



Science & Technology Resource Centre

Gondwana University, Gadchiroli

A centre of excellence for sustainable value creation conceived & funded by Rajiv Gandhi Science & Technology Commission (RGSTC), Mumbai, Govt. of Maharashtra.

Issue No. 25

Monthly Newsletter

Sep-Oct 2021



Role of Science and Technology in Human Capacity Development

Developing countries face numerous challenges in the process of building their scientific and technological human capacity; particularly in relation to the training and accumulation of human resources or specialized human capital in science, technology and innovation. The lack of organized and sustainable higher education options (masters and doctoral programs), non-existent or low-quality academic programs, lack of research-oriented study options, and other factors are strong contributors to the emigration of talent from underdeveloped rural pockets to urban spheres.

The essence of how science and technology contribute to society is the creation of new knowledge, and its utilization to boost the prosperity of human lives, and as solutions to everyday challenges.

Investment in Science, Technology and Innovation (STI) is essential for economic development and social progress. Research and development (R&D) can foster sustainable development by building greener, more inclusive societies. To be effective, however, infrastructure development, technology transfer and both public and private level R&D need to be nurtured and regulated via effective policies.

The formulation and implementation of adequate science, technology and innovation policies is critical to tackling contemporary challenges

- Strengthen institutional capacity for research & improve science education in particular at secondary and tertiary levels
- Identify strategic areas for enhancing national and regional research capacity, infrastructure for engineering and innovation, and designing new institutional strategies at national and regional levels
- Enhance university-industry collaborations, technology transfer and entrepreneurship

Science and Technology Resource Centre (STRC), a centre for excellence in sustainable value creation is entrusted with leveraging available natural resources, traditional knowledge and low-cost rural technologies for capacity development of the tribal communities of Gadchiroli with primary focus on:

- Applied knowledge enabled human capacity development
- Skill based human capacity development
- Appropriate technology enabled human capacity development

STRC believes in maximizing peoples' potential to enable individuals/focused groups to optimize their traditional practices through enhancement of capacities and adopting to appropriate S&T and knowledge enabled development.

The author heads STRC. This article titled Role of Science and Technology in Human Capacity Development is published under Science, Technology and Innovation (STI) for Atma Nirbhar Bharat efforts as part of "Azadi Ka Amrut Mohatsov".



& NEWS & EVENTS



1st Joint Meeting of the Reconstituted Governing Body (GB) and Program Advisory Board (PAB) of STRC

The first joint meeting of the reconstituted Governing Body (GB) and Program Advisory Board (PAB) of STRC-GUG was held on Wednesday, 15th September 2021 under the chairmanship of Dr. C.D. Mayee, Chairman GB (STRC-GUG). Considering the travel restrictions owing to the pandemic situation, meeting was held through both virtual and physical mode. Participating members provided a lot of constructive inputs and insightful ideas to enrich STRC efforts in S & T based livelihood enhancement in Gadchiroli.

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The Chairman, GB (STRC-GUG) provided a brief on reconstitution of the 'bodies'. He shared his views on how STRC moves forward from here and the project sustains itself. He reiterated the fact that University plays a vital role in the taking STRC's mandate forward.

Dr. Shriram Kawale, Pro-Vice Chancellor-GUG, emphasized on the primary objectives of the STRC and why it is instituted within GUG.



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Shri. Girish G. Sohani (Principal Advisor and Trustee, BAIF), suggested standardized element of bamboo poly-houses/ poultry houses, DIY kits and lockdown kits in collaboration with Bamboo Society of India and advised STRC to expose itself to the experiment at Palghar. He also suggested collaboration with BAIF with regard to initiatives on selected NTFPs such as Mahua and Charoli.



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Shri Sanjeev Karpe (Managing Director, KONBAC, Sindhudurg) shared his views on challenges to provide a sustainable readymade market for bamboo products and related value chain, expressed possibilities of KONBAC collaboration on developing training and capacity building programs for local artisans and also support in conducting market studies to understand demand of bamboo products.



10th Anniversary

Celebration of
Gondwana
University,
Gadchiroli (GUG)



DASHAMANOTSAV



Gondwana University, Gadchiroli (GUG) celebrated its 10th Anniversary (Dashamanotsav) on 2nd October 2021. During this 3 day extravaganza, multiple sessions and workshops like Capacity Building Initiatives, Interactive Sessions with Subject Matter Experts, Managerial Workshops, etc. were organised. During the event, STRC actively participated in the one day exhibition on "Innovative ideas" organised by Innovation, Incubation and Linkages Department of GUG. Different innovative projects and ideas were displayed by various institutions where STRC presented its innovative programs, products and technologies. This exposure platform helped STRC to showcase its R & D Tools and Technology, Bamboo Products, One Year Undergraduate Diploma in Bamboo Entrepreneurship & Design, S&T Application Scheme and other significant efforts through this event.



Exhibition

STRC-GUG



STRC's Quest to help Traditional Healers of Gadchiroli and Their Practices to Get Due Recognition

Gadchiroli District has rich history of traditional healing practice using indigenous medicinal knowledge. Since the region is blessed with rich floral diversity especially important medicinal plant resource, local traditional Healers (*Vaidus*) use specific plants and plant parts to treat multiple ailments and serve people in their vicinity either free of cost or with very minimal fees. Although, the precious traditional knowledge, in most cases is passed on from generation to generation, however, there is an eminent danger of losing the core knowledge unless it is preserved or scientifically documented. To promote and recognize such traditional healers, the Quality Council of India (QCI), as the apex quality facilitation body set up by Central Government, launched the Voluntary Certification Scheme for what is now being called the Traditional Community Healthcare Providers (TCHPs).

Looking at the national scenario, Ministry of Tribal Affairs Govt. of India, regularly developing documentation through large scale projects, targeted studies, State Biodiversity Boards etc. feeding the data into India's Traditional Knowledge Digital Library (TKDL).

Considering the above scheme as base STRC has initiated an unique effort of developing a **Directory of Traditional Healers of Gadchiroli** which may further act as a catalyst for Voluntary Certification of Traditional Healers so that the local Vaidus of Gadchiroli get due recognition.



Key Features of the Collective Mechanism

- Streamlined collection of NTFPs, creating storage facilities, employing good storage practice, and primary processing for higher net value ensuring additional income to the primary collectors.
- Capacity building of primary collectors on sustainable harvesting technology, good handling and storage Practices minimizing post harvest losses.
- Shield against adverse price fluctuations and distress sale through analysis of NTFP market trends.
- Ease of doing business with Ensuring communication/ dissemination of correct market information on price/volume.
- One Stop Shop for NTFP Marketing and Immediate benefit sharing.

Streamlining NTFP Collection in Gadchiroli

Gadchiroli's rich forest resources especially non-timber forest produce (NTFP) is majorly comprised of Mahua Flower and seed (Tori), Charoli, Karanj, Palas, Hirda, Behada, Awala, Salai and various wild vegetables and wild honey. Extensive surveys and multiple interventions in the district reveals that, the mechanism of NTFP collection is not streamlined and market for the produce is not regulated, hence, there is a serious need to streamline the NTFP collection through capacity development of primary gatherers/ NTFP collectors and setting up a cluster level centralized NTFP collection mechanism.

To initiate such an effort STRC has taken a cluster level approach for collection of NTFPs especially through primary gatherers/collectors led by a cluster level committee with basic storage and processing infrastructure in Kharkhadi (Dhanora). STRC expects that it may lay a foundation to develop an organised supply chain along with a centralized infrastructure to act as a centre for training & capacity building, primary processing of NTFPs and a platform to establish market linkage. This collective mechanism could be crucial in creating multiple opportunities for livelihood enhancement for the local communities.



Through such interventions at multiple locations in Gadchiroli STRC aiming to streamline collection and marketing of NTFP commodities through human capacity development ultimately leading to develop small scale enterprises at cluster level in tribal region.

Social Audit: Evaluation of Community Perceptions about STRC Livelihood Enhancement Programs

Monitoring and evaluation of livelihood centric techno-social developmental initiatives is important to understand the community perception of the programme, and its impact on beneficiary and non-beneficiary groups (rippling effect). STRC is actively engaged in Monitoring and Evaluation (M & E) exercise; Social Auditing of projects implemented by STRC since July 2021. STRC formulated suitable framework including applicable and specific indicators, questionnaire and interaction modules for the M&E exercise. Using applicable methodology project wise beneficiaries (sample) were selected, interacted and their response were recorded. Intensive field visits, in-depth/ semi-structured interviews, informal interactions and observational analysis were carried out as part of the exercise.

The following indicators were considered during the formulation and execution of M&E framework and responses were recorded



Improved quality of life for the community

Better water resources, health facilities, availability of natural resources etc.



Participation

Level of commitment, Influence on each other, Participation with voice and vote.



Awareness

Experience in that specific activity, Training / workshop attained.



Adaptability

Acceptance of improved practices, External input dependence.



Economical

Income generation through the activity, Availability of market (freedom to sale), Yield.



Institutional

Reliance of subsidies, Level of conflict in community, level of trust in public institutions.



Environmental

Availability of resources, Conservation practices, surrounding natural biodiversity.

Conclusion of the Assessment

1. Preliminary assessment shows positive interest of beneficiaries continuing implemented technology and sustainable practices in livelihood centric activities.
2. Economic indicator shows significant positive changes in enhancing economic health of the family.
3. Social indicators reflects the rippling effect (non-beneficiary involvement) to a greater extent.
4. Qualitative responses indicates the regaining of trust on organizations and public administrations, institutions in general terms through STRC interventions.
5. This exercise also identified the grey areas or gaps where capacity building and handholding is needed at a larger scale.