

75
Azadi Ka
Amrit Mahotsav

Techनीव

अपना देश,
अपना विज्ञान @75

Testimony of Science and Technology
Empowerment of Community



JOINTLY ORGANISED BY



Ministry of Science and Technology (MoST)
Ministry of Earth Sciences (MoES)
GOVERNMENT OF INDIA

CO-ORDINATED AND IMPLEMENTED BY



Vigyan Prasar

An autonomous organization of DST
Government of India

“As we enter the 75th year of India’s Independence, it is appropriate that we appreciate, assess and evaluate our scientific progress and achievements and we should highlight India’s remarkable progress in the seven decades of its Independence.”

– DR JITENDRA SINGH

Hon’ble Minister of State (Independent Charge) of the Ministry of Earth Sciences, Minister of State (Independent Charge) of Science & Technology, Minister of State in the Prime Minister’s Office, Minister of State in the Ministry of Personnel, Public Grievances



As the nation celebrates “Azadi Ka Amrit Mahotsav” marking the 75 years of Independence, showcasing over seven decades of progressive and glorious history of its people, culture and achievements, its remarkable feats in the field of science, technology and innovation is like a feather in its cap.

On this epic occasion, the Ministry of Science & Technology (Department of Science & Technology), Department of Bio-Technology (DBT), Council of Scientific and Industrial Research (CSIR), and Ministry of Earth Sciences (MoES) is organising a programme ‘Techनीव@75’, to highlight the impact of science, technology and innovation in creating social equity, inclusion

and aspiration. The programme aims to display the STI capacity at the societal foundation level i.e., the community. Techनीव@75 will showcase the experiences and views of the empowered communities about the role of science and technology in bringing change in their quality of life resulting in strong sustainable societal foundation (नीव).

The major objectives of the programme are:

- **Capturing and highlighting the impact of STI on aspirations and socio-economic development of the community.**
- **Identifying the systemic gaps in science and technology delivery system to improve quality of life and livelihood of the community.**



- **Building pathways for strengthening preparedness, credibility and resilience at the community level through STI interventions.**

It will be a year-long programme of 75 hours (3 hours/day in 25 days), starting 15 November 2021.

The 25-day programme will be organised on following themes:

- **Natural Resource Based Livelihood**
- **Energy Access for Prosperous Society**
- **Integrated Community Resilience**
- **Healthy Society**
- **Strengthening Social Capital.**

Societal Programmes of Scientific Ministries/ Departments

- **Department of Science and Technology (DST)**, with its Science for Equity for Empowerment and Development (SEED) division, works to connect STI for empowerment of the communities living in remote and rural areas, SC/ST, divyangjan, elderly and women through science led solutions and development and deployment of location specific appropriate technologies for creation and improvement of sustainable livelihoods and better quality of life.
- **Department of Biotechnology (DBT)**, initiated the biotechnology programme for societal development in 1990 to benefit the vulnerable section of the society, particularly farmers, women and SC/ST population, with particular focus on the youth belonging to these sections from the 130 crore population of the country. DBT is currently engaged in ensuring enhancement of the human development index in Indian districts with its four major programmes under the Scheme Aspirational Districts Programme, Programme for Women, Programme for SC/ST Population and Programme for Rural Development.
- **Council of Scientific and Industrial Research (CSIR)**, is committed to utilise its scientific strength and meet the expectations of the country with its flagship programmes like Ayurgenomics: Bridging age-old wisdom to healthcare of the future, S&T interventions in medicinal and aromatic plants for rural development in Northeast India, blasts for constructive purposes, converting waste to wealth with CSIR-CSMCRI's spent wash management technology, aroma mission: Integrating agriculture and entrepreneurship and much more.
- **Ministry of Earth Sciences (MoES)**, is mandated to provide services for weather, climate, ocean and coastal state, hydrology, seismology and natural hazards; to explore and harness marine living and non-living resources in a sustainable manner for the country and to explore the three poles of the Earth (Arctic, Antarctic and the Himalayas). These services have brought socio-economic benefits to farmers, fishermen and significantly saved lives from arduous weather and sea calamities such as cyclones, Tsunami, etc.

Communities Empowered through STI Interventions

Developing agro technology for high value Himalayan medicinal plant *Chirayita* (*Swertia cordata*)

Collection of high value medicinal plants from its natural habitat is one of the main sources of income for the marginal households living high in the mountains. The medicinal plants trade in Himachal Pradesh involves 165 species growing in the wild or cultivated in the state. Regular harvesting in a destructive manner has reduced the population of medicinal plants and has threatened their existence. With SEED-DST support, Himalayan Research Group (HRG), Shimla developed an agro technology of selected species of an important herb commonly called *Chirayita* (*Swertia cordata*), with active participation of organised women groups in the high altitude village of Gohar Block in Mandi District.

HRG trained Kamrunag, a group of 16 women in semi-processing of *Chirayita*. It helped in reducing agriculture operations inside the forest and discouraged the use of inorganic inputs. It enabled marginalised women to save time and reduce their drudgery.



Improving dairy business in Jammu by amelioration of infectious diseases in milch cows

Jammu and Kashmir imports milk from neighbouring states as the prevalence of cattle diseases like mastitis, severely mar their milk production capacity. Department of Biotechnology under its societal project has selected SC/ST population of four villages in Jammu district and trained over 370 farmers for profitable dairy farming using scientific interventions. Skill development workshops were organised to enhance their technical skills in farm management.

This has motivated and nurtured many new farmers to venture into start-ups in the dairy sector. Now they are earning two to five times more than their previous income. Notably, a high percentage of youth with impressive pay packages in the private sector have started dairy farming. Mr Dinkar Kausal, MBA quit his job and started a dairy unit with pure Sahiwal cattle. Likewise, RV Brothers was started by two youth under the brand name Moo Milk. Today, they have expanded their business with an automatic bottle filling facility in Jammu.



Establishing Birhors, a vulnerable tribal community of West Bengal with S&T interventions

The DST SEED supported STI hub at Sidho-Kanho-Birsha University brought a radical change in the lives of the tribal community, Birhor, by applying the existing knowledge and technology intervention to help them adapt scientific agriculture methods, which have increased the yield and has generated revenue.

The Birhors have now started cultivating capsicum, brinjal, tomato, bean, papaya, moringa and other cash yielding varieties, along with their traditional occupation, which is rope making from forest-plants and honey



collection. They have also started pisciculture, and were trained for the production of value-added products like lemon grass tea, tulsi tea, green tea, and lemon grass powder, which has reaped rich economic dividends.

Birhors have now adapted modern agricultural practices and are open to new technological changes so as to improve their living standard.



Scientific cultivation of Seaweed proves boon for the local community in Tamil Nadu

Empowerment of the marginalised communities had always been at the helm of Science, Technology and Innovation activities by our various scientific organisations. Serving the cause of societal upliftment through scientific intervention, the Marine Algal Research Station, a unit of CSIR's Central Salt and Marine Chemicals Research Institute (CSIR-CSMCRI) located at Mandapam, Tamil Nadu has empowered the local community, particularly women, by imparting skill training to them in seaweed cultivation by deploying modern techniques and latest tools. As many as 2000 locals have been trained including many women who are the breadwinners of their families and are now earning handsome dividends on seaweed farming. Seaweeds are macroscopic algae also termed as the 'Medical Food of the



21st Century' due to their usage as laxatives, for making pharmaceutical capsules, in treatment of goiter, cancer, bone-replacement therapy and in cardiovascular surgeries. This capacity-building activity has ensured livelihood for the locals and has gone a long way in empowering them.



Changemakers Empowering the Society

Dadasaheb Gorakhnath Gaikwad Pioneer Digital Service Provider from a Tribal Community

Hailing from a small village in Aurangabad district of Maharashtra, **Dadasaheb Gorakhnath Gaikwad** is empowering his people in the true sense through digital intervention.

An alumnus of the STI hub at Dr Babasaheb Ambedkar Marathwada University, established with support from DST-SEED, Gaikwad decided to open a Common Service Centre (CSC) cum Internet Café to provide various digital services to the villagers such as photocopy, online banking, insurance, etc.

With no encouragement for higher studies, Gaikwad decided to take admission in the Computer Skill Training under Reform Intervention (CSTURI) activity course against all odds. The course is specially designed to empower the marginalised communities.

Earlier these facilities were not available in the village for which the villagers needed to travel all the way to the Taluka. Gaikwad is empowering the local people in the true sense by providing digital services and has thus contributed in improving the life and livelihood of the villagers.



Aniket Kanade 'Farmer's Own Fabricator' Customising Agriculture Tools

A resident of Kendure village in Shirur block of Pune district, **Aniket Kanade** is helping the marginalised farmers with customised farming tools.

His village is located in rain-shadow area, poor for farming activities. Aniket joined Vigyan Ashram (VA) for Diploma in Basic Rural Technology (DBRT) programme, designed for the rural youth with a focus on proving multi-skill hands-on training in engineering (metal fabrication, carpentry, and civil construction), energy (electrification), farming and food processing sectors. VA is implementing the DBRT programme with technical and financial assistance from DST-SEED.

Subsequently, Aniket started Kanade Bodybuilders and Fabrication Works, where he fabricates hand tools and bullock operated agricultural tools for local farmers. After an initial struggle, his enterprise gained the confidence of farmers, who now throng to him for his services. Widely known as 'farmers own fabricator' in his area, Aniket with his skills and determination has emerged as the Changemaker of the community.

Programme Details

75 hours programme spanning 25-days (3 hour per day).
In this three-hour programme, one hour will be dedicated
for each of the three sessions mentioned below:



**COMMUNITY
FEEDBACK AND
EXPERIENCE
SHARING**



**SOCIETAL
CHANGEMAKERS'
CONCLAVE**



**ROUNDTABLE
DISCUSSION
FOR THE FUTURE
ROADMAP**

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For more details about the programme log on to:

<https://www.indiascienceandtechnology.gov.in/techneev@75>

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