

UPSC Notes

Stockholm Convention on Persistent Organic Pollutants (POPs) - UPSC Notes

Conference of Parties (COP) 10 to Stockholm Convention on Persistent Organic Pollutants (Adopted in 2001 by Conference of Plenipotentiaries) will take place in July 2021 in Geneva, Switzerland. In July 2020, new restrictions on Perfluorooctanoic acids (PFOAs) came into effect, bringing into the news, Stockholm Convention. Hence, aspirants should be well aware of the convention, its objectives and aims for the [IAS Exam](#).

This article will provide you with all the important information about the Stockholm Convention which will be important for the Environment and Ecology syllabus of the UPSC.

The topic, Stockholm Convention, is an important segment of the Environment and Ecology syllabus (Mains GS III) of the IAS Exam. Aspirants can prepare similar important environment topics by referring to the links below:

- [Vienna Convention](#)
- [Ramsar Convention](#)
- [CITES](#)
- [Kyoto Protocol](#)
- [Cartagena Protocol](#)
- [Nagoya Protocol](#)
- [Minamata Convention](#)

What are Persistent Organic Pollutants (POPs)?

Persistent Organic Pollutants are carbon-based organic chemical substances that display the following properties once they are released into the environment:

1. **Lifespan** - They remain in the environment for long periods of time counted in years.
2. **Distribution** - The natural carriers like soil, water and air distribute it throughout the environment
3. **Food Chain** - They become a part of the food chain by getting accumulated in the fatty tissue of living organisms including humans
4. **Toxicity** - They are termed as toxic for both humans and the wildlife.
5. **Bioaccumulation** - The POPs get accumulated in the fatty tissues and its concentration gets magnified. The species including at the higher level of the food chain absorb greater concentrations of POPs and carry it along.
6. **Effect** - The exposure to POPs can cause:
 - a. Cancer
 - b. Allergies
 - c. Hypersensitivity
 - d. Damage to the central and peripheral nervous systems
 - e. Reproductive disorders, and
 - f. Disruption of the immune system

g. Endocrine disruptors

What are the 12 Persistent Organic Pollutants?

The Stockholm Convention initially recognized 12 POPs causing adverse effects on the environment. These are categorized into three categories:

Pesticides	Industrial Chemicals	By-Products
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The 12 POPs under these three categories are given in the table below:

Stockholm Convention - 12 POPs	
Category	Persistent Organic Pollutant
Pesticide	<ol style="list-style-type: none"> 1. Aldrin 2. Chlordane 3. DDT 4. Dieldrin 5. Endrin 6. Heptachlor 7. Hexachlorobenzene 8. Mirex 9. Toxaphene
Industrial Chemicals	<ol style="list-style-type: none"> 1. Hexachlorobenzene 2. Polychlorinated biphenyls (PCBs)
By-Products	<ol style="list-style-type: none"> 1. Polychlorinated dibenzo-p-dioxins and Polychlorinated dibenzofurans (PCDD/PCDF)

In 2017, 16 additional POPs were added under the Stockholm Convention. Those 16 new POPs are mentioned in the table below:

16 New POPs added under Stockholm Convention	
Alpha hexachlorocyclohexane	Pentachlorobenzene
Beta hexachlorocyclohexane	Pentachlorophenol and its salts and esters
Chlordecone	Perfluorooctane sulfonic acid (PFOS), its salts and perfluorooctane sulfonyl fluoride (PFOSF)

Hexabromobiphenyl	Polychlorinated naphthalenes
Hexabromocyclododecane	Technical endosulfan and its related isomers
Hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether)	Tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether)
Hexachlorobutadiene	Decabromodiphenyl ether (Commercial mixture, cDecaBDE)
Lindane	Short-chain chlorinated paraffins (SCCPs)

What is the Stockholm Convention?

History of Stockholm Convention

Stockholm Convention is a global treaty that was adopted by Conference of Plenipotentiaries in 2001 and came into force on 17th May 2004. It was introduced to protect human health from harmful POPs suspended in the air for a long period of time. The convention aims to reduce or eliminate the use of POPs through the active measures of the member states.

Salient Points on Stockholm Convention:

- The [Global Environmental Facility \(GEF\)](#) is the designated interim financial mechanism for the Stockholm Convention.
- The [United Nations Industrial Development Organization \(UNIDO\)](#) takes the responsibility for developing nations and transitioning economies to help them implement Stockholm Convention measures.

Objectives & Aims of Stockholm Convention

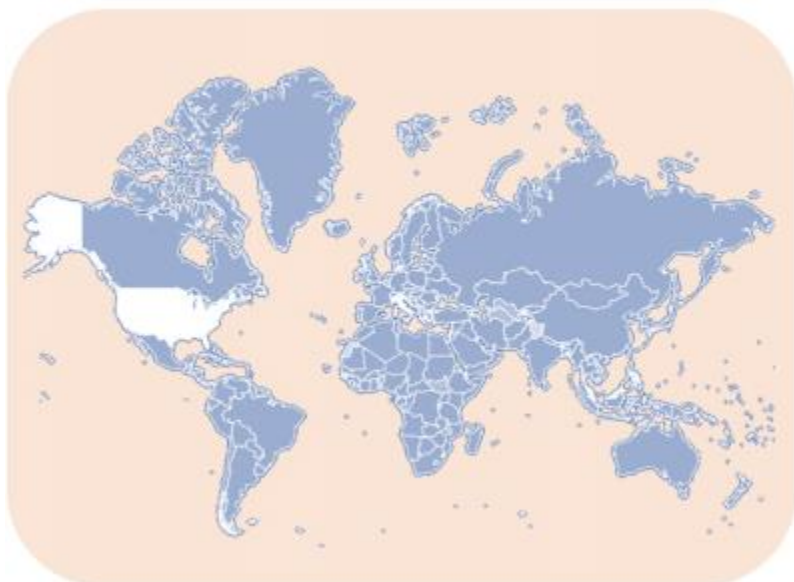
1. To implement control measures for the POPs
2. To develop and implement action plans for unintentionally produced chemicals
3. To develop inventories of the chemicals' stockpiles
4. To review and update the National Implementation Plan
5. To include the new chemicals in the reporting
6. To include the new chemicals in the programme for the effectiveness evaluation

There are three annexes under Stockholm Convention that define which POPs are eliminated, restricted and which unintentionally produced POPs will be reduced:

1. **Annex A** - Chemicals listed under this annexure are to be eliminated by the member states (Some exceptions are given.)

2. **Annex B** - Chemicals listed under this annexure are to be restricted for their use. (Some exceptions are given.)
3. **Annex C** - Unintentionally produced chemicals are to be reduced with measures for ultimate elimination under this annexure.

Members of Stockholm Convention



As of May 2017, there are 181 parties to the Stockholm Convention who have ratified it.

Is India a member of Stockholm convention?

Yes, India is a party to the Stockholm Convention. In May 2002, India signed the global treaty whereas it brought it in force in January 2006.

POPs & India

- According to The Energy and Resources Institute (TERI) January 2018 report on POPs in Indian Environment, the level of POPs in Indian environment is high because of poor management of e-waste and municipal and industrial wastes.
- India has been exempted from the ban of DDT as a result of the Stockholm Convention (SC) and is allowed to produce and use DDT—but only for the control of vector-borne diseases.

India's efforts towards meeting the aims of Stockholm Convention

- Promotion of **non-POP alternatives**
- **Insecticide Act, 1968** - Banning of use, manufacture and import of most of the listed POPs under stockholm convention into India Insecticide Act, 1968
- India submitted its **National Implementation Plan (NIP) on Persistent Organic Pollutants** in 2011 (It is yet to include 16 additionally added POPs.)

Conclusion

Stockholm Convention is considered as a step towards a detoxified future. The topic should be well-read by the aspirants for both prelims and mains examination as questions on POPs can be asked in both papers.

Aspirants should by-now know about the important points of Stockholm Convention which can be asked in [UPSC Prelims 2020](#).

As Environment and Ecology are important sections of the IAS Exam, aspirants can refer to the below-mentioned links to aid their preparation:

Related Links:

Environment Questions for UPSC Mains GS 3	Environment And Ecology Notes For UPSC - Environment Notes For IAS Preparation
GS 3 Structure, Strategy and Syllabus	How to Prepare Environment and Ecology for UPSC?
Topic-Wise GS 3 Questions for UPSC Mains	UPSC Syllabus