

IAS 2022

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PRELIMS SAMPOORNA FACT FILE

Environment

ENVIRONMENT CONVENTIONS, PROTOCOLS AND AGREEMENTS





PRELIMS SAMPOORNA

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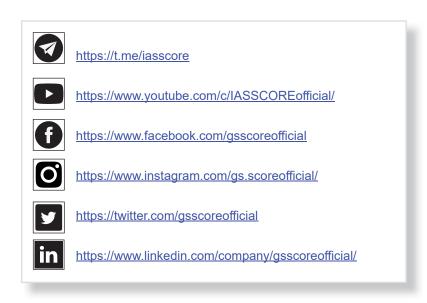
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ENVIRONMENT CONVENTIONS, PROTOCOLS AND AGREEMENTS

Ramsar Convention on Wetlands (Convention on Wetlands)

- International treaty for "the conservation and sustainable use of wetlands".
- It is named after the city of Ramsar in Iran.
- The Convention was signed on the 2nd of February, 1971.
- The 2nd of February each year is World Wetlands Day.
- The number of parties to the convention (COP) is 171.
- The Ramsar Convention Secretariat has its headquarters in Gland, Switzerland
- Montreux Record under the Ramsar Convention is a register of wetland sites on the List of Wetlands of International Importance.



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- Currently, two wetlands of India are in Montreux record: Keoladeo National Park (Rajasthan) and Loktak Lake (Manipur).
- Chilika Lake (Odisha) was placed in the record but was later removed from it.
- The United Kingdom has the world's largest number of Ramsar sites i.e 175.
- In India, currently, the total number of sites on the Ramsar list is 49.

List of Ramsar sites in India

Ramsar Sites in India	State – Location				
Ashtamudi Wetland	Kerala				
Beas Conservation Reserve	Punjab				
Bhitarkanika Mangroves	Odisha				
Bhoj Wetlands	Madhya Pradesh				
Chandra Taal	Himachal Pradesh				
Chilika Lake	Odisha				
Deepor Beel	Assam				
East Kolkata Wetlands	West Bengal				
Harike Wetlands	Punjab				
Hokera Wetland	Jammu & Kashmir				
Kanjli Wetland	Punjab				
Keoladeo National Park	Rajasthan Punjab				
Keshopur-Miani Community Reserve					
Kolleru lake	Andhra Pradesh Manipur				
Loktak lake					
Nalsarovar Bird sanctuary	Gujarat				
Nandur Madhameshwar	Maharashtra				
Nangal Wildlife Sanctuary	Punjab				
Nawabganj Bird Sanctuary	Uttar Pradesh				
Parvati Agra Bird Sanctuary	Uttar Pradesh				
Point Calimere Wildlife and Bird Sanctuary	Tamil Nadu				
Pong Dam lake	Himachal Pradesh				



Renuka lake	Himachal Pradesh				
Ropar Wetland	Punjab				
Rudrasagar Lake	Tripura				
Saman Bird Sanctuary	Uttar Pradesh				
Samaspur Bird Sanctuary	Uttar Pradesh				
Sambhar lake	Rajasthan				
Sandi Bird Sanctuary	Uttar Pradesh				
Sarsai Nawar Jheel	Uttar Pradesh				
Sasthamkotta lake	Kerala				
Surinsar- Mansar lakes	Jammu & Kashmir				
Tsomoriri	Jammu & Kashmir				
Upper Ganga river	Uttar Pradesh				
Vembanad Kol Wetland	Kerala				
Wular lake	Jammu & Kashmir				
Sunderban Wetland	West Bengal				
Haiderpur Wetland	Uttar Pradesh				
Asan Bridge	Uttarakhand				
Kanwar Taal or Kabar Taal Lake	Bihar				
Sur Sarovar	Uttar Pradesh				
Lonar Lake	Maharashtra				
Tso Kar	Ladakh				
Sultanpur National Park	Haryana				
Bhindawas Wildlife Sanctuary	Haryana				
Thol Lake	Gujarat				
Wadhvana Wetland	Gujarat				
Bakhira Sanctuary	Uttar Pradesh				
Khijadiya Bird Sanctuary	Gujarat				



Convention Concerning the Protection of World Cultural and Natural Heritage

- It was adopted by the **General Conference of UNESCO in 1972.**
- The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity.

Objective:

▶ It is based on the premise that certain places on Earth are of outstanding universal value and should, therefore, form part of the common heritage of mankind, and therefore should be conserved.

1154	43	3	52
Properties	Transboundary	Delisted	In Danger
897	218	39	167
Cultural	Natural	Mixed	States Parties



- ➤ The countries that ratify the Convention (States Parties) have to become part of an international community, united in a common mission to identify and safeguard our world's most outstanding natural and cultural heritage.
- While fully respecting the national sovereignty, and without prejudice to property rights provided by national legislation, the States Parties recognize that the protection of the World Heritage is the duty of the international community as a whole.
- Category of site: Cultural site, Natural site and Mixed site.
- **Listed Sites:** According to the sites ranked by country, Italy is home to the greatest number of World Heritage Sites with 58 sites, followed by China (56), Germany (51), Spain (49), France (49), India (40) and Mexico (33).

Convention on International Trade in Endangered Species (CITES)/ Washington Convention

- It is an international agreement to regulate worldwide commercial trade in wild animal and plant species.
- It was signed on March 3, 1973 (World Wildlife Day is celebrated on March 3).

In News

- India has proposed to remove rosewood (Dalbergiasissoo) from Appendix II of CITES.
- India has also proposed to transfer small clawed otters (Aonyxcinereus), smooth coated otters (Lutrogaleperspicillata), Indian Star Tortoise (Geocheloneelegans) from Appendix II to Appendix I, thereby giving more protection to the species.
- The proposal also includes inclusion of Gekko gecko and Wedgefish (Rhinidae) in Appendix II of CITES.
- It is administered by the United Nations Environment Programme (UNEP).
- Secretariat Geneva (Switzerland).
- **CITES is legally binding** on state parties to the convention, which is obliged to adopt their domestic legislation to implement its goals.
- Over 38,700 species including roughly 5,950 species of animals and 32,800 species of plants are protected by CITES against over-exploitation through international trade.

o Classification:

- ➤ **Appendix I:** includes 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. Changes to Appendix III follow a distinct procedure from changes to Appendices I and II, as each Party's is entitled to make unilateral amendments to it.



India and CITES

▶ In India, Wildlife Crime Control Bureau, works for the Implementation and monitoring of CITES under the Ministry of Environment, Forest and Climate Change.

Family	Scientific name	Common name	IUCN	App III	App II	App I	Current	Protection
			status	addition	addition	addition	reservations	status in India
Canidae	Canis aureus	Golden Jackal	LC	1989	_	_	2 countries	Sch II, Part II
	Vulpes bengalensis	Bengal Fox	LC	1989	-	_	_	Sch II, Part II
	Vulpes vulpes griffithi			1989	_	_	25 countries	Sch II, Part II
	Vulpes vulpes montana			1989	-	-	24 countries	Sch II, Part II
	Vulpes vulpes pusilla			1989	-	-	25 countries	Sch II, Part II
Colubridae	Atretium schistosum	Olive Keelback Water Snake	LC	1984	-	-	-	Sch II, Part II
	Cerberus rynchops	South Asian Bockadam	LC	1984	-	-	-	Sch II, Part II
	Xenochrophis piscator	Checkered Keelback		1984	-	-	-	Sch II, Part II
	Xenochrophis schnurrenbergeri	Bar-necked Keelback		1984	-	_	-	Sch IV
	Xenochrophis tytleri	Tytler's Keelback		1984	-	-	_	Sch IV
	Ptyas mucosus	Oriental Ratsnake		1984	1990	-	-	Sch II, Part II
Elapidae	Naja kaouthia	Monocled Cobra	LC	1984	1990	-	-	Sch II, Part II
	Naja naja	Spectacled Cobra		1984	1990	-	-	Sch II, Part II
	Naja oxiana	Central Asian Cobra	DD	1984	1990	_	_	Sch II, Part II
	Ophiophagus hannah	King Cobra	VU	1984	1990	-	-	Sch II, Part II
Herpestidae	Herpestes edwardsi	Indian Grey Mongoose	LC	1989	-	_	_	Sch II, Part II
	Herpestes fuscus	Brown Mongoose	LC	1989	-	_	_	Sch II, Part II
	Herpestes smithii	Ruddy Mongoose	LC	1989	-	_	_	Sch II, Part II
	Herpestes urva	Crab-eating Mongoose	LC	1989	-	_	_	Sch II, Part II
	Herpestes vitticollis	Stripe-necked Mongoose	LC	1989	-	_	_	Sch II, Part II
	Herpestes javanicus auropunctatus ¹		LC	1989	-	-	-	Sch II, Part II
Mustelidae	Martes flavigula	Yellow-throated Marten	LC	1989	_	_	_	Sch II, Part II
	Martes gwatkinsii	Nilgiri Marten	VU	1989	_	_	_	Sch II, Part II
	Mustela altaica	Altai Weasel	NT	1989	_	_	24 countries	Sch II, Part II
	Mustela kathiah	Yellow-bellied Weasel	LC	1989	_	_	24 countries	Sch II, Part II
	Mustela sibirica	Siberian Weasel	LC	1989	_	_	24 countries	Sch II, Part II
	Martes foina intermedia			1989	-	-	3 countries	Sch II, Part II
	Mustela erminea ferghanae			1989	-	_	24 countries	Sch I, Part I
Sciuridae	Marmota caudata	Long-tailed Marmot	LC	1989	_	_	_	Sch II, Part II
	Marmota himalayana	Himalayan Marmot	LC	1989	_	_	_	Sch II, Part II
Ursidae	Melursus ursinus	Sloth Bear	VU	1988	_	1990	_	Sch I, Part I
Viperidae	Daboia russelii	Russell's Viper		1984	_	_	_	Sch II, Part II
	Arctictis binturong	Binturong	VU	1989	_	_	_	Sch I, Part I
	Paguma larvata	Masked Palm Civet	LC	1989	_	_	_	Sch II, Part II
	Paradoxurus hermaphroditus	Common Palm Civet	LC	1989	-	-	-	Sch II, Part II
	Paradoxurus jerdoni	Brown Palm Civet	LC	1989	_	_	_	Sch II, Part II
	Viverra civettina	Malabar Civet	CR	1989	_	_	_	Sch I, Part I
	Viverra zibetha	Large Indian Civet	LC	1989	_	_	_	Sch II, Part II
	Viverricula indica	Small Indian Civet	LC	1989	_	_	_	Sch II, Part II

- ➤ Since its ratification of CITES in 1976, India has listed 39 taxa in Appendix III, 27 species and six subspecies listings of which are still current.
- ➤ In the context of CITES, India is considered a category 2 country under the CITES National Legislation Project meaning that only 1 3 of the four requirements for effective implementation of CITES have been met.



- ► The international trade of wildlife in India as it pertains to CITES listed species is governed under several laws including the Wild Life Protection Act 1972, Foreign Trade Act 1992, and Foreign Trade Policy.
- ➤ The (sub-) species currently and historically listed by India in CITES Appendix III, including their IUCN status (if assessed, with CR = Critically Endangered, DD = Data Deficient, LC = Least Concern, NT = Near Threatened, VU = Vulnerable), potential transfers to different Appendices (App I, II), current reservations by the Parties, and Protection Status in India (indicating the Schedule (Sch) of the Wild Life Protection Act 1972 under which the species is listed).

Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention)

- It is the only global and UN-based intergovernmental organization **established under the aegis of UNEP** exclusively for conservation and management of terrestrial, aquatic and avian migratory species throughout their range.
- Enforcement Year: November 1, 1983
- Parties: As of 1 March 2022 the Convention on Migratory Species has 133 Parties. One country signed the original Convention but has yet to ratify it so is not a Party (Jamaica).
- Species Covered: Convention has two Appendices:
 - > Appendix I list migratory species that are endangered or threatened with extinction.
 - ➤ **Appendix II** list migratory species which have unfavourable conservation status and which **require international agreements** for their conservation and management.

India and CMS

- ▶ India has been a party to the Convention since 1983.
- ▶ India has signed a **non-legally binding Memorandum of Understanding (MoU) with CMS** on conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008), and Raptors (2016).

CMS-COP 13

- It was held in Gandhinagar Gujarat.
- The **Logo** of **COP 13** was inspired by **'Kolam'** a traditional art form Southern India used to depict **key migratory species** in India like Amur Falcon, and Marine Turtles.
- The mascot for CMS COP-13 is 'Gibi The Great Indian Bustard'.
- CMS has focused on the connectivity concept to be integrated into the new **Global Biodiversity** Framework (which will be adopted in 2021 in China).
- COP 13, proposes to include ten new species for protection under CMS viz.:
- Three Indian Species: Asian Elephant, Bengal Florican, Great Indian Bustard.
- Other 7 from around the world: Jaguar (proposed by Costa Rica, Argentina, Bolivia, Paraguay), Whitetip shark (Brazil), Little Bustard (EU Nations), Urial (Tajikistan, Iran, Uzbekistan), Antipodean Albatross (New Zealand, Australia, Chile), Smooth Hammerhead Shark (Brazil), and Tope Shark (EU Nations).



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BRS Convention (Basel, Rotterdam and Stockholm Convention)

Basel Convention

- ➤ The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted on 22 March 1989 by the Conference of Plenipotentiaries in Basel, Switzerland.
- ▶ It intends to reduce trans-boundary movements of hazardous waste from developed to less developed countries (LDCs), and ensure their safe disposal as closely as possible to the source of generation.
- > Secretariat location: Basel, Switzerland
- > Parties: 189 (Haiti and the United States have signed the Convention but not ratified it).
- > Signatories: 53
- ▶ It does **not address** the movement of radioactive waste.
- ➤ Conference of the Parties (COP): It was established pursuant to article 15 of the Convention. It is the governing body of the Basel Convention and is composed of governments of countries that have accepted, ratified or acceded to it. The implementation of the Convention is advanced through the decisions it takes at its meetings.
- ▶ The Conference of the Parties reviews and evaluates the implementation of the Convention.

Rotterdam Convention

- ▶ It was adopted in 1998 and entered into force on 24th February 2004.
- > The objectives of the Convention are:
 - to promote shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals in order to protect human health and the environment from potential harm;
 - to contribute to the environmentally sound use of those hazardous chemicals, by facilitating information exchange about their characteristics, by providing for a national decision-making process on their import and export and by disseminating these decisions to Parties.
- ➤ It covers pesticides and industrial chemicals that have been banned or severely restricted for health or environmental reasons by Parties and which have been notified by Parties for inclusion in the Prior Informed Consent (PIC) procedure.
- ➤ The Convention creates legally binding obligations for the implementation of the Prior Informed Consent (PIC) procedure.
- > Secretariat Location: Rotterdam, the Netherlands
- ▶ **Parties:** 165 parties, Non-member states include the United States.
- ➤ Signatories: 72

Stockholm Convention

➤ **The Stockholm Convention** is a global treaty to protect human health and the environment from persistent organic pollutants (POPs).



Persistent Organic Pollutants (POPs)

- Persistent Organic Pollutants (POPs) are organic chemical substances, that is, they are carbonbased. They possess a particular combination of physical and chemical properties such that, once released into the environment, they:
 - remain intact for exceptionally long periods of time (many years)
 - ▶ become widely distributed throughout the environment as a result of natural processes involving soil, water and, most notably, air;
 - accumulate in the living organisms including humans, and are found at higher concentrations at higher levels in the food chain; and
 - > are toxic to both humans and wildlife.
- ➤ The Stockholm Convention on Persistent Organic Pollutants was adopted on 22 May 2001 in Stockholm, Sweden. The Convention entered into force on 17 May 2004.
- ► Location: Stockholm, Sweden
- ▶ **Parties:** 184 parties to the Convention (183 states and the European Union).Notable non-ratifying states include the United States, Israel, Malaysia, and Italy.
- ➤ The **Global Environmental Facility (GEF)** is the designated interim financial mechanism for the Stockholm Convention.

POPs Annexure

➤ Annex A (Elimination): Parties must take measures to eliminate the production and use of the chemicals listed under Annex A. Specific exemptions are available in Annex A and apply only to Parties that have registered for them. Chemicals included under this category are given in the table.





- ➤ Annex B (Restriction): Parties must take measures to restrict the production and use of the chemicals listed under Annex B in light of any applicable acceptable purposes and/or specific exemptions listed in the Annex. Example DDT and Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride.
- ➤ Annex C (Unintentional production): Parties must take measures to reduce the unintentional releases of chemicals listed under Annex C with the goal of continuing minimization and, where feasible, ultimate elimination. Examples: Hexachlorobenzene (HCB), Hexachlorobutadiene (HCBD), Pentachlorobenzene, Polychlorinated biphenyls (PCB).

BRS COP's Meeting

- The "Triple COPs" meeting took place in Geneva,
 - ➤ Basel Convention (COP-14)
 - ► Rotterdam Convention (COP-9)
 - ➤ Stockholm Convention (COP-9)
- Theme: 'Clean Planet, Healthy People: Sound Management of Chemicals and Waste'.
- o Outcomes:
 - ▶ In **Basel Convention** two important issues were mainly discussed and decided i.e. technical guidelines on e-waste and inclusion of plastic waste in Prior Informed Consent (PIC) procedure.
 - ➤ A proposal by India to prevent developed countries from dumping their electronic and plastic waste into developing countries was defeated.
 - ➤ An amendment to the Convention that includes plastic waste in a legally-binding framework. However, it does not bar countries from exporting various categories of plastic waste.
 - ➤ In Stockholm Convention COP decided to list "Dicofol" in Annex A (Elimination) without any exemption. The "PFOA", (Perfluorooctanoic acid) was also listed with some exemptions in Annex A of Stockholm Convention.
 - ➤ In Rotterdam Convention two new chemicals named **Phorate and HBCD** (hexabromocyclododecane) were added in list for mandatory Prior Informed Consent (PIC) procedure in international trade.

Minamata Convention

- The Minamata Convention on Mercury is a global treaty to protect human health and the environment from the adverse effects of mercury.
- The Convention was agreed at the fifth session of the Intergovernmental Negotiating Committee on mercury in Geneva, Switzerland and adopted later in 2013. The Minamata Convention entered into force on 16 August 2017.
- The Minamata Convention follows and builds on the Basel, Rotterdam and Stockholm conventions. It sets out the same basic substantive obligations for all countries, while providing some targeted differentiation and flexibility in specific substantive provisions, as well as provisions to mobilize financial resources by all, within their capabilities, for implementation in developing countries.
- The Minamata Convention is a 21st century response to the catastrophic pollution in Minamata, Japan, where industrial releases of **methyl mercury** caused the epidemic known as the **Minamata disease** in the 1950s and onwards.



 The objective of the Convention is to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds and it sets out a range of measures to meet that objective.

Parties: 137, Signatories: 128

Convention on Biological Diversity (CBD)

- It is a **legally binding treaty** to conserve biodiversity, has been in force since 1993.
- There are 196 parties and 168 signatories to the CBD, including India.
- It is the international legal instrument for
 - conservation of biological diversity
 - sustainable use of its components
 - fair and equitable sharing of the benefits arising out of the utilization of genetic resources.
- Nearly all countries have ratified it (notably, the US has signed but not ratified).
- The CBD Secretariat is based in Montreal, Canada and it operates under the United Nations Environment Programme.

Developments under CBD

- ► Cartagena Protocol: In 2000, the COP 5 to the CBD adopted the Cartagena Protocol on Biosafety.
 - It came into force on 11 September 2003.
- Nagoya Protocol: The Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (ABS) to the CBD was adopted on 29 October 2010 in Nagoya, Japan at COP10.
 - It entered into force on 12 October 2014.
- ➤ Aichi Targets for biodiversity: The COP-10 also adopted a ten-year framework known as "Strategic Plan for Biodiversity 2011-2020", which provides a set of 20 ambitious yet achievable targets, collectively known as the Aichi Targets for biodiversity.

India and CBD

- ▶ India enacted the Biological Diversity Act in 2002 for giving effect to the provisions of the CBD.
- India submitted its sixth national report (NR6) to the CBD during the inaugural session of the meeting of the State Biodiversity Boards (SBBs) organized by the National Biodiversity Authority (NBA).
- ➤ The NR6 provides an update of progress in achievement of 12 National Biodiversity Targets (NBT) developed under the Convention process in line with the 20 global Aichi biodiversity targets.
 - Briefly, the Report highlights that while India has exceeded/overachieved two NBTs, it is on track to achieve eight NBTs and in respect of the remaining two NBTs also, India is striving to meet the targets by the stipulated time of 2020.



Convention to Combat Desertification (UNCCD)

- Established in 1994.
- Secretariat: It has been located in Bonn, Germany since January 1999.
- It is the sole **legally binding international agreement** linking environment and development to sustainable land management.
- It is the only convention stemming from a direct recommendation of the Rio Conference's Agenda 21.
- To help publicize the Convention, 2006 was declared "International Year of Deserts and Desertification".

UNCCD: COP-14

- The COP-14 to the UNCCD was hosted by India in New Delhi.
- The theme of the Conference was 'Restore land, Sustain future'.
- India took over the COP Presidency from China for the next two years till 2021.
- India is among the select few countries to have hosted the COP of all three Rio conventions on climate change, biodiversity and land.
- The **Ministry of Environment, Forest and Climate Change** is the nodal Ministry for this Convention.

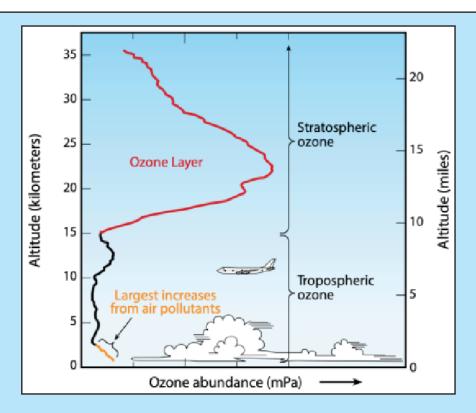
Vienna Convention for Protection of the Ozone Layer

- It is a multilateral environmental agreement agreed upon at the 1985 Vienna Conference and entered into force in 1988.
- The Vienna Convention was the first convention of any kind to be signed by every country involved, taking effect in 1988 and reaching universal ratification in 2009.

Ozone

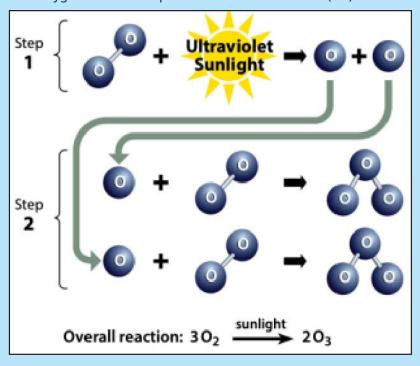
- Ozone is a gas that is naturally present in our atmosphere.
- Each ozone molecule contains three atoms of oxygen and is denoted chemically as O3.
 - ➤ Ozone is found primarily in two regions of the atmosphere.
 - ➤ About 10% of Earth's ozone is in the troposphere, which extends from the surface to about 10–15 kilometers (6–9 miles) altitude.
 - About 90% of Earth's ozone resides in the stratosphere, the region of the atmosphere between the top of the troposphere and about 50 kilometers (31 miles) altitude.
 - ➤ The part of the stratosphere with the highest amount of ozone is commonly referred to as the "ozone layer".





Ozone Formation

- Throughout the atmosphere, ozone is formed in multistep chemical processes that are initiated by sunlight.
- In the stratosphere, the process begins with an oxygen molecule (O2) being broken apart by ultraviolet radiation from the Sun. In the second step, each of these highly reactive oxygen atoms combines with an oxygen molecule to produce an ozone molecule (O3).





- In the troposphere, ozone is formed by a different set of chemical reactions that involve naturally occurring gases as well as those from sources of air pollution.
- Ozone molecules have a low relative abundance in the atmosphere.
- The highest ozone values near the surface occur in air that is polluted by human activities.
- It has been ratified by 197 states (all UN members as well as Niue, Holy See, and the Cook Islands)
 as well as European Union.
- It acts as a framework for international efforts to protect the ozone layer.
- The Convention aimed to promote cooperation among nations by exchanging information on the effects of human activities on the ozone layer.
- These are laid out in the accompanying Montreal Protocol.
- It **does not include legally binding r**eduction goals for the use of CFCs, the main chemical agents causing global warming.

United Nations Framework Convention on Climate Change (UNFCCC)

- It is a multilateral environmental agreement to control greenhouse gas concentrations in the atmosphere.
- The secretariat is located in Bonn, Germany.
- It was adopted on 9th May 1992.
- The first conference was held in Rio de Janeiro, Brazil.
- Parties: 197 countries
- It is not legally binding.
- o Classification of Parties:

> Annex I:

- There are 43 including the European Union.
- These Parties are classified as industrialized (developed) countries and "economies in transition" (EITs).
- The 14 EITs are the former centrally-planned (Soviet) economies of Russia and Eastern Europe.

➤ Annex II:

- There are 24 Parties including the European Union.
- These Parties are made up of members of the **Organization for Economic Cooperation and Development (OECD)**.
- Annex II Parties are required to provide financial and technical support to the EITs and developing countries to assist them in reducing their greenhouse gas emissions (climate change mitigation) and manage the impacts of climate change (climate change adaptation).

> Annex B:

• Parties listed in Annex B of the Kyoto Protocol are Annex I Parties with first- or second-round Kyoto greenhouse gas emissions targets.



• The first-round targets apply over the years 2008–2012. As part of the 2012 Doha climate change talks, an amendment to Annex B was agreed upon containing a list of Annex I Parties who have second-round Kyoto targets, which apply from 2013–2020. The amendments have not entered into force.

> Least-developed countries (LDCs):

• 49 Parties are LDCs and are given special status under the treaty given their limited capacity to adapt to the effects of climate change.

Non-Annex I:

- Parties to the UNFCCC not listed in Annex I of the Convention are mostly low-income developing countries.
- Developing countries may volunteer to become Annex I countries when they are sufficiently developed.

World Charter of Nature

- It was adopted by United Nations member nation-states on October 28, 1982.
- It sets forth "principles of conservation by which all human conduct affecting nature is to be guided and judged."
 The Charter recognizes the interaction between mankind and nature. It calls for member states to reflect the stated principles in their national legislation
- The Charter recognizes the interaction between mankind and nature.
- It proclaims **five principles of conservation** by which all human conduct affecting nature is to be guided and judged.
 - Nature shall be respected and its essential processes shall not be impaired.
 - ➤ The genetic viability on the earth shall not be compromised; the population levels of all life forms, wild and domesticated, must be at least sufficient for their survival, and to this end, necessary habitats shall be safeguarded.
 - ➤ All areas of the earth, both land, and sea, shall be subject to these principles of conservation; special protection shall be given to unique areas, to representative samples of all the different types of ecosystems and the habitats of rare or endangered species.
 - ➤ Ecosystems and organisms, as well as the land, marine, and atmospheric resources that are utilized by man, shall be managed to achieve and maintain optimum sustainable productivity, but not in such a way as to endanger the integrity of those other ecosystems or species with which they coexist.
 - ▶ Nature shall be secured against degradation caused by warfare or other hostile activities.

United Nations Conference on Environment and Development, 1992 (Earth Summit/Rio Summit)

- In continuation of the Stockholm Declaration, 1972, and the Nairobi Declaration, 1982 the third major Declaration was held in Rio-de-Janeiro in Brazil in the year 1992.
- Objective: The Rio Declaration was adopted in the conference recognizing the universal and integral
 nature of Earth and by establishing a global partnership among states and enlisting general rights
 and obligations on environmental protection.



- This summit led to the development of the following documents:
 - ▶ Rio Declaration on Environment and Development
 - ➤ Agenda 21
 - Forest Principles
- **Rio Declaration:** The first document called the Rio Declaration, in short, contained 27 principles that were supposed to guide countries in future sustainable development.
- Agenda 21: is an action plan for sustainable development, but it is non-binding.
- Forest Principles: The Forest Principles is formally called 'Non-Legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of All Types of Forests'. It makes many recommendations for conservation and sustainable development forestry and is non-binding.

Montreal Protocol

- It is an international treaty designed to protect ozone layer by phasing out production of numerous Ozone Depleting Substances (ODSs) that are responsible for ozone depletion.
- It is the landmark multilateral environmental agreement that regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances (ODS).
- It was agreed on 26 August 1987 in Montreal, Canada and entered into force on 26 August 1989.
- The Multilateral Fund for the Implementation of the Montreal Protocol was established in 1991 under Article 10 of the treaty.
- Phase out of HCFCs the Montreal Amendment: Hydrochlorofluorocarbons (HCFCs) are gases used worldwide in refrigeration, air-conditioning and foam applications, but they are being phased out under the Montreal Protocol since deplete the ozone layer.
 - ▶ Recognizing the potential benefits to the Earth's climate, in September 2007 the Parties decided to accelerate their schedule to phase out HCFCs. Developed countries have been reducing their consumption of HCFCs and will completely phase them out by 2020. Developing countries agreed to start their phase out process in 2013 and are now following a stepwise reduction until the complete phase-out of HCFCs by 2030.
- The Montreal Protocol also makes important contributions to the realization of the UN Sustainable Development Goals.



Kigali Agreement

It is an amendment to the Montreal Protocol.



- It happened during the 28th Meeting of Parties (2016) when the 197 member countries signed the agreement to amend the Montreal Protocol.
- It is a **legally binding agreement** between the signatories. And, there are non-compliance measures to ensure its implementation.
- It sets different targets for countries depending upon the states of development, different socioeconomic constraints, and varying technological and scientific capacities.
- Countries agreed to add HFCs to the list of controlled substances, and approved a timeline for their gradual reduction by 80-85 per cent by the late 2040s. The first reductions by developed countries are expected in 2019. Developing countries will follow with a freeze of HFCs consumption levels in 2024 and in 2028 for some nations.
- The Kigali Agreement upholds the principle of **Common but Differentiated Responsibilities and Respective Capabilities.**
- The agreement classifies the signatory parties into three as per the phase-down schedules to freeze and reduce the production of HFCs.

Kyoto Protocol

- The Kyoto Protocol was adopted on 11 December 1997 and entered into force on 16 February 2005.
- Currently, there are 192 Parties to the Kyoto Protocol.
- Kyoto Protocol tries to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets.
- It only binds developed countries, and places a heavier burden on them under the principle of "common but differentiated responsibility and respective capabilities", because it recognizes that they are largely responsible for the current high levels of GHG emissions in the atmosphere.
- **First Commitment:** It added up to an average 5 per cent emission reduction compared to 1990 levels over the five year period 2008–2012 (the first commitment period).
- Second Commitment: Doha Amendment to the Kyoto Protocol was adopted for a second commitment period, starting in 2013 and lasting until 2020. During the second commitment period, Parties committed to reduce GHG emissions by at least 18 percent below 1990 levels in the eight-year period from 2013 to 2020.
- Protocol also offers them an additional means to meet their targets by way of three market-based mechanisms:
 - International Emissions Trading
 - ► Clean Development Mechanism (CDM)
 - ➤ Joint implementation (JI)
- The Adaptation Fund was established to finance adaptation projects and programmes in developing countries that are Parties to the Kyoto Protocol.
 - ➤ In the first commitment period, the Fund was financed mainly with a share of proceeds from CDM project activities.
 - ➤ In Doha, in 2012, it was decided that for the second commitment period, international emissions trading and joint implementation would also provide the Adaptation Fund with a 2 percent share of proceeds.



Paris Climate Deal

- At COP 21 in Paris, on 12 December 2015, Parties to the UNFCCC reached a landmark agreement to combat climate change and to accelerate and intensify the actions and investments needed for a sustainable low carbon future.
- The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.
- Additionally, the agreement aims to increase the ability of countries to deal with the impacts of climate change, and at making finance flows consistent with a low GHG emissions and climateresilient pathway.
- The Paris Agreement requires all Parties to put forward their best efforts through "nationally determined contributions" (NDCs).
- There will also be a global stocktake **every 5 years to assess the collective progress** towards achieving the purpose of the agreement and to inform further individual actions by Parties.
- It entered into force on 4 November 2016, 30 days after the so-called "double threshold" (ratification by 55 countries that account for at least 55% of global emissions) had been met. Since then, more countries have ratified and continue to ratify the Agreement, reaching a total of 125 Parties in early 2017.

Key aspects of the Agreement

- ▶ Long-term temperature goal (Art. 2) The Paris Agreement, reaffirms the goal of limiting global temperature increase to well below 2 degrees Celsius, while pursuing efforts to limit the increase to 1.5 degrees.
- ▶ Global peaking and 'climate neutrality' (Art. 4) —To achieve this temperature goal, Parties aim to reach global peaking of greenhouse gas emissions (GHGs) as soon as possible, recognizing peaking will take longer for developing country Parties, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of GHGs in the second half of the century.
- ▶ **Mitigation** (Art. 4) The Paris Agreement establishes **binding commitments** by all Parties to prepare, communicate and maintain a nationally determined contribution (NDC) and to pursue domestic measures to achieve them.
- ➤ Voluntary cooperation/Market- and non-market-based approaches (Art. 6) The Paris Agreement recognizes the possibility of voluntary cooperation among Parties to allow for higher ambition and sets out principles including environmental integrity, transparency and robust accounting for any cooperation that involves internationally transferal of mitigation outcomes.
- ➤ Adaptation (Art. 7) The Paris Agreement establishes a global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change in the context of the temperature goal of the Agreement.
- ► Loss and damage (Art. 8) The Paris Agreement recognizes the importance of averting, minimizing and addressing loss and damage associated with the adverse effects of climate change. Parties are to enhance understanding, action and support, including through the Warsaw International Mechanism, on a cooperative and facilitative basis with respect to loss and damage associated with the adverse effects of climate change.
- ➤ Finance, technology and capacity-building support (Art. 9, 10 and 11) The Paris Agreement reaffirms the obligations of developed countries to support the efforts of developing country Parties to build clean, climate-resilient futures, while for the first time encouraging voluntary contributions by other Parties. The agreement also provides that the Financial Mechanism of the Convention, including the Green Climate Fund (GCF), shall serve the Agreement.
- ➤ Climate change education, training, public awareness, public participation and public access to information (Art 12) is also to be enhanced under the Agreement.



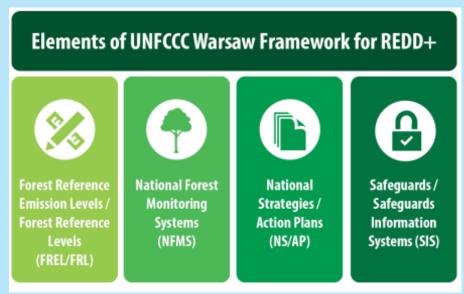
- ➤ Transparency (Art. 13), implementation and compliance (Art. 15) The Paris Agreement relies on a robust transparency and accounting system to provide clarity on action and support by Parties, with flexibility for their differing capabilities of Parties.
- ▶ **Decision 1/CP.21** also sets out a number of measures to enhance action prior to 2020, including strengthening the technical examination process, enhancement of provision of urgent finance, technology and support and measures to strengthen high-level engagement.

UN-REDD

- UN-REDD is the flagship UN knowledge and advisory partnership on forests and climate to reduce forest emissions and enhance forest carbon stocks.
- It is the largest international provider of REDD+ assistance, supporting its 65 partner countries to protect their forests and achieve their climate and sustainable development goals.

REDD+

• REDD+ is a mechanism developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).



- It creates a financial value for the carbon stored in forests by offering incentives for developing countries to reduce emissions from forested lands and invest in sustainable development.
- REDD+ goes beyond simply deforestation and forest degradation and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.
- The framework is commonly referred to as the Warsaw Framework for REDD+ (WFR) adopted at COP 19 in Warsaw, December 2013 and provides the complete methodological and financing guidance for the implementation of REDD+ activities.
- REDD+ is also recognized in Article 5 of the Paris Agreement.
- REDD+ aims to incentivize developing countries to contribute to climate change mitigation actions in the forest sector by:
 - reducing carbon emissions from deforestation;
 - reducing carbon emissions from forest degradation;



- conservation of forest carbon stocks;
- sustainable management of forests;
- enhancement of forest carbon stocks.

o 2025 goals

- forest emissions reduced by 1 gigaton per year
- USD 5 billion mobilised by 2025
- over 15 countries enhanced forest ambitions in NDCS
- UN-REDD was launched in 2008.

What is the difference between REDD+ and the UN-REDD Programme?

- REDD+ is a voluntary climate change mitigation approach that has been developed by Parties to the UNFCCC. It aims to incentivize developing countries to reduce emissions from deforestation and forest degradation, conserve forest carbon stocks, sustainably manage forests and enhance forest carbon stocks.
- UN-REDD: The United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries or UN-REDD Programme is a multilateral body. It partners with developing countries to support them in establishing the technical capacities needed to implement REDD+ and meet UNFCCC requirements for REDD+ resultbased payments. It does so through a country-based approach that provides advisory and technical support services tailored to national circumstances and needs.
- It builds on the convening capacity and technical expertise of the Food and Agriculture Organization of the United Nations (FAO), the United Nations Development Programme (UNDP) and the United Nations Environment Programme (UNEP).
- Other examples of REDD+ multilaterals include the Forest Carbon Partnership Facility and Forest Investment Program, hosted by The World Bank.

Sandai Framework

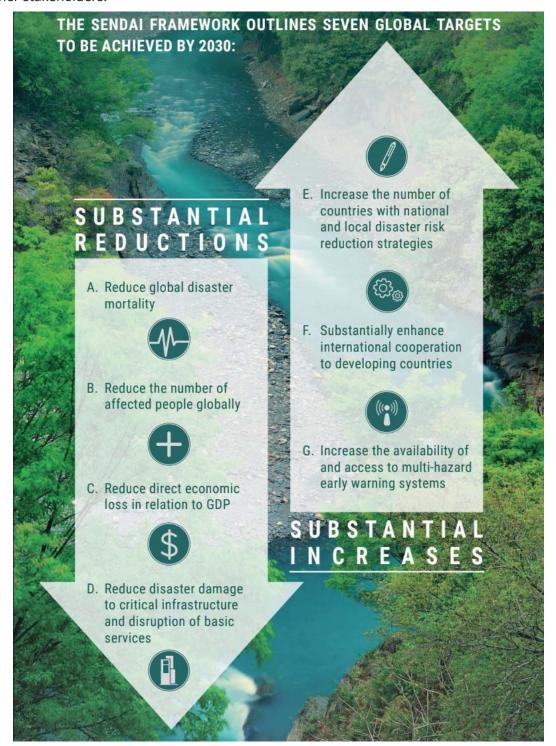
- The Sendai Framework for Disaster Risk Reduction 2015-2030 (Sendai Framework) was the first major agreement of the post-2015 development agenda.
- It provides Member States with concrete actions to protect development gains from the risk of disaster.
- The Sendai Framework works hand in hand with the other 2030 Agenda agreements, including The Paris Agreement on Climate Change, The Addis Ababa Action Agenda on Financing for Development, the New Urban Agenda, and ultimately the Sustainable Development Goals.
- It sets 7 global targets to be achieved under the framework.
- It was endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR).

o It advocates for:

➤ The substantial reduction of disaster risk and losses in lives, livelihoods and health and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.



▶ It recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.



- Sendai Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters. It is the outcome of stakeholder consultations initiated in March 2012 and inter-governmental negotiations held from July 2014 to March 2015, which were supported by the UNDRR upon the request of the UN General Assembly.
- UNDRR is tasked to support the implementation, follow-up and review of the Sendai Framework.



Glasgow Climate Pact (COP 26)

- The UN Climate Change Conference in Glasgow (COP26) brought together 120 world leaders.
- They take important steps, but unfortunately the collective political will was not enough to overcome some deep contradictions."
- Cuts in global greenhouse gas emissions are still far from where they need to be to preserve a livable climate, and support for the most vulnerable countries affected by the impacts of climate change is still falling far short.
- But COP26 did produce new "building blocks" to advance implementation of the Paris Agreement through actions that can get the world on a more sustainable, low-carbon pathway forward.

What was agreed?

Recognizing the emergency

- Countries reaffirmed the Paris Agreement goal.
- They went further, expressing "alarm and utmost concern that human activities have caused around 1.1 °C of warming to date.

■ Accelerating action

- Countries stressed the urgency of action "in this critical decade," when carbon dioxide emissions must be reduced by 45 per cent to reach net zero around mid-century.
- Glasgow Climate Pact calls on all countries to present stronger national action plans next year, instead of in 2025.
- Countries also called on UNFCCC to do an annual NDC Synthesis Report to gauge the present level of ambition.

■ Moving away from fossil fuels

• Calling for a phase-down of coal power and a phase-out of "inefficient" fossil fuel subsidies.

■ Delivering on climate finance

- Developed countries came to Glasgow falling short on their promise to deliver US\$100 billion a year for developing countries.
- Developed countries, in a report, expressed confidence that the target would be met in 2023.

■ Stepping up support for adaptation

 The Glasgow Pact calls for a doubling of finance to support developing countries in adapting to the impacts of climate change and building resilience.

■ Completing the Paris rulebook

• Countries reached agreement on the remaining issues of the so-called Paris rulebook, the operational details for the practical implementation of the Paris Agreement.



■ Focusing on loss & damage

- Acknowledging that climate change is having increasing impacts on people especially in the developing world, countries agreed to strengthen a network—known as the Santiago Network

 that connects vulnerable countries with providers of technical assistance, knowledge and resources to address climate risks.
- They also launched a new "Glasgow dialogue" to discuss arrangements for the funding of
 activities to avert, minimize and address loss and damage associated with the adverse effects
 of climate change.

New deals and announcements

• There were many other significant deals and announcements – outside of the Glasgow Climate Pact – which can have major positive impacts if they are indeed implemented. These include:

Forests

• 137 countries took a landmark step forward by committing to halt and reverse forest loss and land degradation by 2030.

Methane

• 103 countries, including 15 major emitters, signed up to the **Global Methane Pledge**, which aims to limit methane emissions by 30 per cent by 2030, compared to 2020 levels.

■ Cars

• Over 30 countries, six major vehicle manufacturers and other actors, like cities, set out their determination for all new car and van sales to be zero-emission vehicles by 2040 globally and 2035 in leading markets.

Coal

 Leaders from South Africa, the United Kingdom, the United States, France, Germany, and the European Union announced a ground-breaking partnership to support South Africa – the world's most carbon-intensive electricity producer— with \$8.5 billion over the next 3-5 years to make a just transition away from coal, to a low-carbon economy.

Private finance

 Private financial institutions and central banks announced moves to realign trillions of dollars towards achieving global net zero emissions. Among them is the **Glasgow Financial Alliance** for Net Zero, with over 450 firms across 45 countries that control \$130 trillion in assets, requiring its member to set robust, science-based near-term targets.





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