooperation.</li> <li>Adopted guidelines on tourism and development.</li> <li>Decided to mandate the Ad Hoc Open-ended Working Group on Access and Benefit-sharing with the collaboration of the Ad Hoc Open ended Inter-sessional Working Group on Article 8(j) and Related Provisions, to negotiate an international regime on ABS.</li> </ul>
COP 8	2006	Curitiba, Brazil	<ul style="list-style-type: none"> <li>Work programme on island biodiversity</li> </ul>
COP9	2008	Bonn, Germany	<ul style="list-style-type: none"> <li>A resource mobilization strategy and guidance for marine areas in need of protection</li> </ul>
COP10	2010	Nagoya, Aichi Prefecture, Japan	<ul style="list-style-type: none"> <li>the CBD Strategic Plan for Biodiversity 2011-2020, including the Aichi targets and a decision on activities and indicators for the implementation of the resource mobilization strategy</li> </ul>
COP11	2012	Hyderabad, India	<ul style="list-style-type: none"> <li>Adopted 33 decisions on a range of strategic, substantive, administrative, financial and budgetary issues.</li> <li>Addressed the status of the Nagoya Protocol on access to genetic resources and benefit-sharing (ABS); implementation of the Strategic Plan 2011-2020 and progress towards the Aichi biodiversity targets and implementation of the Strategy for Resource Mobilization.</li> </ul>
COP12	2014	Pyeongchang, Republic of Korea	<ul style="list-style-type: none"> <li>Conducted a mid-term review of progress towards the goals of the Strategic Plan for Biodiversity 2011-2020 and its Aichi targets</li> <li>Reviewed progress in providing support towards implementation, through capacity building, technical and scientific cooperation and other initiatives.</li> <li>Deliberations also focused on: resource mobilization and other finance-related matters; improving the efficiency of the Convention's processes; biodiversity and sustainable development; cooperation with other organizations; marine and coastal biodiversity; biodiversity and climate change; biofuels; Article 8(j) (traditional knowledge); sustainable wildlife management; invasive alien species (IAS); synthetic biology and ecosystem conservation and restoration.</li> </ul>

## F) United Nation Convention to Combat Desertification

Headquarters	Bonn, Germany
Place and Date of Signature	Paris, France 17.06.1994
Date of Entry into force	24.06.1998
Number of Parties (as of Oct 2015)	195
India (Year of signature and Enforcement)	17.12.96

Aim : To fight desertification and mitigate drought effects in nations with serious drought and/or desertification issues through effective action at all levels, supported by international cooperation and partnership arrangements, in the framework of an integrated approach, and contributing to the achievement of sustainable development in affected areas.



Source: <https://treaties.un.org> , <http://iea.uoregon.edu> and <http://www.unccd.int>

### India: Progress so far

- With about 32% of its land being affected by land degradation, India has high stakes and stands strongly committed to implementing the UNCCD.
- The Ministry of Environment, Forests & Climate Change is the nodal Ministry in the Government of India for the UNCCD.
- India prepared its National Action Programme (NAP) to Combat Desertification in 2001. It provides an overview of the status of natural resources in the country, the status and impacts of desertification, measures under implementation, and in particular, the initiatives taken for combating desertification.
- Though India does not have a specific policy or legislative framework for combating desertification as such, the concern for arresting and reversing

land degradation and desertification gets reflected in national policies(for e.g., National Water Policy 2012; National Forest Policy 1988; National Agricultural Policy 2000; Forest (Conservation) Act 1980; Environment (Protection) Act 1986; National Environmental Policy 2006; National Policy for Farmers 2007; National Rainfed Area Authority (NRAA)- 2007) which have enabling provisions for addressing these problems.

- Many of the present schemes and programmes of Ministry of Rural Development, Department of Land Resources, Ministry of Environment and Forests, Ministry of Agriculture, Ministry of Water Resources, Ministry of Tribal Affairs, Ministry of Panchayati Raj, Deptt of Science and Technology, Deptt of Space have significant bearing for addressing the DLDD (Desertification, Land Degradation and Drought) challenges.

Source: [www.envfor.nic.in](http://www.envfor.nic.in) & [www.unccd.int](http://www.unccd.int)



## Major decisions at meetings of UNCCD Conference of Parties

S.No	Year	Place	Major Decisions/Resolutions
<b>COP 1</b>	1997	Rome, Italy	<ul style="list-style-type: none"> <li>Selected Bonn, Germany, as the location for the UNCCD's Secretariat and the International Fund for Agricultural Development as the organization to administer the Convention's Global Mechanism (GM).</li> </ul>
<b>COP 2</b>	1998	Dakar, Senegal	<ul style="list-style-type: none"> <li>Invited Central and Eastern European countries to submit to COP 3 a draft regional implementation Annex.</li> </ul>
<b>COP 3</b>	1999	Recife, Brasil	<ul style="list-style-type: none"> <li>Approved a long-negotiated Memorandum of Understanding (MoU) regarding the GM.</li> </ul>
<b>COP 4</b>	2000	Bonn, Germany	<ul style="list-style-type: none"> <li>Adopted the fifth regional Annex for Central and Eastern Europe, began the work of the ad hoc working group to review UNCCD implementation, initiated the consideration of modalities for the establishment of the CRIC (Committee for the Review of the implementation of the Convention), and adopted a decision on the Global Environment Facility (GEF) Council's initiative to explore the best options for GEF support for UNCCD implementation.</li> </ul>
<b>COP 5</b>	2001	Geneva, Switzerland	<ul style="list-style-type: none"> <li>Established the CRIC and supported a proposal by the GEF to designate land degradation as another focal area for funding.</li> </ul>
<b>COP 6</b>	2003	Havana, Cuba	<ul style="list-style-type: none"> <li>Designated the GEF as a financial mechanism of UNCCD, decided that a comprehensive review of the Secretariat's activities would be undertaken by the UN Joint Inspection Unit (JIU).</li> </ul>
<b>COP 7</b>	2005	Nairobi, Kenya	<ul style="list-style-type: none"> <li>Reviewed the implementation of the Convention, developed a MoU between the UNCCD and GEF and reviewed the recommendations in the report of the JIU assessment of the Secretariat's activities.</li> <li>Established an Intergovernmental Intersessional Working Group to review JIU report and to develop a draft ten-year strategic plan and framework to enhance the implementation of the Convention</li> </ul>
<b>COP 8</b>	2007	Madrid, Spain	<ul style="list-style-type: none"> <li>Adopted a decision on the ten-year strategic plan (the Strategy). Delegates also requested the JIU to conduct an assessment of the GM for presentation to COP 9.</li> </ul>
<b>COP 9</b>	2009	Buenos Aires, Argentine	<ul style="list-style-type: none"> <li>Adopted 36 decisions, which addressed topics including: four-year work plans and two-year work programmes of the CRIC, CST, GM and the Secretariat; JIU assessment of the GM; the terms of reference of the CRIC; arrangements for regional coordination mechanisms (RCMs); the communication strategy and the programme and budget.</li> </ul>
<b>COP10</b>	2011	Changwon, South Korea	<ul style="list-style-type: none"> <li>Decisions taken for the implementation of the Convention and contribution to global efforts to address issues related to desertification, land degradation and drought (DLDD).</li> <li>Approved the strategic orientation of the Convention's institutions and subsidiary bodies.</li> <li>Adopted four operational objectives to assess the implementation of the Convention against performance indicators and approved an iterative process on reporting procedures and the refinement of methodologies for the review and compilation of best practices.</li> </ul>
<b>COP11</b>	2013	Windhoek, Namibia	<ul style="list-style-type: none"> <li>Agreed to establish a science-policy interface (SPI) to enhance the UNCCD as a global authority on desertification, land degradation and drought (DLDD) and sustainable land management (SLM).</li> <li>Established two ad hoc working groups, one on the iterative participatory process on impact-indicator refinement and monitoring and another to discuss options for providing scientific advice to the UNCCD and called for a multi-stakeholder partnership model for launching a fellowship programme.</li> </ul>
<b>COP12</b>	2015	Ankara, Turkey	<ul style="list-style-type: none"> <li>Adopted decisions related to desertification, land degradation and drought (DLDD), including how to pursue the target to achieve land degradation neutrality (LDN) and how to align the UNCCD's goals and parties action programmes with the recently adopted Sustainable Development Goals (SDGs).</li> </ul>

Source : [www.unccd.int](http://www.unccd.int)

## Way Forward

Globally, over the years, together with a spreading of environmental consciousness, there has been a change in traditional beliefs that there should be a balance between environmental quality and development. As the number of international environmental instruments is increasing, the issue of enforcement and compliance by member countries is becoming a matter of great concern, especially for the developing countries like India. The countries have and are reviewing their national environmental regulations and reinforced these, often with the establishment of national agencies/institutions. It is important for these institutions to function effectively,

and at the same time, promote compliance with, and enforcement of environmental regulations.

Although India has been very active in all the international forums relating to environmental protection and is party to many multilateral agreements relating to the environment except a very few, still a lot needs to be done at local level for their implementation. The real challenge before India is how to preserve its local environment, meet the basic needs of its growing population and to pass on the same in reasonable conditions to future generations. A cooperative and collaborative effort to reduce human footprint is the only way forward to protect and preserve the pristine environment for future generations.

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<a href="http://www.climatenetwork.org">www.climatenetwork.org</a>	Climate Action Network
<a href="http://www.ciel.org">www.ciel.org</a>	Center for International Environmental Law
<a href="http://www.ecolex.org">www.ecolex.org</a>	Information service on environmental law, operated jointly by FAO, IUCN and UNEP
<a href="http://www.iisd.ca">www.iisd.ca</a>	International Institute for Sustainable Development
<a href="http://www.iucn.org">www.iucn.org</a>	World Conservation Union
<a href="http://www.moef.gov.in">www.moef.gov.in</a>	Ministry Of Environment, Forests & Climate change
<a href="http://www.nbaindia.org">www.nbaindia.org</a>	National Biodiversity Authority
<a href="http://www.ozonecell.com">www.ozonecell.com</a>	Ozone Cell India
<a href="http://www.pbb.gov.in">www.pbb.gov.in</a>	Punjab Biodiversity Board
<a href="http://www.ramsar.org">www.ramsar.org</a>	Ramsar convention
<a href="http://www.unccd.int">www.unccd.int</a>	United Nation Convention to combat desertification
<a href="http://www.unep.org">www.unep.org</a>	United Nations Environment Program
<a href="http://www.unfccc.int">www.unfccc.int</a>	UN Framework Convention on Climate Change
<a href="http://www.wwf.org">www.wwf.org</a>	World Wide Fund for Nature (WWF)

## NEWS

### Indian climate models to aid future IPCC reports

*The climate models will be prepared by the Pune-based Centre for Climate Change Research*

Mysuru : India will have its own climate change models to project the impact of global warming over the decades and these will form part of the forthcoming Sixth Intergovernmental Panel on Climate Change Reports that is expected to be available in 2020.

The IPCC reports — there have been five so far since 1988 — are coordinated by the United Nations and bring together the scientific consensus on the causes and impact of climate change. They also assess the extent to which the globe is expected to warm up over the medium and long term.

“We will be working on our own models and projections and have to make our first submission by 2018,” said Madhavan Rajeevan, Secretary, Ministry of Earth Sciences, at the Indian Science Congress here.

### Crucial at Paris summit

The IPCC’s fifth report in 2014, was critical in shaping the resolution at the recently concluded climate talks in Paris that all countries — developed and developing — had to, over time, do their bit to contain their greenhouse gas emissions to keep ensure that mean global temperatures did not rise beyond 1.5 to 2 degree of temperature in the 19th century.

As per the Paris Agreement, which will come into effect in 2020, India and several other countries will have report their emissions as well as detailed plans to curb them.

The climate models, being developed by the Earth Sciences Ministry, will be prepared by the Pune-based Centre for Climate Change Research.

These are so-called dynamic models that rely on super-computers to compute the weather on a given day and simulate how it would evolve over days, months and even years. These models, developed in the United States, have over few years been customised to Indian conditions. "Their ability to predict the Indian monsoon has consistently improved over the years," said Mr. Rajeevan, "and now over the next few years they should be able to project climate over the decades.

*Source: 5<sup>th</sup> January 2016, The Hindu*

### **Soon, ordinance to ban polybags**

Patiala : Punjab government has decided to issue an ordinance banning use of polythene bags in the state. The ban will come into force from February 1, 2016.

Punjab Pollution Control Board (PPCB) chairman Manpreet Singh disclosed that defaulters would be fined Rs 500 to Rs 1,000 depending on the quantity of bags seized. For a kilogram of polythene seized, the fine would be Rs 500 and polythene bag weighing more than a kilogram would invite a penalty of Rs 1,000.

PPCB chairman elaborated that manufacturing and distribution of polythene bags would be declared illegal and stiff action would be taken against the violators. Citing the example of neighbouring state, Himachal Pradesh, where the order banning polythene has been fully implemented, he said the programme required participation of people of Punjab.

PPCB had also decided to install three imported equipment in Mandi Gobindgarh, Ludhiana and Amritsar to measure the level of air pollution, which would be passed online to the administration.

Based on the information, the local administration, in cooperation with the PPCB, would be empowered to order shut down of air polluting industrial units. The

machines have been procured at a cost of Rs 3 crore to the state.

"Meat plants have also started sifting sludge from blood. The blood is dried and passed on to manufacturers of poultry feed. Dried blood of animals is nutritious for hens when mixed with other constituents," the board chairman said about another initiative of theirs.

Earlier this month, National Green Tribunal ordered imposing a fine of Rs 5,000 on anyone found using or dealing with plastic material in Chandigarh

While Mohali municipal corporation started its drive against polythene bags in August, it has now also decided to target the 'mandis' to cut loose the connection of supply of polythene bags

While there already is a ban on use of plastic bags in Himachal Pradesh, the state government had last year imposed a ban on using polythene for packaging non-essential eatables, especially potato chips and candies

In April, the ministry of environment, forests and climate change directed Haryana state government to enforce a blanket ban on all plastic bag manufacturing units operating without a licence across all districts of the state

*Source: 31<sup>st</sup> December 2015, Times of India*

### **Great crested grebe spotted at Okhla after a decade**

*The great crested grebe (Podiceps cristatus) is a diver that prefers to live in deeper wetlands, which the Okhla Bird Sanctuary is devoid of.*

New Delhi : A bird uncommon to the city seems to have found a new abode at Okhla Bird Sanctuary. Much to the delight of birdwatchers, a great crested grebe was recently spotted in the sanctuary after almost a decade.

Environmentalists on their daily stroll in the sanctuary were surprised at the rare sighting on Monday morning. "Just one great crested grebe seems to have flown its way to this wetland. We checked our records and this

bird of the grebe species has never been spotted in the Capital or in this sanctuary for over 10 years now,” said environmentalist T.K. Roy. The bird was sighted with a flock of Eurasian coots.

The great crested grebe (*Podiceps cristatus*) is a diver that prefers to live in deeper wetlands, which the Okhla Bird Sanctuary is devoid of. It has a large and slender neck with a pinkish bill and a black crown. The black crown turns into a black crest during breeding plumage. Among five species of the grebe available in the Indian sub-continent, the smallest in size and the most common of the species is the little grebe. The great crested grebe spotted in the Okhla wetlands is the largest among its species.

“Although it is not threatened or a rare species, it certainly is uncommon in the Delhi region. The migratory bird is mostly found in Punjab’s Harike Wetland, Nangal Wildlife Sanctuary, Ropar Wetland and Himachal Pradesh’s Pong Dam Wetland. In general, it is found across Europe and Central Asia and in winter, it migrates to North Australia, East Asia (China, Korea, Japan, Russia) and South Asia (only in Northern India).

*Source: 29<sup>th</sup> December 2015, The Hindu*

## **Eighth National Steering Committee on Climate Change Approves Four Projects**

Delhi : The eighth National Steering Committee on Climate Change (NSCCC) approved four projects from Tamil Nadu, Kerala and Punjab and also considered one project submitted by Government of Madhya Pradesh, at a meeting held here today. The agenda of the meeting was to consider the Detailed Project Reports (DPRs) submitted by Government of Tamil Nadu and Government of Kerala for funding under the National Adaptation Fund on Climate Change (NAFCC) and demonstration projects submitted by Government of Madhya Pradesh, Government of Punjab and Government of Tamil Nadu under Climate Change Action Programme (CCAP).

The project, titled Management and Rehabilitation of Coastal Habitats and Biodiversity for Climate Change Adaptation and Sustainable Livelihood in Gulf of Mannar, Tamil Nadu”, has been submitted by Government of Tamil Nadu. The total cost of the project will be Rs. 24.74 crore and will cover 23 coastal villages of Tuticorin district. The 4-year project has five broad objectives: conduct baseline vulnerability studies, coral rehabilitation, sea grass rehabilitation, deployment of 6,000 Artificial Reef (AR) modules, and eco-development activities in the project villages. The project will help in developing the much needed Comprehensive Plan or Scheme for Coral and Sea Grass Restoration”. It will augment the database on coral ecosystem, species diversity, fish catch/effort, anthropogenic pressure, and migration & survival rate. The project activities will lead to economic empowerment of 15 SHGs per village and benefit about 6,900 women. The project will create a platform for knowledge development through regular meeting amongst departments like fisheries, forest, TNSCCC, GOMBRT, IIT, Chennai, Anna University and facilitate planning of roadmap for future conservation efforts. It is estimated that the cumulative potential for revenue generation per annum is about Rs. 1.84 crore for fisherman community and Rs. 1.03 crore for the Women Self Help Groups (SHGs). The Department of Environment and State Steering Committee of Tamil Nadu will be responsible for facilitating overall project implementation.

Another project titled Promotion of Integrated Farming System of Kaipad and Pokkali in Coastal Wetlands of Kerala has been submitted by Government of Kerala. The total cost of the project Rs. 33.73 crore envisions integrated farming methods, as climate smart practices to enhance resilience of aquaculture communities to climate change especially sea-level rise that results in severe intrusion of salinity. The proposed area for the 4-year project is 600 hectares (300 hectares in Kannur District and 300 hectares in Ernakulam, Thrissur and

Alappuzha districts) has as its broad objectives - providing the main infrastructure facility of strong outer bunds with sufficient height; use of tall varieties of salt tolerant paddy; integrating fishery to enhance paddy cultivation and maximize the inland fish production through sustainable aquaculture. The Agency for Development of Aquaculture (ADAK), Department of Fisheries, Government of Kerala, will be the Executing Entity for the project. The project will help simultaneous cultivation of rice and shrimp/ fish in low-lying wetlands where there were no cultivation earlier. It will also improve the quality of life for local farmers through higher disposable incomes. It will improve access to fresh water, as peripheral bunds will prevent seepage of sea water to fresh water sources, capacity building of farmers and will reduce displacement of labourers from nearby areas and provide employment to women. It will also check carbon emission, as wetlands have good potential to act as carbon sink. It is estimated that the cumulative potential for total annual revenue is about Rs. 23.25 crore under this project.

Under Climate Change Action Programme, the Committee considered three projects on Building Resilience through Integrated Farming Systems for Enhancing Livelihood Security” submitted by Government of Madhya Pradesh, Technological adaptation for gainful utilisation of paddy straw (presently burnt on-site) as fuel to replace fossil fuels” submitted by Government of Punjab and Coastal habitat rehabilitation for climate change adaptation in Gulf of Mannar, South-Eastern India: Improving ecosystem services and Fisherman livelihood” by Government of Tamil Nadu. The committee approved the projects from Government of Punjab and Government of Tamil Nadu at an estimated cost of Rs. 3.54 crore and Rs. 67 lakh respectively. The meeting was held under the Chairmanship of Shri Ashok Lavasa, Secretary Ministry of Environment, Forest and Climate Change (MoEF&CC).

*Source: 28<sup>th</sup> December 2015, Business Standard*

## **Punjab plans amphibious vehicles at Harike wetlands to woo tourists**

Chandigarh : To promote water tourism in the State, the Punjab government has planned to introduce amphibious vehicles which can run both on water and land at Harike wetlands.

Stating this, an official spokesman said the amphibious vehicles would be introduced in Harike wetlands at the confluence of the Beas and Sutlej rivers.

After offering sightseeing tour on land at Harike headworks, the dual-mode bus would enter the lake so that visitors could glimpse the rich biodiversity of Harike wildlife sanctuary.

Having an extended area of 8,600 hectares, the declared wetland is significant abode for the winged guests migrating from across the international frontiers, he said.

The spokesman said tenders to invite manufacturers to supply one such tourist bus have been floated by the Punjab Heritage Tourism Promotion Board (PHTPB).

The dual mode bus equipped with indispensable accessories like life jackets, would have the capacity to carry 60 tourists, including 10 children.

He said the cost of one bus would be around Rs 1.5-2 crore. The decision to purchase more buses will be taken after evaluating the performance of the first unit.

He said the government is hopeful of the success of the scheme which would put the State on the world map from tourism point of view.

Notably, Indus Dolphin was recently sighted in the Beas river in the man-made riverine Harike wetland spreads into the three districts of Amritsar, Ferozepur and Kapurthala and covers an area of 4100 hectares.

Besides, the Punjab Government is also planning to release 10 gharials in the Harike wetlands as the first step to increase their numbers and to attract more tourists.

*Source: 14<sup>th</sup> December 2015, The Hindu*

## Paris accord offers hope but could have done more: India

Paris : Prime Minister Narendra Modi on Sunday welcomed the climate change agreement as the victory of “climate justice” and said there were no winners or losers even as environment minister Prakash Javadekar said 196 countries had not only adopted an agreement but a “new chapter of hope” in the lives of 7 billion people across the globe. The minister, however, added that the agreement could have been “more ambitious”.

“Outcome of Paris Agreement has no winners or losers. Climate justice has won and we are all working towards a greener future,” Modi tweeted. “Climate change remains a challenge but Paris Agreement demonstrates how every nation rose to the challenge, working towards a solution,” he added.

Earlier, addressing the closing plenary of the climate summit that continued for hours after final adoption of the agreement, Javadekar, who was India’s head of delegation, said, “The Paris agreement acknowledges and recognizes the development imperatives of India and other developing countries.

India, however, had some concerns over the deal, much like Turkey, Nicaragua and other countries including small island nations. “We share the concern of several friends that this agreement does not put us on the path to prevent temperature rise below 2 degree (Celsius) and that the actions of developed countries are far below their historical responsibilities and fair shares,” Javadekar said.

Referring to points which India agreed to in the deal, Javadekar said, “We are happy that the agreement has unequivocally acknowledged the imperative of climate justice -- which we have no doubts reflects common sentiments -- and has based itself on the principles of equity and common but differentiated responsibilities. The agreement also acknowledges the importance of sustainable lifestyles and sustainable consumption pattern.”

Calling the climate summit an “absolute success”, he said, “We are also happy that the agreement differentiates between the actions of developed and developing countries across its elements (mitigation, adaptation, finance, technology transfer, capacity building and transparency). India has consistently said that the path to climate ambition must be paved with equity. I am happy that the agreement has recognized this.”

*Source: 14<sup>th</sup> December 2015, Times of India*

## 2015 Antarctic ozone hole 4th largest on record

Ontario : After apparently holding fairly steady with 2014 for most of the year, the Antarctic ozone hole in 2015 has now reached the fourth largest extent on record. According to NASA’s Earth Observatory:

*The ozone hole over Antarctica grew relatively large in 2015, according to data acquired by the Ozone Monitoring Instrument (OMI) on NASA’s Aura satellite and the Ozone Monitoring and Profiler Suite (OMPS) on the NASA-NOAA Suomi NPP satellite. On October 2, 2015, OMI observed that the hole had reached its largest single-day area for the year. The image above, based on data acquired with OMI, shows the hole on that day. It spanned 28.2 million square kilometers — the fourth-largest area measured since the start of the satellite record in 1979. The largest single-day ozone hole recorded by satellite was 29.9 million square kilometers on September 9, 2000.*

At a total extent of 28.2 million square kilometres, this year’s ozone hole was surpassed by only by Sept 24, 2003 (28.4 million sq km), Sept 24, 2006 (29.6 million sq km) and September 9, 2000 (29.9 million sq km).

Why did the ozone hole grow so large this year? It was a combination of just how persistent ozone-depleting chemicals are in the atmosphere, and just how cold the atmosphere got over Antarctic during the past month.

*Source: 29<sup>th</sup> October 2015, The Weather Network*

## EVENTS

### **Sustainability Conference: Urban Sustainability: Inspiration and Solution - A Common Ground Conference**

21<sup>st</sup> to 23<sup>rd</sup> January 2016

Portland, Oregon, United States of America

Website: <http://onsustainability.com/the-conference-2016/call-for-papers>

Contact person: Common Ground Publishing

Organized by: Common Ground Publishing

### **6<sup>th</sup> International Conference on Future Environment and Energy (ICFEE 2016)**

23<sup>rd</sup> to 24<sup>th</sup> January 2016

Pattaya, Thailand

Website: <http://www.icfee.org/>

Contact person: Mr Issac Lee

Organized by: CBEES

### **5<sup>th</sup> International Conference on Clean and Green Energy – ICCGE**

1<sup>st</sup> to 3<sup>rd</sup> February 2016

Rome, Italy

Website: <http://www.iccge.org/>

Contact person: Mr. Tang Miao

Organized by: CBEES

### **2<sup>nd</sup> International Conference on Environment and Renewable Energy- ICERE**

24<sup>th</sup> to 25<sup>th</sup> February 2016

Ho Chi Minh, Vietnam

Website: <http://www.icere.org/>

Contact person: Ms. Mickie Gong

Organized by: CBEES

### **International Conference on Sustainable Waste Management - ICSWM**

26<sup>th</sup> to 28<sup>th</sup> March 2016

Hong Kong

Website: <http://icswm.org/>

Contact person: Ms. Frannie Lee

Organized by: SCIEI

### **The 5<sup>th</sup> International Conference on Informatics, Environment, Energy and Applications - IEEA**

26<sup>th</sup> to 28<sup>th</sup> March 2016

Hong Kong

Website: <http://ieea.org/>

Contact person: Ms. Celine Xi

Organized by: SCIEI

### **ICGEA 2016 International Conference on Green Energy and Applications - Ei Compendex & Scopus**

23<sup>rd</sup> to 25<sup>th</sup> March 2016

Singapore

Website: <http://www.icgea.org/>

Contact person: Yashin Tu

Organized by: MATEC

## First Meeting of the Advisory Committee of ENVIS Centre, PSCST

An Advisory Committee of the ENVIS Centre has been constituted on the direction of ENVIS Secretariat, Ministry of Environment, Forest & Climate Change, Govt. of India to guide and review the activities of ENVIS Centre. The First Meeting of the Advisory Committee of ENVIS Centre, PSCST held under the chairpersonship of Dr. Neelima Jerath, Executive Director, Punjab State Council for Science & Technology (PSCST) on 5<sup>th</sup> November, 2015. The meeting was attended by 14 external experts representing relevant departments and institutions. Mr. Gurharminder Singh, Senior Scientific officer (Env.) & Co-ordinator ENVIS Centre gave detailed presentation about major mandate of Punjab ENVIS Centre on 'Status of Environment & Related Issues' and important activities being carried out by the ENVIS Centre since its inception in the year 2005. The various matters of the Centre like its current activities, publications, collection of data and data gaps, coordination of activities of Regional Centre of Expertise (RCE) Network on Education for Sustainable

Development (ESD) and Cloudsat Program of NASA, etc. deliberated in detail. The members appreciated the activities being undertaken by the Centre and also gave valuable suggestions to further expand the activities of the Centre.



A snapshot of First Advisory Committee Meeting of ENVIS