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STRC NEWSLETTER

Science & Technology Resource Centre Gondwana University, Gadchiroli

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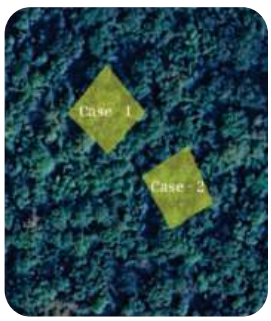
Shri. Swapnil Girade
Chief Program Officer & Head, STRC



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From the CPO's Desk

Artisan Economy:
Tradition as a Driver of Local Development

Shri Swapnil Girade
Chief Program Officer and Head, STRC

India's artisan economy represents a powerful blend of cultural heritage and livelihood generation. Rooted in centuries-old traditions, the sector sustains millions of rural and tribal households through crafts such as handloom weaving, bamboo work, metal craft, pottery, woodcraft, and tribal art. Far from being a residual activity, artisanal production forms one of the country's largest decentralized employment systems and continues to play a vital role in inclusive economic development.

At the national level, the artisan and handicraft sector is recognized as a strategic component of India's development framework. The Ministry of Textiles, through the Office of the Development Commissioner (Handicrafts), has introduced policy measures focused on skill development, cluster-based growth, market access, design innovation, and export promotion. Support for Geographical Indication tagging, national craft awards, and integration of artisans into broader skill and entrepreneurship missions reflects an evolving policy intent to position artisans as economic contributors rather than informal workers.

Despite this policy support, ground realities reveal persistent challenges. A significant number of artisans continue to operate in informal settings with limited access to organized markets, institutional finance, design inputs, and digital platforms. Income insecurity and dependence on intermediaries remain common, particularly in remote and tribal regions. However, successful craft clusters across the country demonstrate that when artisans receive structured support, traditional skills can be transformed into sustainable enterprises contributing to local economies and exports.

In this broader national context, the artisan economy of Gadchiroli and Chandrapur holds significant potential.

These districts possess strong traditions of bamboo craft, metal work, textiles, and tribal art rooted in local ecology and indigenous knowledge systems. At the same time, artisans here face challenges related to remoteness, weak market linkages, and limited branding and design support.

With Gadchiroli emerging as a rapidly developing district, there is an opportunity to reposition artisans as central actors in local economic transformation. Bamboo-based crafts and forest-linked enterprises, supported through skill upgradation, common facilities, market linkages, and institutional backing, can generate sustainable livelihoods and value addition. Chandrapur's proximity to urban and industrial markets further enhances opportunities for artisan products.

Strengthening the artisan economy in these regions is therefore not only about preserving tradition but about enabling dignified livelihoods, fostering rural entrepreneurship, and integrating indigenous skills into the development trajectory. Institutions such as STRC can play a catalytic role by supporting research, capacity building, and ecosystem development to ensure that artisan-led growth becomes a key pillar of regional development.

Article

Estimates to Evidence: Rethinking Bamboo Resource Assessment for Gram Sabha - Led Governance

Shri. Priyank Kale
Scientific Officer,
Bamboo Craft & Livelihoods, STRC

Bamboo has emerged as one of the most strategically important minor forest produces in Scheduled Areas, offering significant potential for livelihood generation, local enterprise development, and ecological restoration. Yet, despite progressive legal frameworks such as the PESA Act, CFR allocations that recognise the authority of Gram-Sabhas over bamboo, its actual governance and utilisation remain fraught with ambiguity. A key reason for this disconnects lies in how bamboo resources are currently assessed and represented.

At present, bamboo availability is largely understood through periodic surveys and assessment reports prepared by the Forest Department. These provide broad estimates of bamboo volume and distribution, primarily for working plan and administrative purposes. While such assessments may suffice at a macro level, they fall short when applied to village-level decision-making. Bamboo is a highly site-specific and dynamic resource—varying by species, clump age, density, and regeneration cycle. When rough, aggregated figures are used to operationalise Gram Sabha rights under PESA, confusion is inevitable, particularly around harvesting permissions, quantities, and sustainability norms.

This lack of precision creates multiple challenges. Gram Sabhas are expected to exercise ownership and management rights without having access to reliable, verifiable data on the actual bamboo stock within their jurisdiction. As a result, harvesting decisions often become contested, implementation delays occur, and mistrust grows between communities and implementing agencies. In many cases, bamboo-based enterprise plans fail to take off simply because neither the producers nor potential buyers have confidence in the estimated availability of raw material.

What is needed, therefore, is a shift from approximate assessments to evidence-based bamboo resource mapping that is accessible and usable at the Gram Sabha level. Advances in remote sensing, geospatial technologies, and mobile-based field tools now make this both feasible and cost-effective. High-resolution satellite imagery, drone-based surveys, and geo-tagged field inventories can together provide a clear picture of where bamboo exists, in what density, and in what condition. When such data are validated through ground truthing and local knowledge, they

offer a far more accurate and transparent basis for planning.

The real value of technology lies not merely in better maps, but in better governance. Scientifically mapped bamboo resources enable Gram Sabhas to make informed decisions on sustainable harvesting, regeneration cycles, and annual harvest limits. They also strengthen the foundation for bamboo-based businesses by allowing realistic supply projections and reducing uncertainty for value chain actors. In this sense, technology becomes an enabler of rights rather than a replacement for community authority.

Local institutions like universities have an important role to play in this transition. By bridging science, policy, and community institutions, such organisations can help translate advanced technologies into practical tools for village-level resource management. Capacity building of local youth, participatory mapping with Gram Sabhas, and integration of scientific data with traditional ecological knowledge are critical to ensuring that resource assessments are both credible and locally owned.

Ultimately, the successful implementation of PESA in the context of bamboo depends not only on legal recognition of Gram Sabha rights, but on the availability of robust knowledge systems that support those rights. Moving from rough estimates to precise, participatory bamboo mapping is essential to reduce conflict, promote sustainable harvesting, and unlock the full economic potential of bamboo-based livelihoods. In the long run, transparent and technology-enabled resource assessment may prove to be one of the most powerful tools for strengthening community-led forest governance.

Cover Story

77th Republic Day Celebrated at Gondwana University

Gadchiroli | 26th January 2026

Gondwana University celebrated the 77th Republic Day with great enthusiasm and patriotic fervour on its campus. The National Flag was hoisted by Vice-Chancellor Dr. Prashant Bokare, followed by the collective recitation of the Preamble to the Constitution.

In his address, Dr. Bokare highlighted the significance of the Constitution and the core values of democracy, justice, and equality, and extended Republic Day greetings to the university community.

University officials, faculty members, non-teaching staff, students, and staff of the Science and Technology Resource Centre (STRC) were present in large numbers, marking the occasion with unity and national pride.

What's Making News

STRC Explores Strategic Collaboration with ICAR-CIFE, Kakinada

Kakinada | 20–21 January, 2026

STRC undertook a two-day exposure and consultation visit to the ICAR–Central Institute of Fisheries Education (CIFE), Balabhadrapuram, Kakinada on 20–21 January 2026. The visit marked a significant step towards building a long-term collaboration aimed at strengthening aquaculture based livelihoods, technology transfer, and skill development in the tribal-dominated districts - Gadchiroli and Chandrapur.

Discussions with CIFE experts led to the identification of key collaboration areas, including replication of CIFE's low-cost portable carp hatchery model to promote local fish seed production among small and marginal farmers. Another major focus was the development of a circular economy model through value-added fish products, with training support for women led Self-Help Groups and linkage to Anganwadi and Ashram Schools to address nutritional deficiencies.

The partnership also envisages promotion of integrated aquaculture and aquaponics, along with a structured three-tier awareness and career development program for school students, rural youth, SHGs, and institutional stakeholders. Upon formalization of an MoU, CIFE will extend technical support for training, content development, project formulation, and establishment of an AquaLab at STRC. The visit successfully translated exploratory discussions into actionable collaboration pathways, setting the stage for joint implementation in the coming months.

STRC Advances Livelihood Technology Adoption through Continued Collaboration with NIF

Gadchiroli | January, 2026

Building on last month's technology outreach initiatives, the Science and Technology Resource Centre (STRC), Gondwana University, Gadchiroli, further strengthened its efforts to promote sustainable livelihood solutions in collaboration with the National Innovation Foundation (NIF) – India.

As part of this ongoing partnership, STRC organised an online demonstration on 23rd January of the Bamboo Splitter and

Bamboo Stick Making Machine, which are among the seven grassroots innovations supported by NIF and facilitated through STRC. The session showcased efficient, low-cost bamboo processing technologies designed to significantly reduce manual labour while enhancing productivity, particularly in rural and tribal contexts.

Continuing this engagement, STRC also conducted an on-site demonstration of the Leaf Plate Making Machine and Multi-Spice Grinder Machine on 5th January at its campus. The initiative aimed to strengthen Self-Help Groups (SHGs) and farmer communities by introducing eco-friendly leaf plate production and value-added spice processing technologies that utilise locally available resources.

The programme was attended by 22 participants from Jambhli, Jangada, and Karkadi villages of Dhanora block, Gadchiroli district. Through these sequential interventions, STRC reaffirms its commitment to facilitating the adoption of grassroots innovations and fostering sustainable, community-driven income generation through appropriate technology integration.

STRC Participates in Strategic Meeting on Livestock-Based Cluster Development at Nagpur

Gadchiroli | January 3, 2025

STRC participated in a strategic meeting on livestock-based cluster development in the Nagpur Division under the MahaSTRIDE initiative, led by the Maharashtra Institution for Transformation (MITRA) with support from the World Bank.

The meeting was held in the presence of Smt. Vijayalakshmi Bidari (IAS), Divisional Commissioner, Nagpur, and attended by Regional Assistant Commissioners (Veterinary) and representatives from MAFSU, Centre for People's Collective, MahaSTRIDE, and STRC represented by Shri Gandharv Pilare (SO) and Shri Vinod Varthya (JSO).

Discussions focused on indigenous livestock breed conservation and characterization, artificial insemination, fodder development, and village-level animal disease diagnostics.

Special attention was given to Gadchiroli's region specific livestock strategies, including interventions within Community Forest Rights (CFR) areas.

Smt. Bidari directed STRC to submit a proposal on cattle characterization in Gadchiroli, in collaboration with MAFSU and the Centre for People's Collective, to the District Administration, Gadchiroli, keeping Regional Commissioner in the loop.

Training on Bamboo Ply Making Successfully Conducted at Lakhandur

Lakhandur | January 17, 2026

Lakhandur recently hosted a tool based bamboo ply training programme for local artisans, focusing on hands-on skill development in the slat-making process. Participants received practical guidance on operation and standardised production techniques to enhance their technical capabilities.

The bamboo slats produced during the training will be procured as raw material for product development at the STRC Model Production Unit (MPU). This initiative strengthens local artisans' skills and supports sustainable livelihood opportunities through structured training and capacity-building interventions.

Environmental Education for Tribal School Children: Module on Classification of Wild Vegetable Conducted at Schools

Gadchiroli | January, 2026

As part of STRC's Environmental Education for Tribal School Children (EES) initiative, Module 4 on the “Classification of Wild Vegetables” was successfully conducted with the objective of strengthening students' understanding of plant diversity and fundamental botanical principles.

The module was implemented across the Schools of Kaneri (Gadchiroli), Markanda (Chamorshi), Rangi (Dhanora), Yewali (Gadchiroli), Karwafa (Dhanora), and Moushikhamb (Gadchiroli).

The session introduced students to the concepts of plant classification and variations among locally available wild vegetable species through a structured, observation-based learning approach. The module was effectively facilitated by Ms. Asmita Redij, Ms. Zeenat Begam Sayyad, and Mr. Aditya Bele, who guided students in identifying distinguishing plant characteristics and understanding the scientific basis of classification.

Students demonstrated a high level of attentiveness and active participation throughout the session. Their observational skills were noteworthy, and their responses during interactive discussions reflected satisfactory comprehension and strong grasping ability. Overall, the session significantly contributed to enhancing environmental awareness and strengthening foundational knowledge in plant sciences among tribal school children, thereby reinforcing the broader objectives of the EES programme.

Visit by Eminent Personalities

Resident Deputy Collector and Additional District Magistrate Shri. Ashish Wankhede Visits STRC to Explore S&T based Initiatives of STRC

Gadchiroli | January 25, 2026

Shri Ashish Wankhede, Resident Deputy Collector, Gadchiroli, visited STRC to gain insights into its S&T based livelihood initiatives.

Team STRC briefed him on the various interventions and showcased Gondwana Craft products, bamboo polyhouse developed for medicinal plant nurseries, and model production unit. The visit highlighted STRC's integrated approach towards sustainable livelihoods and community based development.

Exposure Visit on Gram Sabha Empowerment: Delegation from Vasundhara, Odisha

Gadchiroli | January 20, 2026

To gain insights into the Gram Sabha Empowerment Programme, a delegation of 35 district-level coordinators from the NGO Vasundhara, Odisha, undertook an exposure visit to the EKAL Training Centre and Science and Technology Resource Centre (STRC).

The delegation was oriented to STRC's vision, functioning, and key initiatives by Shri Gandharv Pilare, Scientific Officer, who highlighted the Centre's work in community empowerment, grassroots governance, and sustainable development. The participants explored STRC's programs and expressed appreciation for its community driven and science based approach.

The team also visited the STRC Model Production Unit, gaining exposure to practical production processes and structured skill-development practices supporting sustainable livelihoods. The visit provided a valuable opportunity for knowledge exchange and experiential learning, strengthening perspectives on institutional capacity building and grassroots participation.

Distinguished Visit of Mrs. Minakshi Agrawal with Deputy Collector (MGNREGA) to STRC

Gadchiroli | January 21, 2026

Smt. Minakshi Agrawal, wife of Shri Rajesh Agrawal, Chief Secretary, Government of Maharashtra, along with Smt. Smita Belpatre-Patil, Deputy Collector (MGNREGA) visited STRC to gain an overview of the Centre's initiatives and programs. During the visit, she observed the Gondwana Craft products with keen interest and appreciated for craftsmanship and innovation.

Shri. Swapnil Girade, Chief Project Officer & Head, STRC, provided a detailed briefing on the Centre's mandate, key initiatives, and community-centric programs, with special emphasis on the Gondwana Craft initiative its operational processes, skill development focus, and impact on promoting sustainable livelihoods.

STRC Signs MoU with BIT, Ballarpur to Strengthen Collaboration in Food Technology and Tribal Enterprise Development

Ballarpur | January 9, 2026

Science and Technology Resource Centre (STRC), Gondwana University, Gadchiroli, officially signed a Memorandum of Understanding (MoU) with Ballarpur Institute of Technology (BIT), Ballarpur to establish a structured and long-term institutional partnership in the field of Food Technology and Tribal Enterprise Development.

Under this MoU, STRC led by Shri Swapnil Girade, Chief Program Officer & Head, STRC and BIT represented by Dr. Rajnikant Mishra, Director, Ballarpur Institute of Technology will work collaboratively to advance research, academic engagement, and enterprise development focused on tribal food products and traditional medicinal knowledge.

The strategic collaboration seeks to integrate scientific knowledge with traditional practices to foster sustainable, research-driven livelihoods and develop enterprises in tribal regions. Priority areas include applied and translational research, documentation, and scientific validation of indigenous and traditional food systems. Joint initiatives will cover nutritional and phytochemical analysis, product formulation, standardization, and field validation of forest-based products.

The partnership will also enable access to advanced laboratory facilities for testing, quality assessment, and compliance with relevant standards, while facilitating student and faculty research projects, cross-internships, and experiential learning through combined field and laboratory exposure. Additionally, capacity building efforts such as skill based training, licensing support, and branding assistance will strengthen sustainable, market ready food based enterprises.

Our Latest Publications

Monthly Newsletters

Our 2024 Story
A Pictorial Representation

Techno-Social Tapestry
By Shri Ashis Gharai,
Former CPO & Head, STRC

- Executive Editor -

Shri Swapnil Girade

Chief Program Officer and Head, STRC

- Graphics and Design -

Ms Priyanka Durge

Scientific Officer, Communication for Development through ICT, STRC

- Contribution -

Team STRC

Science & Technology Resource Centre
Gondwana University, Gadchiroli

Conceived and funded by Rajiv Gandhi Science and Technology Commission (RGSTC), Mumbai, Government of Maharashtra, Science & Technology Resource Centre (STRC) is an autonomous institute established in concurrence with Gondwana University, Gadchiroli in 2014. As a centre of excellence for sustainable value creation, STRC is leveraging local resources, relevant knowledge and appropriate technologies for human capacity development. STRC acts as a catalyst to science and technology based development of the under-served tribal communities of the Gadchiroli region and as a bridge between knowledge activities of the University and enhanced livelihoods in the neighborhood.

'Science & Technology Resource Centre Foundation Gadchiroli', registered under the Societies Registration Act, 1860 (XXI of 1860).

www.strc.org.in | strc.gug@gmail.com | +91 7588762147

STRC, Gondwana University, MIDC Road, Complex, Gadchiroli - 442605