



Indo-Canadian Science Programme on clean water technology

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The Department of Biotechnology and Department of Science and Technology, Ministry of Science and Technology are collaborating with Canada through the India-Canada Centre for Innovation Multi-disciplinary Partnerships to Accelerate Community Transformation and Sustainability (IC-IMPACTS), on programme focusing on Clean Water technology. Under the programme **five projects** are being implemented with Indian commitment of **Rs. 572.00 lakhs** and Canadian commitment of **Rs. 750.00 lakhs**.

Results/technologies likely to be achieved from the projects and subsequently adopted for ensuring the supply of clean drinking water and efficient water management are:

- i. **Bio-sensors for detection of toxins:** Impedance-based hand-held bio-sensors for assessment of the water quality and a nano-particle based water treatment system to eliminate toxins and microorganisms in water. Toxins which will be detected are cyanotoxin (microcystins, anatoxins) and micro-organisms (Enterococcus, Salmonella, Staphylococcus).
- ii. **Heavy metal detection and removal:** Plastic cartridges for color based test monitoring kit for detection of multiplex heavy metal. Developing fixed bed biochar columns to remove heavy metals from waste water.
- iii. **Bio-recovery from waste water (waste to wealth):** Integrated pilot-scale 915 MHz MW-AOP for advanced anaerobic digestion system for resource recovery.
- iv. **Survey to identify and explore alternatives in domestic water management:** Technology and financial appropriateness of water and wastewater infrastructure in selected cities of India.

These technologies are currently being developed with the aim that these technologies will be used in India. The technologies are being adapted and modified for Indian conditions. Technologies developed will be taken for feasibility studies and shall be implemented on pilot scale within two years.

This information was given by Minister of State for Science & Technology and Earth Sciences Shri Y.S.Chowdary in written reply to a question in Rajya Sabha today.

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