



सत्यमेव जयते  
Government of India

# **28<sup>th</sup> & 29<sup>th</sup> NATIONAL CHILDREN'S SCIENCE CONGRESS (2020 & 2021)**



राष्ट्रिय प्रौद्योगिकी परिषद् NCSTC

A programme of National Council for Science and Technology Communication,  
Department of Science & Technology,  
Government of India

**FOCAL THEME:**



**Science for Sustainable Living**



**W**e are at the crossroads regarding critical and complex ecological challenges, economic stress and social instability at local, regional, national and global scales. Joy of living is disturbed with questions, uncertainties, fear, depression, frustration and envy. Globally, there is an increasing search for alternative ways to design our thought processes and how we live our daily lives; where approach of sustainable living seems to be the only way forward.

Sustainable living pleads for a lifestyle which reduces the impact of human way of life on planet Earth, by cutting down on the use of natural resources, preventing pollution and through judicious decision-making in use of material, energy, transportation, recreation, etc. Here, “sustainable lifestyle” is a cluster of habits and patterns of behaviour embedded in a society and facilitated by institutions, norms and infrastructures that frame individual choices, in order to minimise the use of natural resources and generation of wastes, while supporting fairness and prosperity for all (UNEP, 2016).

Scientific inquiry in the form of exploration, experimentation with proper validation and interpretation helps us in understanding different ways and means to adopt sustainable approaches in daily walk of life. With this perspective the focal theme “Science for sustainable living” would like to systematically use the methods of science for personal and community level decision-making that would lead to establishment sustainable ways of life (*genre de vie*) through improving/upgrading quality of life (QoL), conservation of nature and ecosystem, facilitating energy efficiency and also to achieve equity, equality, happiness, peace and harmony.

## **A REGENERATIVE APPROACH TO SUSTAINABILITY**

Sustainable living is in simple terms making a living with preserving the existing resource base without depleting the current levels and to a great extent generating renewable sources. But taking into account factors such as growing population, negative ecological impacts due to anthropogenic factors such as climate change, there is also a need for regenerating the lost resources to match future demands, even if we limit our consumption levels. Therefore the concept of regenerative sustainability plead for a net-positive approach to sustainability that is based on ‘procedural sustainability’ through collaborative planning for community development as interpreted by constructive social theory.

It is different from the regenerative development and design approach which is rooted in the notion of ecological worldview of systems that support co-evolution of human and natural systems in a caring and nurturing relationship like parental relationship.

The idea of regenerative suitability approach and regenerative design approach concern for reorientation for reducing harm and damage to produce net-positive outcomes both for environment and human at personal space to neighbourhood space scale.

Therefore, the focal theme proposes to inculcate the idea of regenerative sustainability among the young minds of the country.



## OBJECTIVES

Motivate and engage the children for inquiry based learning exercise:

1. To learn and understand ecology, economy and society and their inter-relationships.
2. To apply scientific understanding in day-to-day decision-making
3. To design and develop approach /solution for tapping potentiality and overcoming the gaps and challenges
4. To take Initiatives for personal reflection\* and transformation to community and society

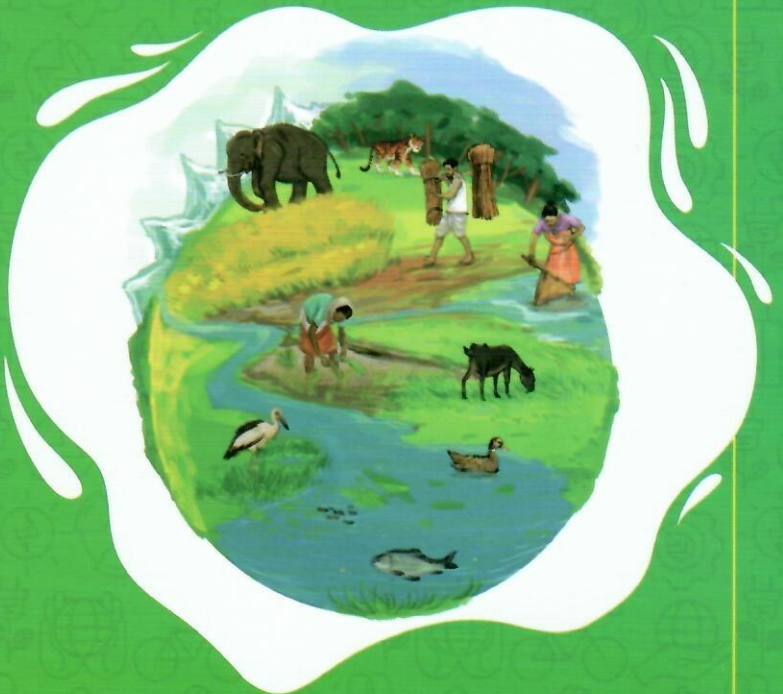
*\*means an opportunity to reconsider events, thoughts and feelings from a fresh perspective*

## SUB-THEMES

### Ecosystem for Sustainable living

#### Proposed coverage

- Understanding Ecosystem – learning about ecosystem components, their functions and interrelations ( both natural and man-made system)
- Exploring diversity of life, its role in ecology, economy and social sustainability
- Impact of human activities on ecosystem
- Conservation of biodiversity and ecosystem
- Natural Resource Management (NRM ) for ecological, economic and social sustainability
- Ecosystem approach for sustainable living





An illustration depicting various traditional sustainable living activities. In the background, a man is fishing with a net from a small boat on a river, with a thatched-roof hut on stilts on the bank. In the foreground, a woman is using a large wooden mortar and pestle, another woman is operating a traditional stone mill with a cow pulling it, and a third woman is kneeling and working with clay or pottery.

## Appropriate Technology (AT) for Sustainable living

### Proposed coverage

- Design and development of AT
- Ecosystem management, Ecosystem based production, NRM
- Responsible Consumption
- Sustainable habitat development
- Management of Human Wildlife Conflict (HWC)
- Harnessing Renewable Energy (RE), achieving energy efficiency etc.

## Social Innovation for Sustainable living

### Proposed coverage

- Social innovation for security of life, livelihoods, social inclusion, eradicating poverty, promotion of eco-sanitation
- Social innovation for Climate Change adaptation, resilience development, Disaster Risk Reduction
- Social institutional reframing, promoting social inclusion, responsible consumption and management
- Social entrepreneurship





## Design, Development, Modelling and Planning for Sustainable living

### Proposed coverage

- Defining carrying capacity, threshold limits
- Sustainable production
- Sustainable consumption
- Habitat development
- Transportation system, energy system
- Pollution monitoring-impact assessment
- Natural Resources management
- Farming system design
- Climate change resilience and adaptation, etc.

## Traditional Knowledge System (TKS) for Sustainable living

### Proposed coverage

- Documentation, validation, improvisation and application of TKS in
  - ▶ Ecosystem management
  - ▶ Conservation, resource optimization,
  - ▶ Energy efficiency
  - ▶ System efficiency
  - ▶ Promoting growth within and social inclusion

