



Technology | Enterprise | Development

In this Issue

From the CPO's Desk

Low-Cost Bamboo Polyhouse: A boon for Marginal Farmers for Crop Security and Land Use Optimization

Article

Significance of Social Auditing in Livelihood Sector

News & Events

- † **Bamboo Polyhouse Initiative**
- † **Livelihood Scoping and Community Interaction in Burgi, Etapalli**
- † **Exploring possibilities of collaboration with National Bank for Agriculture and Rural Development, Chandrapur**
- † **'One Staff One Grampanchayat' Initiative**

Glimpses of the Month



**STRC-GUG
Jurisdiction**

**Gadchiroli
Chandrapur
(Maharashtra, India)**



**Science & Technology Resource Centre
Gondwana University, Gadchiroli**

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

**October 2022
(issue #37)**

Low-Cost Bamboo Polyhouse: A boon for Marginal Farmers for Crop Security and Land Use Optimization

India has varied agro-climatic conditions across the country and crop production in general is influenced by external factors. To negate most of the external factors and to take up crops in a controlled micro climatic condition, polyhouse-based crop production is considered more effective and beneficial. One can grow crops in polyhouse that are otherwise impossible to grow under natural climatic conditions of that area, like growing strawberries in the plains of India. Major benefits of having crops in a polyhouse are; controlled environment, non-dependency on season, no bearing on external climatic condition, protection from disease and pests, better quality of produce, efficient land utilization, higher yield, growth uniformity, shorter crop-cycle, better drainage, and aeration system etc. All these factors lead to higher income for farmers.

Generally, two major kinds of polyhouses are commonly used, namely; Open Ventilated Polyhouse System (OVPS) and Environmentally Controlled Polyhouse System (ECPS). Furthermore, the Environmentally Controlled Polyhouse System has three sub-categories such as; Low-tech, Medium-tech and High-tech.

Low-tech ECPS the built using low-cost material such as wood or bamboo with UV film as cladding is believed to have the potential to be more popular and widely accepted as it is low-cost and easy to maintain. Hence, Bamboo Polyhouse has immense scope as a replicable model. There have been a lot of research done and few pilot initiatives carried out to develop a standard operating procedure for Bamboo Polyhouse, especially through a collaborative pilot by CTARA- IIT Bombay and BAIF in Palghar district of Maharashtra.

Taking this initiative forward, STRC has decided to incorporate the Bamboo Polyhouse initiative into its framework. A cadre of artisan will be trained on the SOP (developed by CTARA, IIT Bombay) to construct Bamboo Polyhouse and two such pilots have been planned in Gadchiroli. STRC sees a lot of scope in using Bamboo Polyhouse concept for Aromatic Plant Gardens (experimental plots), Nurseries and Nutrigarden (vegetable growers) across Gadchiroli.

(The author heads the Science & Technology Resource Centre, Gondwana University, Gadchiroli)



Significance of Social Auditing in Livelihood Sector

Social audit exercise is adopted to measure, understand, and document the actual quality of impact of a socio-economic development program originally designed to bring specific and tangible benefits to the society concern. Like a financial audit which verifies procedural expenditure, a social audit validates how programs have been implemented and services have been delivered, with the goal of making them more impactful and reflective of social goals. Essentially, outcome of a Social Audit mirrors the actual impact of the development program from the perspective of the beneficiaries and society at large. It helps identify the gaps between the objectives, that program had set out to achieve and the actual impact. Carefully conducted social audit exercise also helps in bringing shuttle changes in the implementation strategy, there by influencing program's long-term impact.

A Social Audit exercise is mainly based on four principles; administrative and financial transparency, community participation, beneficiaries' participation, and accountability. A social audit practice uses various techniques and methodologies as per the nature/type of organization, and service. Preparatory groundwork, Data/information collection and analysis, cross verification in the field and follow-up these are the basic ingredients of the social audit practice. Social audit covers a range of stakeholders and practices and can be taken up in different forms. It can be undertaken independently by the Community Based Organizations (CBOs) or jointly with the government departments. For a fair and unbiased assessment of the social impact a certain program has created, competent third-party Social Audit is carried out.

Science & Technology Resource Centre (STRC) has been implementing appropriate technology based natural resource dependent multiple livelihood enhancement programs in the Gadchiroli region since the past few years. STRC is mandated to bring in tangible long term socio-economic benefits leading to overall science and technology based human development of the community groups such as; Agri-Allied farmers, fish farmers, primary collectors of NTFPs, Artisans and Traditional Healers.

As responsible techno-social organization, STRC has conducted periodic internal audits to assess impact of the programs, however, a third-party social audit exercise of specific interventions would help assess the quality of program implementation from the beneficiary's perspective and would help us design and implement our programs to create better impact. In this context, Vasantrao Naik State Agriculture Extension Management Training Institute (VANAMATI), Nagpur has been assigned to carry out the said exercise for STRC in the last quarter of 2022.

(The author works at Science & Technology Resource Centre as a Scientific Officer)





Bamboo Polyhouse Initiative

Science & Technology Resource Centre (STRC), Gondwana University, Gadchiroli has taken the initiative to incorporate the concept of Bamboo Polyhouse into the STRC framework. Following suggestions from the Governing Body - STRC, a team from the Centre for Technology Alternatives for Rural Areas (CTARA), Indian Institute of Technology, Bombay (IIT- Bombay), led by Dr. Narendra Shah, Member Secretary, Rajiv Gandhi Science & Technology Commission, Mumbai, Government of Maharashtra, visited Gondwana University Gadchiroli on 15th October 2022. The team assessed the proposed site for bamboo poly-house in the premises of Krishi Vigyan Kendra, Sonapur and expressed satisfaction over the site condition.

The visiting faculties from CTARA, IIT-B also had a detailed interaction with the Chairman, Governing Body - STRC, Hon'ble Vice Chancellor, Gondwana University Gadchiroli, and Chief Program Officer & Head, STRC, and the team in this context.

A brief action plan has been prepared to initiate the pilot in Gadchiroli.

Livelihood Scoping and Community Interaction in Burgi, Etapalli

Science & Technology Resource Centre (STRC) conducted an exploratory field visit to Burgi Gramsabha of Etapalli taluka during 29th and 30th Sep 2022 to identify the scope of science and technology based livelihood interventions in the region.

During an interaction with the local Sarpanch, Shri. Vilas Gawade, visiting STRC team could gain an overall understanding of Burgi Cluster. Subsequently few community level interactions were held. This exercise helped us to understand the livelihood scenario, community aspirations at large, key driving factors for local governance, challenges at individual and community level. At the end of the discussion, STRC could identify and assess the potential opportunity for S & T based livelihood intervention.

STRC team also visited 'Wainganga Hatchery Unit' in Ankhoda, Chamorshi. Considering the availability of community tanks and other water bodies, program intervention in aquaculture is envisaged in the region.



Exploring possibilities of collaboration with National Bank for Agriculture and Rural Development, Chandrapur



Science & Technology Resource Centre (STRC), Gondwana University, Gadchiroli is exploring collaboration opportunities with National Bank for Agriculture and Rural Development (NABARD), Chandrapur. NABARD offers a lot of scope in on-farm/off-farm direct livelihood development support in form of inputs and institutional building for rural entrepreneurship etc. In this context, Shri Ashis Gharai, Chief Program Officer and Head, STRC invited Shri. Trunal Fulzele, District Development Manager, NABARD, Chandrapur to discuss possibilities. Series of discussions have been organised since last month leading to development of few joint proposals. STRC, Gadchiroli and NABARD, Chandrapur are now working on developing Detailed Project Reports (DPRs) under relevant schemes such as; Farm Sector Promotion Fund, Livelihood Enterprise Development Program, Micro Enterprise Development Program, Farmer Producer Organization / Off-farm Farmer Producer Organization, Rural Haat/ Rural Mart etc.

We expect further progress in this collaboration effort in near future.

'One Staff One Grampanchayat' Initiative

To enhance its reach and impact, Science & Technology Resource Centre (STRC) has introduced 'One Staff One Grampanchayat' initiative. Under this initiative, each staff (program) has been assigned to identify and take complete responsibility of one Grampanchayat with regard to taking STRC's current Science and Technology based livelihood enhancement activities to each of these Grampanchayats. Through scientific assessment, planning and execution of need based programs, each staff responsible for the concerned Grampanchayat, would identify scope, segregate beneficiaries for each possible intervention and plan action for them.

As part of the preliminary exercise, each staff member made their first visit to the concerned Grampanchayat. The subsequent steps would include Detailed Panchayat Profiling - Demographic Database, Resource Mapping of Forest and Forest resources, cultivable and unused land, water bodies, schools, healthcare facilities, self help groups etc. along with overall Human Development Index. Scoping exercise would be carried out to identify possibilities of extending current STRC interventions and new intervention planning. Stakeholder identification, linkages and development of targeted field implementation plan will be carried out subsequently.





Promotional activities of 'Vaidu Chikitsalay' a unique platform to promote traditional healers and healing practices.



'Common Facility Centre' for Bamboo and Non Timber Forest Produce based 'Primary Processing Centre'- Proposal has been submitted to the Manav Vikas Mission, Gadchiroli for the year 2022-23.



Capacitating 'Village Level Committee' to foster the start of Non Timber Forest Produce based 'Primary Processing Centre' at Kharkadi, Dhanora, Gadchiroli.



Science & Technology Resource Centre is engaging with traditional bamboo artisans across Gadchiroli to bring them into the main stream.



Inspection of the proposed site for Bamboo Polyhouse Development at Krishi Vigyan Kendra, Gadchiroli



Orientation of Science & Technology Resource Centre ground staff on QField (application based data collection)



Field action to develop a comprehensive Vaidu Directory of Gadchiroli Region - Glimpses of Traditional Healers from Etapalli survey.