

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF SCIENCE AND TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION No. 783
TO BE ANSWERED ON 05/02/2021

Technology to solve rural challenges

783. SHRI ANNASAHEB SHANKAR JOLLE:

Will the Minister of SCIENCE AND TECHNOLOGY विज्ञान और प्रौद्योगिकी मंत्री be pleased to state:

- (a) the details of steps taken by the Government to utilize the existing knowledge/technologies to solve rural challenges including the schemes being implemented for the purpose; and**
- (b) whether the best practices have been documented under such schemes/initiatives to use for rural transformation?**

ANSWER

MINISTER OF HEALTH AND FAMILY WELFARE; MINISTER OF SCIENCE AND TECHNOLOGY; AND MINISTER OF EARTH SCIENCES
(DR. HARSH VARDHAN)

स्वास्थ्य और परिवार कल्याण मंत्री, विज्ञान और प्रौद्योगिकी मंत्री और पृथ्वी विज्ञान मंत्री
(डॉ. हर्ष वर्धन)

(a) Ministry of Science & Technology (S&T) has taken several steps to motivate scientists and researchers to utilize existing knowledge of S&T processes, tools and technologies to find solutions to solve rural challenges on real time basis being faced by the country to improve quality of life of common man under its schemes/programs for societal development. In this direction, the Ministry is operating the following programs/schemes:

1. Science & Technology for Women
2. Technological Advancement for Rural Areas (TARA)
3. Schedule Caste Sub Plan (SCSP)

4. Tribal Sub Plan (TSP)
5. Technological Intervention for Addressing Societal Needs (TIASN)
6. Technology Intervention for Disabled and Elderly (TIDE)
7. Biotechnology based program for societal development
8. 'CSIR-800' scheme.
9. Establishing Science Technology and Innovation (STI) Hubs for SC/ST population
10. Agro-Technology Development with the aim to generate knowledge, technologies, products or processes related to agriculture and allied sectors
11. National Innovation Foundation (NIF)

Focus of the Schemes:

1. These schemes/programs aim to promote and support need based S&T interventions for livelihood improvement, self-employment generation, skill development and drudgery reduction among the target population by diffusion of proven and field-tested indigenous and improved technologies at the pilot scale.
2. These schemes/program have focus for development and improvement of indigenous technologies to benefit rural and weaker communities which include SC/ST, women, *Divyangjan* and other backward communities.
3. In this endeavor, researchers and senior scientists working in R&D Universities, Academic Institutes and S&T capable Voluntary Organizations are encouraged to develop/improve indigenous technologies to address issues and challenges of society particularly to improve the quality of life, solve real time social issues in rural areas.
4. The broad focused areas supported under these schemes/programs include agriculture and animal husbandry including post-harvest processing, integrated farming system, renewable energy application, entrepreneurship development, Engineering and Allied Aspects (Construction, Leather and Craft related technologies), Training and Skill Development, Drinking Water and Sanitation, bio-resource utilization for sustainable development linked to hygiene and nutrition as well.

5. Many innovative technologies have been incubated by National Innovation Foundation (NIF), an autonomous body of the Department of Science and Technology (DST), Government of India to scout, document, incubate and disseminate innovations and outstanding traditional knowledge which addresses the challenges of agriculture, health, veterinary and in rural areas to improve the quality of life and address the problem of livelihoods security.
6. NIF and DST are jointly implementing the INSPIRE Awards – MANAK (Million Minds Augmenting National Aspiration and Knowledge), wherein one million school students are targeted for attracting ideas and innovations annually. During 2020-21, a total of 6.53 lakh ideas and innovations were scouted from all States and UT's of the country and 84.59% of participating schools were based in rural areas of the country.

Significant achievements to address Rural Challenges:

Several novel and/or adaptive technologies have been developed & deployed by S&T capable NGOs to improve the quality of life of common man in rural areas like:-

1. Community-owned & community-operated affordable safe water solution powered by solar energy for use in Bundelkhand region;
2. Enamel coated forced-draft improved biomass cookstove developed by SPRERI, Gujarat;
3. Hands free and Automatic sanitation system developed by DA, New Delhi;
4. Foundry waste-based paver blocks technology by DA, New Delhi;
5. Water Quality Monitoring System Architecture and Device National Institute of Technology (NIT), Puducherry;
6. Portable, wireless light system for rural India by University of Petroleum Energy Studies (UPES), Dehradun
7. Low cost, portable laboratory workbench for providing science education to school children in rural areas developed by Chandigarh University, Chandigarh;
8. Low-cost carding machine for Namda Weavers of Tonk, Rajasthan developed by Foundation for MSME Clusters (FMC) Nalanda

9. Food Processing Technology using Solar Dehydration Technology to produce value added fruit bars/rolls, and formulation of nutritional supplements(drinks/powder) from locally grown fruits & vegetables, millets and/or pulses to address prevalent nutritional issues of Geriatric Population; Pregnant & Lactating mothers & to the School going children;
10. Rice De-husking machine & Domestic Egg Incubator; & Livelihood related technologies suitable for Arid/Desert Regions among others.

To strengthen such initiatives for societal benefits, continuous efforts are being made by the Government to identify the new and emerging thrust areas through brainstorming workshops involving various stakeholders to promote academic and scientific research for evolving affordable & sustainable technologies to address rural challenges.

(b) The best practices of these initiatives are recorded in the form of Final Technical Report, which is further evaluated through a well-established monitoring mechanism for each scheme/program. The technologies having potential for rural transformation are being replicated through Coordinated Network Programs for wider geographical reach and large-scale development of communities at grassroots level, particularly in rural areas. The best practices are made available through following portals: -

1. Best practices in terms of promising technologies related to rural application and transformation have been captured and put on www.dsttara.in with technology delivery & adoption details at the community level in diverse rural milieu.
2. The ideas and innovations of the creative people from rural areas of the country are documented on an innovation portal (www.innovation.nif.org.in) comprising of 1.15 lakh ideas and innovations covering Engineering, Agriculture, Veterinary and Human Health.
