

**GOVERNMENT OF INDIA  
MINISTRY OF HEALTH AND FAMILY WELFARE  
DEPARTMENT OF HEALTH AND FAMILY WELFARE**

**LOK SABHA  
STARRED QUESTION NO. 264  
TO BE ANSWERED ON THE 6<sup>TH</sup> DECEMBER, 2019  
ENVIRONMENTAL TOXINS**

**\*264. SHRIMATI SAJDA AHMED:**

Will the Minister of HEALTH AND FAMILY WELFARE be pleased to state:

(a) whether the Government has taken note that environmental toxins are an issue of serious concern in the country;

(b) if so, the details thereof and the measures taken by the Government to fight against eco-toxicity;

(c) whether the Government proposes to set up Research Centre/Laboratory to find the environmental toxicity among patients and if so, the details thereof; and

(d) the number of people diagnosed with dangerous levels of environmental toxins/heavy metals in their systems in AIIMS, Delhi recently?

**ANSWER  
THE MINISTER OF HEALTH AND FAMILY WELFARE  
(DR. HARSH VARDHAN)**

(a) to (d): A statement is laid on the Table of the House

**STATEMENT REFERRED TO IN REPLY TO LOK SABHA  
STARRED QUESTION NO. 264\* FOR 6<sup>TH</sup> DECEMBER, 2019**

(a) & (b) Government has taken note of the environmental toxins, which are generally considered as harmful chemicals having adverse effects on health and environment. It includes pollutants, heavy metals (such as lead, mercury, arsenic etc.), pesticides, insecticides and other chemicals (such as benzene, formaldehydes, radon, bis-phenol-A and phthalates etc.). Ministry of Environment Forest and Climate Change (MOEFCC) is the nodal ministry for formulating policies related to industrial chemical management and hazardous waste, to control their harmful impact / effects on environment and human health. MOEFCC is administering following set of rules for chemical and waste management under provisions of Water (Prevention and Control of Pollution) Act, 1974; Air (Prevention and Control of Pollution) Act, 1981 and Environment (Protection) Act, 1986:

(i) Manufacture Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989 and Chemical Accident (Emergency Planning, Preparedness and Response) (CAEPPR) Rules, 1996 – The MSIHC Rules, 1989 & CA (EPPR) Rules, 1996 have been notified to put in place a risk management framework for ensuring chemical safety at industrial installations. The MSIHC Rules, 1989 aim to prevent major chemical accidents arising from industrial activities as well as limit the effects of chemical (industrial) accidents. The CA (EPPR) Rules, 1996 provides statutory framework for setting up four tier crisis management framework at national, state, district and local level with organizational support. Further, the rules provide the criteria for identification of Major Accident Hazard (MAH) installations.

(ii) The Public Liability Insurance Act, 1991 – The PLI Act, 1991 provides statutory recognition to ‘no fault’ liability such that where death or injury to any person or damage to property has resulted from a hazardous substance accident, the owner of hazardous substance is held liable to provide relief through district administration.

(iii) Regulation on Lead contents in Household and Decorative Paints Rules, 2016 – The rules prohibit manufacture, trade, import and export of household and decorative paints containing lead or lead compounds (calculated as lead metal) in excess of 90 parts per million (0.009 per cent.) of the weight of the total non-volatile content of the weight of the dried paints film.

(iv) Regulation of Polychlorinated Biphenyls Order, 2016- The rules bans manufacture, import, use of Polychlorinated Biphenyls (PCBs), PCB contained equipment. The PCBs are one of the 12 Persistent Organic Pollutants (POPs) listed under Stockholm Convention for elimination. The PCBs have been used in transformer oils, capacitor oils etc. due to insulating and non-flammable properties. The rules require occupiers to identify, label and remove PCB-containing equipments from use by 2025, and manage those wastes in an environmentally sound manner not later than 2028.

(v) Regulation of Persistent Organic Pollutants Rules, 2018: The purpose of the said rules is to prohibit the manufacture, trade, use, import and export of the seven chemicals namely (i) Chlordecone, (ii)Hexabromobiphenyl, (iii) Hexabromodiphenyl ether and Heptabromodiphenylether (Commercial octa-BDE), (iv) Tetrabromodiphenyl ether and Pentabromodiphenyl ether (Commercial penta-BDE), (v) Pentachlorobenzene, (vi) Hexabromocyclododecane and (vii) Hexachlorobutadiene.

(vi) Hazardous and Other Wastes (Management and Transboundary Movement) Rule 2016: The rules have been framed in the priority of prevention, minimization, reuse, recycling, recovery, co processing; and safe disposal. The rules make it mandatory for facilities dealing with hazardous and other wastes to obtain authorization from State Pollution Control Boards/Pollution Control Committees. The rules also regulate the import and export of hazardous and other wastes in the country.

(vii) E-waste Management Rules, 2016: The rules mention manufacturer, dealer, refurbisher and Producer Responsibility Organization (PRO) as additional stakeholders for management of e-waste. The Compact Fluorescent Lamp (CFL) and other mercury-containing lamp brought under the purview of rules. The rules prescribe Extended Producer Responsibility (EPR) approach, which may include setting up of PRO, e-waste exchange, e-retailer, Deposit Refund Scheme as implementation mechanism. Collection targets have been prescribed for producers to ensure efficient channelization of e-waste and monitoring compliance under the rules.

(viii) Bio-Medical Waste Management Rules, 2016; The rules are applicable for concerned stakeholders who are involved in generation, collection, receipt, storage, transport, treatment, disposal, or handling bio-medical waste. The Rules

prescribe phasing out of chlorinated plastic bags, gloves beyond March 27, 2019 in medical applications except blood bags.

(c) The National Environmental Health Profile study was initiated by the Ministry of Environment, Forest and Climate Change aiming to make an assessment of human health impact in consequence of exposure to air pollution in 20 selected cities across the country. The study covered 20 cities in 4 zones of the country i.e. North, South, East and West and is a collaborative effort of Central Pollution Control Board (CPCB)/ State Pollution Control Boards (SPCBs)/ Pollution Control Committees (PCCs) and medical institutions. The data generated by CPCB/SPCBs/PCCs related to spatial and temporal distribution of air pollution is evaluated by medical institutions on the health manifestations. A core group of eminent healthcare professionals and representatives of AIIMS New Delhi, PGIMER Chandigarh, Indian Council of Medical Research, National Centre for Disease Control (NCDC), Ministry of Health and Family Welfare and Central Pollution Control Board (CPCB) was formed with the following objectives:

- (i) To generate evidence for impact of air pollution on human health through systematic review/meta-analysis using available studies
- (ii) To compare the level of air pollution, health outcomes across twenty cities in the country
- (iii) To determine the effects of air pollution on health outcomes
- (iv) To develop a model to predict the health outcomes attributable to air pollution

Simultaneously, to diagnose the cases of toxicity, a “Clinical Ecotoxicology (Diagnostic & Research) Facility” has been established at the All India Institute of Medical Sciences, New Delhi in August, 2019. The facility has been providing diagnostic services to the patients referred from different OPDs, Wards and ICUs of AIIMS, New Delhi. At present the diagnostic tests for toxic elements and heavy metals are being provided. The facility is also engaged in research related to environmental exposure to toxic elements, heavy metals and its impact on human health. Various collaborative research projects funded by Government of India (Department of Health Research, Indian Council of Medical Research (ICMR) and Department of Science & Technology) are ongoing.

Central Pollution Control Board (CPCB) is also monitoring the water quality of aquatic resources throughout the country in association with State Pollution Control Boards/Committees under National Water Quality Monitoring Programme (NWMP). The monitoring network covers 4022 locations covering surface and groundwater locations. The water quality is assessed for various physico-chemical, bacteriological, heavy metals and pesticide concentration.

Further, All India Institute of Hygiene and Public Health (AIIHPH), Kolkata had undertaken investigation on causes of arsenic pollution in West Bengal by developing a field model for removal of arsenic from ground water and did community based projects to mitigate arsenic pollution in West Bengal and Jharkhand. AIIHPH has also undertaken a study on leaching of toxins from Poly Ethylene Terephthalate (PET) & plastic bottles used for packaging of pharmaceutical preparations, soft drinks and alcohol.

National Institute of Occupational Health (NIOH)-ICMR has been carrying out various investigations on trace metal exposure and toxicity to investigate heavy metal poisoning, musculoskeletal disorders, pesticide poisoning etc. in various occupational groups. This Institute also has the capability to detect and measure several toxic elements including heavy metals (including lead, arsenic, manganese, etc.), pesticides, phthalates, volatile organic compounds and several other chemicals used in various industries as well as those in the environment.

In addition to above, the following institutes also have capabilities for public health surveillance for analyzing toxins:

1. Poison Information Centres at NIOH Ahmedabad, AIIMS New Delhi and Sri Ramchandra Medical College (SRMC), Chennai.
2. CSIR-Institute for industrial Toxicology Research, Lucknow
3. Forensic Labs also have the capability to detect the environmental toxins.

**(d)** During an analysis of causes of serious illnesses in patients where the causes of diseases were not forthcoming, it was found that out of the 310 patients in AIIMS, New Delhi, 147 have been diagnosed with high levels of environmental toxins / heavy metals. The environmental toxins found in the positive cases included flouride, mercury, vanadium, chromium, manganese, iron, zinc and lead.

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