



# WORLD SUSTAINABLE DEVELOPMENT SUMMIT 2022

**TOWARDS A RESILIENT PLANET:  
ENSURING A SUSTAINABLE AND EQUITABLE FUTURE**

February 16-18, 2022 (Virtual)



NIBIO



## Endocrine Disrupting Chemicals (EDCs): Regulatory and Policy Implications for India

### THEMATIC TRACK SUMMARY

Venue: Chinnar

Date: February 16, 2022

Time: 03:30 PM - 05:00 PM (IST)

#### Suggested Citation

World Sustainable Development Summit (2022), Endocrine Disrupting Chemicals (EDCs): Regulatory and Policy Implications for India, Thematic Track Summary (Rapporteurs: Dheeraj Mehra and Justin Jacob), New Delhi: The Energy and Resources Institute.

## Actionable Messages

**Message 1:** The Indian legislative system needs to specifically address the tolerance limits and regulations for several key Endocrine Disrupting Chemicals (EDCs) in food, water, and consumer products.

**Message 2:** India might gain tremendously from leveraging and expanding existing measures to address the problem of EDCs. The upcoming Chemical Management and Safety Rule (CMSR) may be expanded to include a broader range of very harmful EDCs.

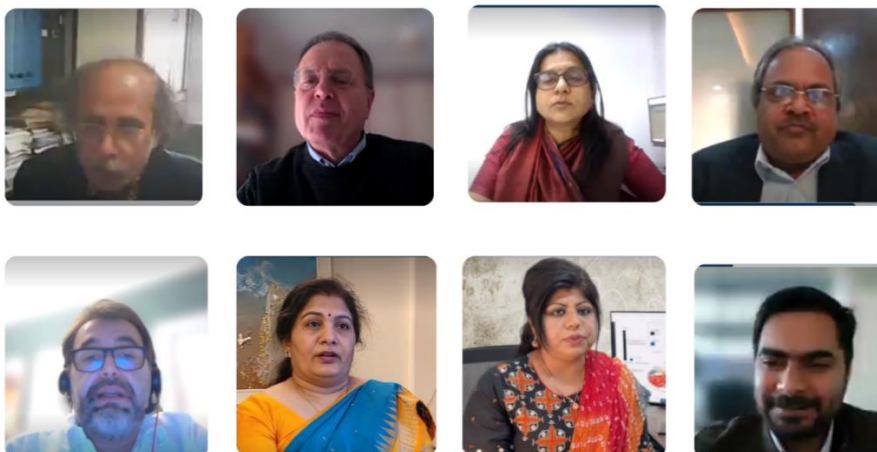
**Message 3:** There is a requirement for risk analysis frameworks based on sources of EDCs and their impacts such that risk mitigation measures can be adopted at the source.

**Message 4:** There is a need for development of a collaborative platform between different ministries that monitor or regulate chemical substances such as agriculture, fisheries, dairy, food processing and pharmaceuticals among others; to ascertain harmonized protocols/ solutions to minimize exposure to EDCs.

**Message 5:** It is necessary for advanced research on EDCs to generate robust datasets for strengthening the country's policy framework and regulatory mechanisms.

**Message 6:** There is a need for promotion of quality labelling systems for EDCs in food, which has been talked about in detail in the policy brief released during this event.

**Message 7:** There is a need for strengthening institutional capacity by infrastructural, technological, and knowledge enhancement of concerned institutions.



## Narrative

The Thematic Track deliberated on the status of Endocrine Disrupting Chemicals (EDCs), their adverse impact on human health in India, and the policy landscape. The session commenced with a welcome address by **Dr S K Sarkar, Senior Director & Distinguished Fellow, TERI**. Having led the project from TERI “Endocrine disruptors in Indian food, minimizing children exposure and fostering a separate space for every culture and food market,” he emphasized the concerns from the health impact of EDCs. He also stated that “Extensive research underlines India as a hotspot for EDCs, and the results of the current study being an eye-opener.” He welcomed the distinguished panelists in the discourse towards science-led policies in this domain.

A documentary was screened, summarizing the research's essence under the EDIFY project and the actionable path that the scientists aim to convey to the policymakers.

**Dr Andrea Terron**, while delivering the special address, presented his thoughts on how Europe dealt with pesticides, having endocrine-disrupting properties. He also highlighted the data gaps and the need for further research to focus on regulatory actions required to resolve issues related to EDCs.

In her keynote address, **Ms Roli Singh** provided a brief overview of the food safety and standards responsible for ensuring safe and wholesome food in India. This was followed by the release of the Policy Brief titled ‘Endocrine-disrupting chemicals (EDCs) in food and drinking water in India, State-of-affairs and recommendations for policymakers. **Dr Girija Bharat** moderated the technical session, briefly introducing the project and the panelists.

**Dr Satish Sinha**, underlined that synthetic chemicals are always present in common objects such as furniture, autos, toys, and consumable meals, these being exceedingly toxic. He further pointed out the health impacts of EDC's and their link to severe reproductive and neurological disorders. The more significant implication, he said is that many of these chemicals do not remain in the products. They find or leach out into the larger environment, impacting the food chain establishing a strong connection between many of these chemicals and their impact on the food chain.

According to **Dr Luca Nizzetto**, the research on environmental contamination shows India being a hotspot for endocrine-disrupting chemicals. These chemical pollutants are present at such a young period in our development that persistent exposure can have serious negative consequences, even when exposed to low doses.

He stated that the Advanced Chemical Management System and the Food Safety Regulation began to recognize new techniques to identifying prioritized substances that exhibited possible endocrine disruptor characteristics. So considering the need and the ongoing effort to endow India with a moralistic chemical management system and take note of the scarcity of data on the dietary exposure for several priority contaminants, including some that are already recognized and endocrine disruptors, the EDIFY project was conceived as an international research exchange.

**Dr Paromita** shared her views on the usage of Phthalates, plasticizers that are added to plastic products to improve their durability and flexibility to give the shape of the product. The molecules present in additives mimics the hormones, which act as an endocrine disruptor.

**Dr Brij Mohan Sharma** commenced his presentation by stating, "Today, we live in a world where safe food is a privilege." According to the World Health Organization, one out of every ten individuals has been impacted by consuming contaminated food. Every year, 600 million instances of foodborne infections are reported, resulting in roughly 420,000 deaths, with 30% of the deaths occurring in children under the age of five. The more serious concern is the vast disparity in food safety between developed and developing countries. The annual economic loss of and medical costs from unsafe food consumption is estimated to be around \$110 billion. The factors that lead to unsafe food in developing countries include the use of unsafe water for cleaning and processing of the food, inappropriate use of chemicals in agricultural production, inadequate and poorly enforced food safety and environmental regulations. There have been several cases of chemical contamination in food around the globe. Popular cases include Minamata, mercury poisoning, in which people consumed mercury-containing fish from the Minamata Bay in 1960. Another example is Delhi, where cooking mustard oil was found chemically contaminated in 1998.

In her concluding session **Dr Girija Bharat** thanked all the dignitaries and panelists for delving deep into this crucial topic that has the potential to hinder sustainable and healthy living. She said that India's health protection, food safety, and chemical management are expected to benefit from a review of national and international policies that can provide useful insights and inspiration for the ongoing development of new chemical management policies and regulations. Furthermore, developing a better understanding of the presence and amounts of a wide range of EDCs in food products that form the main constituent of the Indian diet is a critical step toward better understanding the occurrence

and levels of EDCs in the Indian population. Very few studies have been conducted concerning interlinkages of EDC in food in India. Indian research institutions must carry out Advanced Research on EDC to generate robust datasets for strengthening India's policy framework and regulatory mechanisms.

Some of the important actionable steps discussed include:

- Requirement of risk analysis frameworks based on sources of EDCs and their impacts such that risk mitigation measures can be adopted at the source.
- Development of a collaborative platform between different ministries that monitor or regulate chemical substances such as agriculture, fisheries, dairy, food processing and pharmaceuticals among others; to ascertain harmonized protocols/ solutions to minimize exposure to EDCs.
- The necessity for advanced research on EDCs to generate robust datasets for strengthening the country's policy framework and regulatory mechanisms.
- Promotion of quality labelling systems for EDCs in food, which has been talked about in detail in the policy brief released during this event.
- Strengthening of the regulatory framework by continuous improvement based on global benchmarks
- Strengthening institutional capacity by infrastructural, technological, and knowledge enhancement of concerned institutions.

## Making Words Count @WSDS 2022

“ Need for development of a collaborative platform between different ministries to monitor and regulate chemical substances in agriculture, fisheries, dairy, food processing, and pharmaceuticals, etc.; to ascertain harmonized protocols and solutions to minimize exposure to EDCs.

*Ms Roli Singh, IAS  
Additional Secretary, MoH&FW*

“ Holistic planning and management of EDCs by integrating the key aspects of environmental sustainability and the targets of Sustainable Development Goals are crucial.

*Dr S K Sarkar  
Senior Director & Distinguished Fellow, TERI*

“Endocrine Disrupting Chemicals are linked to reproductive health, passing from one generation to another.”

*Mr Satish Sinha  
Associate Director, Toxics Link, New Delhi, India*

“ Plastic has entered our food chain. PAEs and BPA in all the food types were significantly higher in Delhi.

*Dr Paromita Chakraborty  
Associate Professor, SRMIST*

“Your mind is what you eat.”

*Dr Brij Mohan Sharma  
Research Scientist, RECETOX, Czech Republic*