



**TELANGANA STATE COUNCIL OF SCIENCE & TECHNOLOGY  
(TSCOST)**

**ENVIRONMENT, FORESTS, SCIENCE & TECHNOLOGY DEPARTMENT  
GOVERNMENT OF TELANGANA**

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**Smt. G. Krishnaveni**

**Joint Secretary to Govt., EFS&T Dept., Govt. of Telangana &  
MEMBER SECRETARY (FAC), TSCOST**

**Theme Meeting on Outreach of Department of Atomic Energy  
Technologies for Societal Applications  
through TSCOST in Telangana State**

TSCOST organized a **Theme Meeting on Outreach of Department of Atomic Energy Technologies for Societal Applications through TSCOST in Telangana State** during 13-14 July 2017 at Conference Hall (6<sup>th</sup> floor ), Aranya Bhavan, O/o. Principal Chief Conservator of Forests- HoFF, Opp. Reserve Bank of India, Hyderabad to work-out the Areas of Application/ Launch Procedures for transfer of technologies , in consultation with the concerned line departments / user agencies.

This is the first-of-its-kind workshop in which Bhabha Atomic Research Centre (BARC), Department of Atomic Energy (DAE), Govt. of India, is collaborating with Telangana State Government through TSCOST for disseminating Department of Atomic Energy Technologies for societal applications in the fields of Agriculture, Food Processing, Water, Waste Management, Health Care etc.

Smt. G. Krishnaveni, Joint Secretary to Govt., EFS&T Dept., Govt. of Telangana and Member Secretary (FAC), TSCOST presided over the Inaugural Session. The Member Secretary, TSCOST welcomed the Scientists from Bhabha Atomic Research Centre (BARC), Department of Atomic Energy (DAE), Govt. of India and urged the State Govt. departments, Universities and Research Institutions to initiate collaborative projects with DAE, BARC in the areas of Water, Waste Management, Agriculture, Food preservation and Health care sectors and to benefit the State in making new strides in these sectors.

Shri Shrikrishna Gupta, Outstanding Scientist & Head, Technology Transfer & Collaboration Division, BARC, Mumbai delivered the keynote address on Department of Atomic Energy (DAE) Technologies and explained about the details of various technologies developed by Bhabha Atomic Research Centre (BARC), Mumbai; Institute for Plasma Research (IPR), Gandhinagar; Raja Ramanna Centre for Advanced Technology (RRCAT), Indore and other Research Institutes of DAE. He assured that the DAE and BARC, Govt. of India would extend support to the State Government, TSCOST and other departments, Universities, Research Institutes in transfer of technologies for the benefit of society and environment.

On 13-7-2017 & 14-7-2017, 12 Senior Scientists of various divisions of Department of Atomic Energy, Govt. of India made presentations on Water, Waste Management, Agriculture and Food preservation technologies and interacted with the user departments for exploring possible avenues of application of these technologies in relevant sectors.

Officials, Scientists and Academicians from Agriculture, Horticulture, Medical & Health, Municipal Administration, Forests, Rural Water Supply, Ground Water, TSIC, EPTRI, Bio-diversity Board, TSPCB, IIT, JNTU, NIMS, MNJ Institute of Oncology & Research Centre, KIMS Research Centre and several R&D Institutions attended the theme program.

The Sessions on Water & Waste Management Technologies was chaired by Smt. G. Krishnaveni, Member Secretary, TSCOST.

The Session on Agriculture and Food Processing was chaired by Dr. S. Sudheer Kumar, Registrar, Prof. Jaya Shanker Telangana State Agricultural University, Hyderabad.

Dr. Geeta K. Vemuganti, Professor & Dean, Department of Medical Sciences, University of Hyderabad, Hyderabad chaired the Session on Healthcare Technologies.

Display of several BARC developed / supported products such as Pulse Active Station, Bhabhatron, Irradiated Food Samples for Pest Disinfestation, Preservation etc. was arranged, which attracted the attention of the visitors.








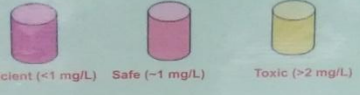
**NCCCM**  
National Centre for Compositional Characterisation of Materials  
Bhabha Atomic Research Centre

**Visual Detection and Remediation of fluoride from ground waters**

**Fluorosis patients**



**Fluoride detection chart**



Deficient (<1 mg/L)      Safe (~1 mg/L)      Toxic (>2 mg/L)

Remediation of fluoride from ground waters will enable public to consume fluoride free water and over come the problem of fluorosis. NCCCM had developed a simple and easy to operate fluoride remediation technology which is being transferred to M/S Shrinathji Kayakalp, Bhopal. The flow diagram and plants set up at NCCCM and Bhopal are as follows.

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  graph TD
    A[ADD PREPARED ADSORBENT TO FLUORIDE CONTAMINATED WATER TANK, MIX AND ALLOW TO SETTLE FOR 2 HRS] --> B[COLLECT SOLID ADSORBENT FROM BOTTOM PORT]
    A --> C[COLLECT WATER FROM TOP VALVE]
    B --> D[REGENERATION: ADD SODIUM HYDROXIDE, USE pH 11 AND FILTER]
    C --> E[FILTER THROUGH WATER FILTER AND USE FOR DRINKING]
    D --> F[COLLECT ADSORBENT, WASH WITH WATER, ADD HYDROCHLORIC ACID (1:1)]
    F --> G[COLLECT FILTERATE, RE USE]
  
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**Flow Diagram of Fluoride Remediation**

**Demonstration Plant, NCCCM, Hyderabad**

**Mini Plant, M/S Shrinathji Kayakalp, Bhopal**

**National Centre for Compositional Characterisation of Materials (NCCCM)**  
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*Lily Garden*


 A photograph of a laboratory setup on a wooden table. In the foreground, there is a large white bucket with a pink lid and a pink flower design, labeled "Lily Garden". Below it is a smaller, clear plastic bucket, also with a pink lid and "Lily Garden" branding. To the left, there are several glass bottles and containers, some with colored liquids. A white paper with some markings is also on the table. The background shows the same conference room setting as the top image, with the presentation board visible.

