

STRC NEWSLETTER



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.

TECHNOLOGY | ENTERPRISE | DEVELOPMENT



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Beyond Beneficiaries: Women Shaping Grassroots Technological Change in Rural and Tribal Contexts



Shri. Swapnil Girade
Chief Program Officer & Head, STRC



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Ms. Priyanka Durge
Scientific Officer, STRC

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From the CPO's Desk

Beyond Beneficiaries: Women Shaping Grassroots Technological Change in Rural and Tribal Contexts

Tribal women form the economic and social backbone of rural landscapes in regions such as Gadchiroli. Their daily operations encompass a complex matrix of agricultural labor, minor forest produce collection, household management, and traditional practices. Historically, rural development frameworks have positioned these women as passive beneficiaries of welfare programs. However, a critical paradigm shift is underway. Through the strategic introduction of accessible, low-cost technologies, STRC is witnessing tribal women emerge as proactive agents of technological and economic transformation.

Taking a holistic approach to tribal development requires understanding the interconnected nature of women's daily routines. Interventions must address livelihood enhancement, physical health, agricultural efficiency, and food security simultaneously. By deploying context-specific innovations, we are bridging the gap between traditional practices and modern scientific applications.

Revolutionizing Forest Produce Collection

The collection of Non-Timber Forest Products (NTFP) is a primary economic driver in tribal regions. The traditional harvesting of Mahua flowers, for instance, requires women to endure prolonged periods of bending and squatting. This labor-intensive method not only causes severe musculoskeletal stress but also exposes the collected flowers to soil contamination, thereby reducing their market value.

To address this, STRC executed the deployment of low-cost, net-based Mahua harvesters. By laying out specialized nets beneath the trees, women can collect falling flowers effortlessly and hygienically. This simple technological shift yields profound results. It eliminates extreme physical drudgery, prevents contamination from dirt and moisture, significantly elevates the grade of the produce and drastically reduces the time. Consequently, women command better market prices while safeguarding their long-term physical health.

Drudgery Reduction Through Processing Technologies

Time poverty is a significant barrier to the economic advancement of rural women. Manual food processing and agricultural post-harvest routines consume hours that could otherwise be utilized for income-generating activities or community leadership.

The introduction of Agri-allied tools and low-cost processing mechanisms at the community level has fundamentally altered this dynamic. These versatile machines handle multiple agricultural and domestic processing tasks with high efficiency. By mechanizing the post harvesting of spices, grains, and forest yields, these tools drastically reduce the physical toll on women. The immediate outcome



Shri Swapnil Girade
Chief Program Officer and Head,
STRC

is a substantial reduction in domestic drudgery. The long-term impact is the creation of a time surplus, allowing women to engage in self-help groups, micro-enterprises, and skill-building initiatives.

Scientific Standardization of Tribal Food Products

Transitioning from subsistence-level food processing to market-ready entrepreneurship requires scientific validation. Tribal communities possess a rich heritage of indigenous foods and wild vegetables with immense nutritional value. However, penetrating formal markets requires consistency, hygiene, and extended shelf life.

STRC is addressing this gap by developing Standard Operating Procedures (SOPs) for tribal food products. This initiative involves the systematic nutritional profiling of indigenous ingredients and the establishment of standardized value-addition protocols. When women are trained to implement these SOPs, they transform traditional recipes into commercially viable, safe, and packaged food products. This convergence of indigenous knowledge and modern food technology places women at the helm of local food sovereignty and micro-entrepreneurship, ensuring their produce meets contemporary market standards.



A Holistic Impact on Livelihoods and Health

The integration of grassroots technology extends beyond mere economic metrics. It touches every aspect of a tribal woman's life.

1. **Health Outcomes:** Ergonomic harvesting tools and mechanized processing equipment directly mitigate chronic joint and back pain, which are prevalent among rural women laborers.
2. **Agricultural Operations:** Time saved in domestic processing allows for better focus on crop management and the adoption of efficient farming practices.
3. **Economic Independence:** Standardized food production and higher-quality NTFP yields create reliable revenue streams, elevating the socio-economic status of women within their households and the broader Gram Sabha structure.

Collectively, The narrative of rural development must evolve. Tribal women possess the indigenous

wisdom and operational resilience required to drive local economies. When equipped with appropriate, accessible, and low-cost technologies, they quickly transition from beneficiaries to innovators and entrepreneurs. The

adoption of net-based harvesters, agri-allied tools and scientific processing SOPs proves that technology, when applied with a holistic understanding of local realities, is a powerful catalyst for equity. STRC remains dedicated to facilitating this ecosystem, ensuring that women continue to shape and lead grassroots technological change.



Article

Building Skills, Creating Opportunities: STRC's Approach

Empowering Communities through Skill Development



Science and Technology Resource Centre (STRC), Gondwana University, continues to play a vital role in empowering communities by focusing on skill development as a pathway to sustainable livelihoods. With a strong presence in remote and underserved regions, STRC adopts a community-centric approach that emphasizes practical learning, capacity building, and long-term impact.



Ms. Priyanka Durge

Scientific officer,
Communication for Development
through ICT STRC

Enhancing Skills through Practical Learning

At the core of STRC's initiatives is the belief that skills are key to unlocking opportunities. The Centre regularly organizes hands-on training programs, field demonstrations, and exposure visits tailored to the needs of local communities. These initiatives are designed not only to enhance technical competencies but also to build confidence among beneficiaries, enabling them to explore new livelihood avenues.



Promoting Safe and Efficient Practices

A significant aspect of STRC's work is its focus on promoting safe and efficient practices through the introduction of appropriate tools and technologies. Demonstrations and distribution of equipment such as the Multi Tree Climber have helped traditional workers adopt improved methods, reducing occupational risks while increasing productivity. Such interventions directly contribute to better income generation and improved quality of life.

Strengthening Stakeholder Engagement

STRC also works closely with various stakeholders, including students, field functionaries, and community members, to ensure that knowledge is effectively transferred and sustained. Exposure visits and interactive sessions at the Centre provide participants with valuable insights into ongoing initiatives, fostering a deeper understanding of skill-based development models.





Documenting Impact and Best Practices

Beyond training, STRC actively documents field experiences and success stories, highlighting the real impact of its initiatives. These efforts not only showcase outcomes but also support the replication of successful practices across different regions.



Towards Sustainable and Inclusive Development

Through its consistent efforts, STRC continues to build an ecosystem where skills lead to opportunities and opportunities lead to empowerment. Moving forward, the Centre remains committed to strengthening its skill development initiatives, expanding outreach, and creating meaningful change at the grassroots level.

Field Story

वैशाली मडावी, एक सामान्य महिला, जी पूर्वी घराचा खर्च चालवण्यासाठी शेतीमजुरीवर अवलंबून होती, आज STRC च्या मदतीने नव आयुष्य घडवत आहे. STRC च्या Bamboo Common Facility Centre प्रकल्पांतर्गत, वैशालीला बांबू हस्तकलेचं प्रशिक्षण मिळालं आणि आधुनिक मशीनरी वापरण्याची संधी मिळाली. STRC ने तिला नवीन डिझाईन्स तयार करणे, गुणवत्तापूर्ण उत्पादन तयार करण्यास मार्गदर्शन केले.

“पूर्वी माझा दिवस शेतीमजुरीत जात असे आता मला बांबू कामातून स्थिर उत्पन्न मिळते.”

- वैशाली मडावी, मालदुगी, कुरखेडा

STRC च्या या उपक्रमामुळे केवळ वैशालीच नव्हे, तर मालदुगीतील अनेक महिलांना आत्मनिर्भरता आणि स्वावलंबनाचा मार्ग मिळत आहे.

बांबू CFC प्रकल्प स्थानिक समाजाच्या विकासाचा एक महत्त्वाचा भाग ठरत आहे, जो महिला सक्षमीकरण आणि आर्थिक समावेशाला चालना देतो.



Cover Story



STRC's Gond Painting Workshop Under Gondwana Craft Revives Traditional Heritage Through Science, Culture, and Creative Innovation



Gadchiroli / 15 -20 April 2026

A five-day Gond painting workshop was successfully organized by the Science and Technology Resource Centre (STRC), Gondwana University, from 15th to 20th April 2026. Gond painting is an important traditional folk art of the Vidarbha and Gondwana regions, and this initiative was undertaken with the objective of preserving and promoting this rich artistic heritage.

The primary objectives of the workshop were to encourage local communities to engage with Gond art, to conserve and popularize this unique and gradually fading art form, and to nurture new entrepreneurs through artistic skills. The workshop witnessed enthusiastic participation from individuals of diverse backgrounds and age groups, ranging from school students to senior citizens, including students, entrepreneurs, homemakers, and retired officials.



Renowned national-level Gond artist Mr. Sunil Shyam served as the resource person for the workshop. He provided in-depth training on the history of Gond art, its distinctive features, intricate drawing techniques, colour composition, and design principles. Through hands-on practice, participants created their own artworks and gained practical understanding of the finer aspects of the art form.

The valedictory session of the workshop was attended by the Hon'ble Vice Chancellor of Gondwana University, Dr. Prashant Bokare, and Registrar Dr. Anil Hirekhan. On this occasion, the Hon'ble Vice Chancellor felicitated Mr. Sunil Shyam with a bamboo-crafted memento and a certificate in recognition of his artistic excellence. Mr. Swapnil Girade, Chief Program Officer and Head of STRC, Gondwana University, distributed certificates to all participants. Participants also shared their experiences and expressed gratitude to the coordinators for conducting such a meaningful initiative.

This initiative is expected to provide momentum to local art traditions and create new opportunities in the field of Gond painting in the future. The organizers highlighted that through STRC, efforts are being made to promote inclusive development by integrating traditional knowledge with modern skills.



What's Making News

STRC Spotlights Indigenous Wisdom at Maharashtra Gyan Sabha 2026



Nagpur / April 4, 2026

Science and Technology Resource Centre (STRC) recently marked its presence at the landmark Maharashtra Gyan Sabha 2026, held in Nagpur on April 4-5. The two-day conclave, inaugurated by Chief Minister Devendra Fadnavis, was organized by Shiksha Sanskriti Utthan Nyas in collaboration with Gondwana University, RTM Nagpur University, VNIT, and IIM Nagpur. Focused on the National Education Policy (NEP) 2020, the Sabha aimed to bridge the gap between global and Indian knowledge systems, fostering a future-ready, value-based learning environment that celebrates local heritage while preparing for global challenges.

Representing Gondwana University with distinction, STRC showcased its pioneering work in documenting and revitalizing indigenous wisdom through a dedicated exhibition. The stall featured the vibrant Gondwana Craft collection, highlighting the intricate bamboo production skills of traditional tribal artisans, alongside the Vaidya Chikitsalay initiative, which displayed traditional medicinal products rooted in ancestral healing knowledge. By presenting these initiatives, STRC successfully demonstrated how traditional tribal practices can be integrated into modern innovation and livelihood frameworks, earning significant appreciation at this prestigious state-level platform.





A bamboo-crafted memento developed by the Science and Technology Resource Centre (STRC), Gondwana University, was presented to Hon'ble Chief Minister Devendra Fadnavis by Atul Kothari, National Secretary of Shiksha Sanskriti Utthan Nyas, in the presence of Prof. Bhimaraya Metri, Director of IIM Nagpur.

Empowering Rural Entrepreneurs: STRC Distributes Cotton Wick Machines in Markhanda, Chamorshi



Chamorshi | April 17, 2026,

Science and Technology Resource Centre (STRC) distributed cotton wick-making machines to local entrepreneurs, self-help groups (SHGs), and producer collectives in Markhanda Village, Chamorshi. This initiative is a part of STRC's ongoing efforts to enhance grassroots innovation, aims to boost local production value chains while providing an additional, sustainable source of income for rural communities.



The demonstration highlighted how simple yet impactful technological interventions can transform traditional livelihoods. By equipping local producers with efficient machinery, STRC is fostering self-reliance, skill enhancement, and economic resilience empowering rural entrepreneurs to scale their operations and contribute to a thriving local economy.



STRC Empowers Tribal Harvesters with Life-Saving Multi Tree Climber Tool Darpanguda, Chamorshi



Chamorshi / April 10, 2026

Science and Technology Resource Centre (STRC) brought grassroots innovation to the tribal communities of Darpanguda in Chamorshi block. In a hands-on demonstration, STRC distributed the Multi Tree Climber Tool—a safe, efficient device designed specifically for harvesting ice apples from towering toddy palm trees that reach 30–50 feet high.

Traditionally, over 98% of tribal NTFP (Non-Timber Forest Produce) harvesters rely on hazardous bamboo ladders for climbing, leading to numerous accidents and tragic fatalities from falls. This innovative tool eliminates these risks by providing secure climbing support and ease of operation, ensuring safer harvests while boosting productivity. STRC's initiative reflects our ongoing commitment to technology-enabled livelihoods that protect tribal workers and preserve their vital forest-based traditions. Safer climbs, stronger communities.



Inspiring the Next Generation of Leaders: Newly Recruited Skill Development Trainees (Maharashtra) Visited STRC, Gondwana University



Gadchiroli / April 18, 2026

Science and Technology Resource Centre (STRC) had the pleasure of hosting a delegation of approximately 12 newly recruited Skill Development Officers (Trainees). The immersive exposure visit was organized to provide these incoming professionals with a comprehensive understanding of STRC's unique, grassroots-driven operations. During their time on campus, the trainees explored our various livelihood generation models, technology transfer initiatives, and community-centric incubation programs designed specifically for the tribal and rural landscapes of the region.

The visit proved to be an eye-opening experience for the officers, who gained firsthand insights into how academic institutions can drive tangible socio-economic transformation. The delegation highly appreciated the visionary efforts of Gondwana University and STRC in creating scalable skill development frameworks, bridging the gap between traditional knowledge and modern industry needs.



Our Latest Publications



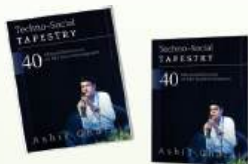
Monthly Newsletters



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.



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

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

