ANNUAL REPORT
2023-24

Science and Technology Resource Centre
Gondwana University, Gadchiroli


“Innovating with Nature,
Empowering with Knowledge and
Technology”

Leading with Purpose

Dr. Anil Kakodkar
Chairman, Rajiv Gandhi Science and Technology Commission,
Govt. of Maharashtra, Mumbai

Science & Technology Resource Centre at Gondwana University Gadchiroli has been set up to nurture a sustainable ecosystem that enhances livelihood as well as contributes to enriching academics and research in the local context leveraging synergy between the two. This is still work in progress however some progress has been made in the context of Bamboo. In principle connecting up with other Institutions with similar /complimentary objectives would further strengthen the ecosystem.

I am optimistic that the Science & Technology Resource Centre is on the right path to becoming a hub of innovation. STRC holds immense potential to drive positive change in tribal communities through science and technology. Its efforts must focus on need-based, inclusive, and sustainable solutions. By promoting grassroots innovations and preserving indigenous knowledge, STRC can truly empower local communities. Continued engagement and collaboration will be key to achieving this vision.

Dr. Charudutta D. Mayee
Chairman, Governing Body
Science and Technology Resource Centre
Gondwana University, Gadchiroli

Dr. Prashant Bokare
Vice Chancellor,
Gondwana University, Gadchiroli

Science & Technology Resource Centre (STRC), Gondwana University, Gadchiroli, provides a wonderful platform for creating the R & D eco-system in the University set-up and envisages to become a science and technology nodal centre for the region. With its prime focus on applicable science, technology and innovation for livelihood enhancement of the underserved communities,
I believe, STRC is moving in the right path to become a centre of excellence for sustainable value creation in the coming years. Gondwana University, as the parent institution, would help propel STRC's quest in achieving the desired goal.

Governing Body

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Chairman, Governing Body, STRC

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Gadchiroli

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CONTENT

Executive Summary

Shri Ashis Gharai
Chief Program Officer & Head
Science and Technology Resource Centre
Gondwana University, Gadchiroli

On behalf of the Science and Technology Resource Centre (STRC) at Gondwana University, Gadchiroli, we proudly present our annual report for the fiscal year 2023–2024. This year marked transformative progress in aligning grassroots innovation with sustainable development, empowering rural and tribal communities, and advancing scientific research tailored to local needs. Under the visionary leadership of Hon'ble Vice Chancellor Dr. Prashant Bakare and with steadfast support from the Rajiv Gandhi Science and Technology Commission (RGSTC), STRC reinforced its role as a catalyst for inclusive growth, environmental stewardship, and accessible technology.

STRC's commitment to leveraging local resources for societal benefit yielded groundbreaking outcomes. A flagship achievement was the launching of *Bamboo Common Facility Centre (CFC)* and *Integrated Fish Farming (IFF)* project under District Administration's *Manav Vikas Mission*, creating scalable models for bamboo enterprises and aquatic livelihood systems to benefit marginalized communities in Gadchiroli.

Education and outreach remained pivotal to our mission. One year *Bamboo Diploma Program* equipped students with specialized skills in bamboo entrepreneurship and sustainable design, while Vignyan Bharti's *Space on Wheels* initiative engaged over 2,200 schoolchildren through interactive STEM learning experiences.

Tribal schools in Gadchiroli further benefited from our *Environmental Education for Sustainability (EES) Program*, fostering ecological awareness and nurturing a generation committed to conservation.

Environmental sustainability was advanced through the establishment of the *Gondwan Vanaushadhi Ropvatika*, a medicinal plant conservatory in Kharkadi Dhanora, preserving biodiversity and promoting herbal healthcare. In parallel, STRC constructed its first low-cost bamboo polyhouse in Gadchiroli with RGSTC support, empowering farmers to adopt climate-resilient agricultural practices. Institutional recognition came with STRC's registration as a *Training Provider and Centre* under the Maharashtra State Skill Development Society (MSSDS), formalizing our capacity to deliver high-impact skill development programs. Our innovative endeavours were further validated by the granting of **five design patents** for bamboo-based tools and products. The upcoming *Traditional Craft Outlet* at Nagpur's Futala Lake Viewing Gallery, for the *Gondwana Craft* platform, will soon bridge rural artisans with urban markets, celebrating heritage crafts and boosting economic opportunities.

Looking ahead, STRC will scale its impact by expanding the *Bamboo CFC* and *Integrated Fish Farming* models across Gadchiroli and Chandrapur districts. Advocacy for integrating science and technology into rural development policies will remain a priority, alongside strengthening partnerships with academic, governmental, and industry stakeholders. Plans to diversify into forest-based tech innovations, waste-to-resource initiatives, and expanded outreach programs are underway, ensuring holistic community development.

As we move forward, STRC remains steadfast in its mission to empower communities through innovation, sustainability, and equitable access to technology—transforming challenges into opportunities for a resilient future.

STRC Programs and Initiatives 2023-2024

Aquaculture and Livelihoods

In the reporting year 2023–24, the Aquaculture and Livelihood vertical at STRC continued its commitment to fostering sustainable rural economies through integrated, community-Centered initiatives. Building on the region's unique ecological and social context, STRC intensified its focus on aquaculture-based livelihoods, especially in tribal and remote regions of Gadchiroli to bridge technological gaps and empower rural and tribal communities, the vertical has focused on integrating scientific approach to fishery, capacity building, and market linkages to transform traditional aquaculture into a robust, income-generating enterprise.

Integrated Fish Farming (IFF) – Enhancing Livelihoods through Synergistic Practices

As part of STRC's ongoing efforts to promote sustainable rural livelihoods, an Integrated Fish Farming (IFF) initiative—combining aquaculture and backyard poultry—was implemented in the Chandra and Medpalli clusters of Aheri Block, Gadchiroli. Supported under the Manav Vikas Mission, Government of Maharashtra, the initiative aimed to diversify income sources for small and marginal farmers, particularly in tribal communities.

The intervention began with the formation of Fish Farmer Interest Groups (FIGs) through Gram Sabha resolutions, ensuring community ownership and participatory planning. A one-day technical workshop on "Pre- and Post-Stocking Management in Aquaculture" was conducted on August 30, 2023, in Medpalli. Attended by 36 farmers, the session focused on key practical aspects such as pond preparation, sludge removal, seed stocking, feed management, and water quality monitoring. Demonstrations on measuring essential water parameters—pH, dissolved oxygen, and ammonia—were also carried out to promote scientific and sustainable practices.

To enable full integration with poultry rearing, low-cost bamboo composite poultry sheds—designed in-house—were provided to selected farmers, along with necessary inputs such as brooders, feeders, and feed to support two rearing cycles. This integrated approach aimed to optimize farm-level resource use, enhance productivity, and reduce vulnerability to seasonal income fluctuations.

The implementation was not without its challenges—initial reluctance from farmers and delays in the distribution of key inputs posed notable hurdles. Nevertheless, consistent field-level support, proactive community engagement, and timely technical interventions helped navigate these difficulties. Consequently, approximately 65% of the selected farmers adopted the integrated model within the first year, underscoring both the viability of the approach and the resilience of the local farming communities.

Capacity Building and Collaborations

STRC continued to prioritize knowledge dissemination through focused training programs and strategic collaborations. On the occasion of World Fisheries Day (November 21, 2023), a one-day training program on Sustainable Fisheries in Freshwater Bodies was conducted in Malezari, Mulchera. The session emphasized scientific practices such as carp polyculture, fingerling production, and disease management.

STRC also participated in the Aquaculture-based Livelihood Opportunities workshop held in Wardha, organized by JALJIVIKA, Pune. The event facilitated discussions on government schemes, appropriate aquaculture technologies, and market linkages. Through these platforms, STRC trained 206 farmers—including women and youth—under six Farmer Interest Groups (FIGs), focusing on improved aquaculture techniques.

Collaboration with the Maharashtra Animal and Fishery Sciences University (MAFSU) remained central to STRC's efforts. Under the joint initiative titled Development of Organized Fish Seed Production, Culture, and Marketing, three Portable Carp Hatcheries (PCHs) were installed in Chamorshi, Kurkheda, and Korchi talukas. Monitoring visits in January 2024, led by Dr. Prashant Telvekar (MAFSU) and Shri Ajay Shahare (STRC), reported successful breeding of common carp and meaningful engagement with FIG members. The project has now entered its second phase, which focuses on live fish marketing through Fish Vending Units, aiming to provide farmers with direct access to local markets.

Technology Transfer and Infrastructure Development

The Science and Technology Resource Centre (STRC) has focused on promoting affordable and scalable technologies tailored to local needs. As part of this initiative, 25 bamboo composite poultry sheds were developed, offering a cost-effective and sustainable solution for small-scale poultry farming. Additionally, four functional portable carp hatcheries—developed by the Central Institute of Freshwater Aquaculture (CIFA), Bhubaneswar—were deployed to support decentralized fish seed production. These interventions aim to reduce reliance on external inputs and bring down operational costs for rural entrepreneurs and communities.

To further support value chain development in the fisheries sector, three fish vending units were established. These units were designed to enable hygienic handling and retail of fish, thereby improving product quality, enhancing consumer confidence, and contributing to better returns for local vendors. Collectively, these infrastructure initiatives reflect STRC's commitment to facilitating grassroots-level access to appropriate technologies and improving livelihoods through practical, field-ready innovations.

Community Impact and way forward

The vertical's initiatives have directly impacted over 200 households, with Women Self-Help Groups (WSHGs) reporting increased income through improved fish culture practices. The integration of poultry and fish farming has reduced input costs by 30% while boosting yields. Success stories from FIGs in Aheri and Mulchera highlight a growing interest among new farmers to adopt aquaculture, signalling a shift toward sustainable livelihoods.

Looking ahead, STRC aims to expand its footprint by establishing 15 additional FIGs and scaling portable hatchery installations. Emphasis will be placed on strengthening market networks with urban centres and integrating digital tools for real-time advisory services.

Bamboo Craft and Livelihoods

The Bamboo Craft and Livelihood Vertical of the Science and Technology Resource Centre (STRC) has continued to make meaningful progress in promoting bamboo-based livelihoods and introducing appropriate technologies during the fiscal year 2023–24. Through initiatives in skill development, infrastructure support, and collaborative efforts, the vertical has contributed to strengthening livelihood opportunities for rural and tribal communities in Gadchiroli and surrounding regions.

Skill Development and Artisan Empowerment

In alignment with its broader goal of strengthening the bamboo-based rural economy, the Science and Technology Resource Centre (STRC) continued to invest in capacity-building and infrastructure development during 2023–24. A significant initiative was the organization of a five-day Training-cum-Production Workshop at Maldugi village in Kurkheda block, marking the operational launch of the Bamboo Common Facility Centre (B-CFC) established under the Manav Vikas Mission. This intervention aimed to reinforce community-level production capabilities by enhancing technical skills, introducing process standardization, and promoting localized value addition.

The workshop engaged 24 local participants in practical training centered on the STRC-developed Bamboo Toolkit—an affordable, user-friendly solution for improving the efficiency of bamboo strip sizing, cutting, and bending. The structured, hands-on approach enabled artisans to improve productivity and adopt consistent practices aligned with quality norms. The B-CFC now functions as a resource hub for facilitating decentralized bamboo-based livelihoods in the region.

To further strengthen community engagement, STRC organized an exposure visit for 50 traditional artisans from neighboring villages to its Model Bamboo Production Unit. The visit introduced participants to advanced techniques such as bamboo treatment, surface finishing, and the use of polyhouse structures for drying and curing bamboo—highlighting scalable methods that complement traditional knowledge systems.

The exposure visit concluded with an interaction session addressed by Hon'ble Vice Chancellor Dr. Prashant Bokare, who distributed bamboo toolkits to the trained participants. These collective efforts represent a steady step forward in equipping rural communities with the tools and know-how required to enhance bamboo-based livelihood opportunities in a sustainable and self-reliant manner.

Furthering its commitment, STRC conducted additional **capacity-building initiatives** to equip bamboo artisans with advanced techniques and entrepreneurial skills. In collaboration with **Nirmala Niketan** and **Gyanajyoti Community College, Palghar**, a **three-day training program** was organized in May 2023 for **20 local artisans**. This program introduced low-tech tools developed by STRC and demonstrated assembly-line production methods for crafting symmetric bamboo lotus flowers, thereby enhancing both efficiency and product quality. **Shri Antik Mallick**, Scientific Officer at STRC, emphasized the importance of sustainable practices, while **Sr. Clera Gonsalves**, Director of Gyanajyoti Community College, highlighted the initiative's role in diversifying livelihood opportunities for tribal artisans.

The participation of STRC representatives in the Summer Workshop organized by the National Institute of Design (NID), Bengaluru, served as a constructive capacity-building experience during the reporting year. Three team members attended the intensive, hands-on program, which focused on key aspects of bamboo furniture design, including material behavior, joinery techniques, and principles of sustainable design. The workshop provided exposure to contemporary approaches in functional, aesthetic, and environmentally responsible furniture development.

Building on the knowledge and technical inputs gained through the workshop, STRC initiated a focused design exploration at its Model Bamboo Production Unit. The team commenced prototyping a range of bamboo furniture pieces, incorporating learnings related to collapsible forms, modularity, and ergonomic design. These efforts aimed at aligning traditional bamboo craftsmanship with current design sensibilities and functional expectations, while preserving the cultural relevance and ecological value of the material.

Technological Advancements and Infrastructure Development

During 2023–24, the Science and Technology Resource Centre (STRC) undertook measured steps to diversify the application of bamboo through the development of structural and functional products. A key initiative in this area was the Bamboo Polyhouse Project—implemented in collaboration with the Rajiv Gandhi Science and Technology Commission (RGSTC) and IIT Bombay. As part of this effort, a 125 sq. m. bamboo-based polyhouse structure was constructed on the Gondwana University campus, marking a practical advancement in demonstrating bamboo's structural utility.

The pilot structure was developed using treated, structurally viable bamboo, with technical guidance from experts at CTARA-IIT Bombay and SASMIRA. Designed as a demonstration unit, the polyhouse supports the promotion of climate-responsive agriculture, with a focus on the cultivation of medicinal and aromatic plants—aligning with STRC's objective to support sustainable rural livelihoods and biodiversity-friendly practices.

To ensure technical soundness and contextual relevance, a feasibility assessment and structural site evaluation were conducted by Shri Datta Gholap, a practitioner known for his work in alternative construction systems. His inputs helped incorporate site-specific adaptations, including adjustments to the foundation and materials to improve resilience under local climatic and soil conditions.

This initiative contributes to STRC's ongoing efforts in exploring bamboo-based infrastructure solutions tailored to regional needs. The polyhouse now serves as a functional model that demonstrates the potential for year-round cultivation, supports agro-processing initiatives, and aligns with community-oriented approaches to herbal resource development.

Impact and Future Outlook

In 2023–24, the initiatives under this vertical directly supported and sustained **over 70 local artisans**, helping them learn new skills and explore opportunities for small-scale enterprise. These efforts have encouraged many to move beyond traditional practices and take up improved techniques in bamboo processing and product making.

The **Bamboo Common Facility Centre (CFC)** at Maldugi is gradually taking shape as a **local center for training and production**, where artisans can access tools, machines, and technical guidance. Similarly, the **bamboo polyhouse**, now standing as a functional demonstration structure at Gondwana University, has opened up possibilities for using bamboo in small-scale farming and herbal plant cultivation.

Looking ahead, STRC aims to **set up more bamboo polyhouses** in suitable areas, especially where communities are interested in farming or plant-based livelihoods. Plans are also in place to **start product outlets** where artisan-made bamboo goods can be sold locally and in nearby markets. To support this, STRC will work on **introducing simple digital tools** that can help artisans and producer groups reach more customers.

At the same time, STRC will continue to **improve bamboo treatment methods**, making sure that products last longer and meet quality standards. Strengthening **partnerships with technical experts and industry partners** will also be a focus, ensuring that the work being done can grow steadily and benefit more people in the years to come.

Special Report on Workshop on Bamboo for Green Economy
Date: January 25, 2024
Venue: Gondwana University, Gadchiroli
Organized by: STRC in collaboration with Rajiv Gandhi Science and Technology Commission (RGSTC), Mumbai

Overview

On January 25, 2024, the **Special Tribal Research Centre (STRC)**, in partnership with **RGSTC Mumbai**, hosted a significant **State-Level Workshop and Round Table Discussion** on *'Bamboo for Green Economy'* at **Gondwana University, Gadchiroli**. The event brought together a diverse group of stakeholders—including researchers, industry experts, policymakers, and grassroots practitioners—with a shared vision to explore and advance the role of bamboo in driving sustainable economic growth.

The workshop was **chaired by Padma Vibhushan Dr. Anil Kakodkar**, Chairman of RGSTC and a leading voice in science-driven development. His presence underscored the importance of bringing innovation and science-based strategies into bamboo-based livelihood promotion and environmental sustainability.

Set against the backdrop of Gadchiroli's rich bamboo resources and tribal communities' traditional knowledge, the event served as a platform to discuss practical approaches for bamboo cultivation, utilization, value addition, and policy support within the framework of Maharashtra's green economy aspirations.

Key Discussions

The workshop featured a series of focused sessions led by domain experts, covering the full value chain of bamboo—from cultivation to market integration:

Cultivation & Propagation:

Experts such as **Dr. P. Tetali** and **Shri Vinay Kolte** spoke about the importance of selecting the right bamboo species based on local agro-climatic conditions. They also shared insights into mass propagation techniques, including tissue culture and nursery management, that can ensure a steady supply of quality planting material across the region.

Shri Vinay Kolte

Dr. P. Tetali

Structural Applications:

The potential of bamboo in the construction sector was explored through engaging sessions by **Shri Sanjeev Karpe** (Native Konbac Bamboo Products) and **Shri Avinash Kumar** (Bamboo Research & Training Centre, Chichpalli). They demonstrated how prefabricated bamboo components can be used in building eco-friendly housing, community infrastructure, and temporary shelters—offering sustainable alternatives to conventional materials.

Shri Sanjeev Karpe

Shri Avinash Kumar

Treatment & Standardization:

Smt. Nirupama Deshpande (Sampoorna Bamboo Kendra) shed light on accessible and cost-effective treatment methods to increase bamboo's durability and performance. She emphasized the need for standardization and local capacity building to ensure that artisans and entrepreneurs can consistently meet quality expectations.

Smt. Nirupama Deshpande

Policy & Market Linkages:

Dr. Narendra Shah (RGSTC) and **Shri Girish Sohani** (BAIF) underlined the importance of creating enabling policies and fostering partnerships with industry players. Discussions centered around building robust value chains, improving artisan incomes, and connecting rural production hubs with broader markets.

Shri Girish Sohani

Dr. Narendra Shah

Outcomes and Way Forward

The workshop concluded with a strong consensus on the need for a **coordinated state-level roadmap** to integrate bamboo into Maharashtra's green economy strategy. As a first step, participants agreed to contribute to a **white paper** that would outline **actionable recommendations**, including:

1.Development of **species-specific Standard Operating Procedures (SOPs)** for cultivation and processing.

2.Introduction of **training modules** for bamboo polyhouse construction and other structural applications.

3.Formation of **bamboo clusters** to centralize processing, improve productivity, and facilitate marketing.

4.Promotion of **institutional partnerships** and **policy-level interventions** to support artisans, SHGs, and startups engaged in bamboo enterprises.

The event not only strengthened networks among key stakeholders but also reaffirmed STRC's role as a nodal institution in advancing **science-led, community-driven bamboo development** in Maharashtra.

LOKMAT TIMES

LOKMAT TIMES • **Anchor**

Bamboo good medium to promote socio-economic activity: Dr Kakodkar

LOKMAT NEWS NETWORK
GADCHIROLI

"Bamboo is a good medium to promote socio-economic activities in the areas where it is being cultivated on a large scale. Since Gadchiroli is one such area and Science and Technology Resource Centre (STRC) of Gondwana University, Gadchiroli is already active in bamboo related activities, we should consider hosting further programmes on bamboo," opined Padma Vibhushan Dr Anil Kakodkar, Chairman of Rajiv Gandhi Science and Technology Commission (RGSTC), Mumbai.

In consultation with Dr Prashant Bokare, vice chancellor of the Gondwana University, Girish Sohani, renowned development expert and principal advisor, BAIF and Dr C D Mayee, chairman, governing body, STRC, the round table discussion was held.

Padma Vibhushan Dr Anil Kakodkar being felicitated at the hands of vice chancellor of the Gondwana University Dr Prashant Bokare.

Dr Bokare said, through this effort we will strengthen the scope for bamboo-based livelihood by introducing advanced bamboo technology with special focus on bamboo research and innovation.

It was discussed to incorporate bamboo cultivation into existing agricultural systems, identifying bamboo species suitable for diverse climates, evaluating the economic and ecological benefits of different bamboo varieties, and methods for large-scale bamboo propagation in this workshop.

Noted experts Dr P Tetali, scientist, plant research, Vinay Kolte from bamboo nursery, Bhor Pune, Sanjeev Karpe, managing director, Native Konbac Bamboo Products, Avinash Kumar, director, of Bamboo Research & Training Centre, Chichpalli, Nirupama Deshpande,founder of Sampoorna Bamboo Kendra, Melghat, M Shrinivasa Reddy, director of Chandrapur Forest Academy, Dr Narendra Shah, member secretary, RGSTC, Pragati Gokhale, advisor, RGSTC, Nagpur shared their in-depth research and industry experience during the technical sessions.

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Future Outlook

The **Bamboo Craft and Livelihood Vertical** has played a pivotal role in establishing STRC as a leading institution in the field of bamboo-based rural development. Through a well-balanced approach that brings together traditional knowledge and scientific innovation, STRC has created practical avenues for skill development, value addition, and income generation. From the introduction of specialized tools like the Bamboo Strip Width Sizer to the establishment of infrastructure such as the Bamboo Common Facility Centre and model polyhouses, the vertical has enabled local artisans and farmers to move beyond subsistence practices and engage in structured, dignified livelihoods. The integration of design training, exposure visits, and localized production units has not only enhanced the quality of products but also improved the confidence and capacity of grassroots stakeholders.

Looking ahead, STRC's focus remains on building **scalable and replicable models** that combine ecological sustainability with economic viability. Efforts will be geared toward strengthening market linkages through product outlets and digital platforms, refining treatment and processing methods, and deepening collaborations with research institutions, industry players, and government bodies. By embedding bamboo within the broader framework of green economy initiatives, STRC is laying the foundation for a future where local communities can thrive through sustainable resource use. This continued momentum will ensure that bamboo evolves from a traditional material into a **driver of inclusive growth and environmental stewardship** in Gadchiroli and beyond.

NTFP, Medicinal Plants and Other Livelihoods

During 2023–24, the Science and Technology Resource Centre (STRC) at Gondwana University advanced its efforts under Vertical III, aimed at fostering community-based livelihoods. This vertical brings together scientific knowledge and traditional practices to promote the sustainable use of Non-Timber Forest Produce (NTFP), medicinal plant cultivation, and context-specific agronomic support for marginal farmers. The year saw focused initiatives that empowered local communities—especially primary collectors and smallholder farmers—to adopt improved techniques, enhance product value, and connect with structured markets, thereby supporting more sustainable and dignified ways of earning a livelihood.

NTFP Collectivization Project at Kharkadi, Dhanora

One of the key initiatives under Vertical III during the reporting year was the NTFP Collectivization Project launched in Kharkadi, Dhanora block. This intervention focuses on promoting scientific harvesting practices, improving post-harvest storage, and enabling value-added processing of select commercially significant Minor Forest Produce (MFP), including mahua flowers, hirda, behda, charoli, bamboo and honey. The project seeks to address persistent bottlenecks in the NTFP value chain—such as inadequate post-harvest practices, lack of market access, and limited local capacity for value addition—while recognizing the potential of these resources to support rural livelihoods.

A monitoring visit by a University-appointed committee marked a noteworthy development during the year. The team assessed on-ground progress through field visits to storage and processing units and engaged with members of the Village-Level Committee (VLC). Their feedback underscored the need for infrastructure improvements, seed funding to support procurement operations, and stronger institutional mechanisms to ensure transparent and accountable management of NTFP-related activities.

Three priority outcomes were identified for focused implementation: enhancing the skills of primary collectors in scientific harvesting and storage; facilitating linkages with organized markets; and establishing consistent income streams through structured procurement systems. This approach reflects an ongoing transition toward a more sustainable and community-driven forest economy, grounded in local knowledge and improved practices.

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Farmers' Open School: Building Agronomic Knowledge Among Marginal Farmers

Parallel to the NTFP-based initiatives, STRC expanded its outreach to marginal and smallholder farmers in the region by launching the Farmers' Open School (FOS)—a participatory and field-based learning platform aimed at enhancing farmers' knowledge of advanced agronomic practices. FOS is conceptualized as a decentralized model of informal education, enabling farmers to learn through experience, expert facilitation, and peer engagement. Five FOS units were established during the year across three blocks in Gadchiroli district—at Talodhi and Maller Mal in Chamorshi taluka, Usegaon in Gadchiroli, and Potgaon and Kinhala in Wadsa.

Each school comprises a cohort of approximately twenty farmers, forming a learning collective that progresses through structured modules. The inaugural module focused on 'Seed Treatment in Paddy Cultivation'. This was chosen based on widespread gaps in seed preparation practices and its critical role in determining germination success and crop health. Sessions were facilitated by Subject Matter Specialists (SMSs) from the Krishi Vigyan Kendra (KVK), who conducted demonstrations and theoretical sessions on techniques such as salt treatment, use of chemical and biological fungicides, and other seed inoculation practices.

Farmers were not only introduced to the science behind each method but were also supported in practical application on their own fields. These sessions contributed to a more informed approach to cultivation, promoting disease resistance and improved yield performance. Future modules are planned to build upon this foundation and cover themes like nutrient management, pest control, and water conservation in the context of rain-fed agriculture.

Integration of Traditional Knowledge and Scientific Practices

Vaidya Chikitsalay: Reviving Indigenous Healing Traditions

Gadchiroli, a forest-rich district inhabited by indigenous communities such as the Gond and Madiya, is home to a vast yet endangered repository of traditional medicinal knowledge. The local traditional healers, or *Vaidu*, have long maintained a symbiotic relationship with the forest, drawing upon generations of ethnomedicinal wisdom passed down through oral traditions, experiential learning, and sacred texts. However, this rich legacy faces the risk of extinction due to a lack of formal documentation, scientific validation, and institutional recognition. Recognizing the urgent need to preserve and promote this knowledge, the Science & Technology Resource Centre (STRC) at Gondwana University initiated the Vaidya Chikitsalay—a unique platform that not only honors traditional healers but also integrates their practices into a broader discourse of holistic and community-based healthcare.

Establishment and Impact of Vaidya Chikitsalay

Launched on 20th September 2022, the Vaidya Chikitsalay represents a pioneering effort to institutionalize traditional healing within an academic setting. Operated thrice a week by thirteen selected traditional healers—including women practitioners—the Chikitsalay offers treatments for ailments ranging from bone fractures and fevers to skin diseases and kidney disorders. These healers were meticulously chosen through community engagement, interviews, and validation processes based on parameters such as expertise, ethical practice, and community recognition. Since its inception, over 500 patients have benefited from its services, with several reporting significant improvement in health outcomes and returning for follow-up care. The initiative not only bridges indigenous wisdom with modern validation but also affirms the relevance and effectiveness of folk medicine in addressing grassroots healthcare needs.

Capacity Building and Market Facilitation

Capacity building has been central to all activities under Vertical III. Whether through direct training of primary collectors on sustainable harvesting and grading techniques, or through the modular education of farmers under FOS, the focus has remained on building long-term capacity rather than short-term compliance. Each intervention was designed with an embedded training component, often culminating in a practical output—be it a community-managed seed bank, a demonstration plot, or a standardized collection centre for NTFPs.

Market facilitation efforts were also initiated in tandem with production-level interventions. In the case of the Kharkadi NTFP project, efforts are underway to develop primary processing infrastructure and establish market linkages with buyers who value traceability and sustainability. Initial dialogues with stakeholders indicate that organized marketing, supported by quality assurance, can substantially improve income levels for local collectors. STRC's role as a facilitator between producer groups and market actors is expected to grow in the upcoming year, with a focus on promoting fair trade and enabling collective negotiation.

Looking Ahead

The achievements of 2023–24 under Vertical III represent early but critical steps toward realizing a forest-based rural economy that is equitable, knowledge-driven, and community-governed. By building community capacities, improving access to scientific knowledge, and creating pathways to formal markets, STRC is laying the groundwork for integrated rural development in forested geographies such as Gadchiroli. Future plans include scaling the NTFP collectivization model to additional clusters, expanding the Farmers' Open School network to other blocks, and piloting value-addition interventions for medicinal plants. Further, greater attention will be given to institutional strengthening of local groups—Village-Level Committees, farmer collectives, and women's cooperatives—who are the primary actors in this ecosystem. The experiences of the year highlight both the potential and the challenges inherent in working at the intersection of forest ecology, local livelihoods, and rural innovation. STRC remains committed to this long-term agenda and looks forward to deepening its partnerships with community institutions and allied organizations in the coming years.

Applicable R & D and Academic Program Development

The Science and Technology Resource Centre (STRC) has consistently prioritized the integration of research, innovation, and academic excellence to address regional challenges and empower communities. During the fiscal year 2023–24, Vertical IV focused on fostering collaborative research, securing intellectual property, designing skill-based academic curricula, and promoting environmental stewardship. This vertical underscores STRC's commitment to bridging scientific advancements with grassroots needs, ensuring sustainable socio-economic development in the Gadchiroli region.

Collaborative Research and Development Initiatives through STRC Assistance for S & T Application Scheme

STRC spearheaded impactful research projects through partnerships with academic institutions, aligning with regional priorities such as healthcare, nutrition, and ecological sustainability.

Customized Mobility Aids Using Bamboo

In collaboration with the Biomedical Engineering and Technology Innovation Centre (BETiC) at Visvesvaraya National Institute of Technology (VNIT), Nagpur, STRC initiated the project *'Design and Development of Customized Mobility Aids Using Bamboo for Disabled Villagers'*. Supported under the **Gramin Aarogya Sampada Sahyog (GRASS)** initiative, this project adopted a participatory approach to design affordable orthopedic aids tailored to the needs of individuals with disabilities. Workshops and discussions held in January–February 2023, led by Dr. A. M. Kuthe (Professor, Mechanical Engineering, VNIT), emphasized user-centric design and explored enterprise opportunities around bamboo-based aids. This initiative not only addresses mobility challenges but also aims to create sustainable livelihood avenues for people with disabilities, reflecting STRC's dual focus on social welfare and economic resilience.

Edible Wild Vegetables: Nutritional Security for Tribal Communities

A pioneering study under the STRC Assistance for S&T Application Scheme investigated the role of wild vegetables as a nutritional resource for forest-dependent tribal communities in Gadchiroli. The research documented 70 wild edible species, including *Allmania nodiflora* (Dhan Bhaji), *Boerhavia diffusa* (Khaparkhuti), and *Smilax zeylanica* (Sherdire), which are rich in proteins, vitamins, and minerals. These plants, harvested sustainably during monsoon, serve as both dietary staples and supplementary income sources for tribal families. The findings highlight the symbiotic relationship between tribal communities and forests, emphasizing the need to preserve traditional knowledge while promoting nutritional security.

Miyawaki Plantation: A School based Model for Afforestation

STRC funded a comparative study led by Dr. Chetan Warde (Anandwan College, Warora) to evaluate the Miyawaki afforestation technique against traditional methods. A demo plot at Ashramshala, Chandala, was established with 400 indigenous plants spanning 64 species. This initiative aims to assess ecological benefits such as biodiversity enhancement, carbon sequestration, and soil conservation, alongside economic and educational outcomes. The project serves as a living laboratory for students, fostering environmental awareness and providing replicable models for institutions seeking sustainable green cover solutions.

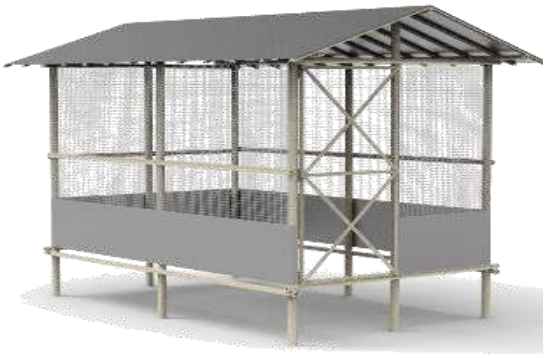
Innovation and IPR

STRC's emphasis on innovation culminated in the grant of **five design patents** by the Government of India, recognizing its efforts to leverage bamboo—a locally abundant resource—for practical applications:

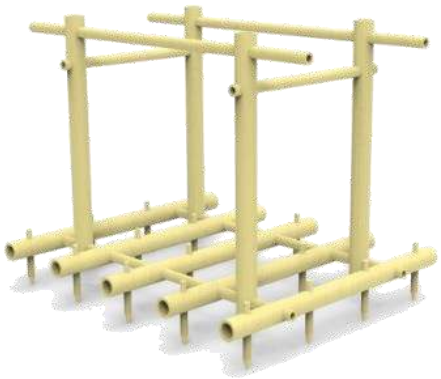
1. **Bamboo Seed Spacer** (Application No. 369636-001): Facilitates uniform seed sowing in agriculture.
2. **Bamboo Composite Poultry Shed** (Application No. 369635-001): Eco-friendly housing for poultry farming.
3. **Bamboo Lotus Flower** (Application No. 369634-001): Decorative handicraft promoting rural artistry.
4. **Bamboo Trophy** (Application No. 369632-001): Sustainable alternative to conventional awards.
5. **Bamboo Jewellery** (Application No. 369633-001): Fashion accessories merging tradition with modern design.

These patents underscore STRC's expertise in transforming bamboo into versatile products, fostering entrepreneurship, and aligning with national goals of self-reliance and green innovation.

Design Patent No.	Title of the Design Patent	Status
369635-001	Bamboo Poultry-Shed	Accepted and Published
369633-001	Bamboo Earring	Accepted and Published
369632-001	Bamboo Trophy	Accepted and Published
369634-001	Bamboo Lotus	Accepted and Published
369636-001	Bamboo Seed Spacer	Accepted and Published



Bamboo Poultry Shed
(Design Patent No-369636-001)



Bamboo Seed Spacer
(Design Patent No-369635-001)

Bamboo Flower Toolkit
(Patent Application- In Pipeline)

Academic Program Development

STRC's academic initiatives in 2023–24 focused on equipping students with technical expertise and entrepreneurial skills, particularly in the bamboo sector.

Diploma in Bamboo Entrepreneurship and Design

The Winter 2023–24 session of the **Diploma in Bamboo Entrepreneurship and Design** commenced with 23 enrolled students. The two-semester curriculum emphasizes hands-on training in bamboo craftsmanship, product design, and enterprise management. A dedicated smart classroom and workshop facilitated interactive learning, while exposure visits to institutions like the **Bamboo Research and Training Centre (BRTC), Chandrapur**, enriched practical knowledge. During the visit, students engaged with Prof. Shirish Kaner (BRTC), learning advanced techniques in bamboo construction, laser cutting, and product development.

15-Day Training on Structural Applications of Bamboo

Fifteen diploma students participated in an intensive training program at BRTC from February 6 to 22, 2024. The workshop focused on low-tech construction methods, enabling students to build a two-layered bamboo structure using locally sourced materials. Topics included on-site management, tool handling, and operational strategies, preparing participants to address real-world challenges in bamboo-based infrastructure development.

Environmental Education and Sustainability Initiatives

Environment Education for School Children (EES)

Recognizing the importance of environmental awareness and a[illegible]n, the Science and Technology Resource Centre (STRC) has actively promoted sustainability through focused education and community-based conservation efforts. In alignment with its commitment to ecological stewardship, STRC implemented innovative learning modules under its Environmental Education for School Children (EES) program. Designed for tribal students aged 12–14, the initiative blends classroom concepts with real-world engagement, aiming to cultivate a deep understanding of biodiversity, ecological processes, and sustainable practices from an early age.

IMG_8276.CR2

This **'Beyond the Classroom'** initiative, targeting tribal students aged 12–14, combined theoretical knowledge with experiential learning. In 2023–24:

1. **Module I (Introduction to Biodiversity)**: Delivered across 10 Ashramshalas, fostering awareness of local ecosystems.
2. **Module II (Ecological Processes through Nature Trails)**: Engaged students in field activities to observe flora, fauna, and ecological interactions.
3. **Module III (Developing Medicinal Plant Gardens)**: Currently underway in Chandala and Sode blocks, promoting hands-on conservation through school gardens.

This program bridges science and society, empowering students to become environmental stewards in their communities.

Skill Development and Institutional Recognition

STRC expanded its role in skill development through strategic partnerships and government schemes.

Registration Under Maharashtra State Skill Development Society (MSSDS)

On March 13, 2024, STRC was designated as an ACKVK under the Maharashtra Government's Skill Development Scheme. Launched by the Hon'ble Deputy Chief Minister, this initiative aims to equip youth with industry-relevant skills. At STRC's inaugural event, chaired by Dr. Prashant Bokare (Vice-Chancellor, Gondwana University), gathered 40 trainees for orientation. The center will focus on bamboo-related training, addressing gaps in skilled labour and promoting rural entrepreneurship.

STRC was recognized as a **Training Provider and Training Center** under the **Acharya Chanakya Kaushalya Vikas Kendra (ACKVK) Scheme**. Two job roles—**Bamboo Work Artisan** and **Bamboo Grower**—were prioritized to align with regional employment needs. Plans include training 60 students across two batches, fostering self-reliance and entrepreneurship.

Brief Report on Exploring the India's Great Space History

Science & Technology Resource Centre, Gondwana University, Gadchiroli Hosts ISRO's 'Space on Wheels' Program

Date: February 16, 2024

Venue: Science & Technology Resource Centre, Gondwana University, Gadchiroli

The Science & Technology Resource Centre (STRC) at Gondwana University, Gadchiroli, proudly welcomed the Indian Space Research Organization's (ISRO) renowned 'Space on Wheels' program on February 16, 2024. This flagship initiative of ISRO in collaboration with Vigyan Prasar under the Government of India, brought its well-equipped mobile exhibition to the STRC premises, showcasing the history and current developments of India's space program.

The anticipation surrounding the event was evident as STRC prepared to host a large assembly of children and teachers from across the Gadchiroli city. Over 1250 enthusiastic students from 12 peripheral schools converged at the STRC premises, eager to embark on a journey through the cosmos and explore the wonders of space exploration. The ISRO bus, stationed on campus for the day, catered to the curious young minds, providing them with a hands-on experience and making the event a resounding success.

Shri. Ashis Gharai, Chief Program Officer & Head of STRC-GUG, expressed his gratitude for being chosen as the host of the 'Space on Wheels' program in a remote place like Gadchiroli. He highlighted the privilege of inviting and hosting over 1200 children from 12 schools around Gondwana University, emphasizing STRC's commitment to promoting science and technology-based education in the region.

During the event, visiting children were introduced to various aspects of space science, including the functioning of satellites and their orbits, balancing velocity, and the Earth's gravitational pull. They also learned about India's space program and the contributions of various scientists who have shaped ISRO into the pioneer organization it is today. An open science exhibition was also organized, providing students with interactive displays and hands-on activities to enhance their understanding of space exploration and technology.

The formal inauguration of the event was conducted by Dr. Anil Hirekhan, Registrar, and C. A. Bhaskar Pathare, Finance & Accounts Officer of Gondwana University, Gadchiroli. Their presence, along with that of many university officials and esteemed guests, added to the significance of the day-long event. The 'Space on Wheels' program not only inspired the participants to dream big but also reaffirmed India's accomplishment in space exploration and technological innovation.

'Space on Wheels' program, served as a testament to the institution's dedication to promoting scientific literacy and fostering a spirit of inquiry among the young children's and youth. The event provided a unique opportunity for students to expand their knowledge and explore the endless possibilities of space exploration. As the students departed with newfound inspiration and enthusiasm, the impact of the 'Space on Wheels' program continued to resonate within the corridors of STRC, inspiring future generations to reach for the stars.

Future Outlook

Vertical IV initiatives in 2023–24 exemplify STRC's holistic approach to integrating research, education, and community engagement. By securing patents, advancing bamboo-based innovations, and nurturing skilled entrepreneurs, STRC has solidified its position as a hub for applicable R&D. Environmental education programs and collaborations with national agencies like ISRO further amplify its impact, bridging scientific knowledge with grassroots needs. As STRC continues to expand its academic and skill development portfolios, its contributions to sustainable development and rural empowerment remain pivotal, setting a benchmark for science-driven societal transformation.

Communication for Development Through ICT

The Communication for Development (C4D) vertical at STRC serves as a strategic conduit to bridge knowledge gaps, foster partnerships, and amplify the impact of science and technology-driven initiatives in the Gadchiroli region. By leveraging multi-stakeholder engagement, knowledge dissemination, and participatory approaches, this vertical has played a pivotal role in aligning grassroots needs with institutional expertise, thereby creating sustainable pathways for socio-economic transformation. Below is an overview of key activities, collaborations, and outcomes under this vertical during the reporting period.

Stakeholder Engagement and Institutional Collaborations

STRC's C4D efforts have been anchored in fostering robust partnerships with government bodies, academic institutions, and industry leaders. A landmark collaboration emerged with the National Skill Development Corporation (NSDC), New Delhi, following a visit by Dr. Kapil Chandrayan, NSDC Consultant, on 5th October 2023. During his interaction with STRC officials, Dr. Chandrayan explored avenues to integrate STRC's bamboo craft and social entrepreneurship models into national skill development frameworks. This dialogue underscored the importance of structured communication channels, such as sharing STRC's strategies, reports, and entrepreneurial ecosystem frameworks, to align with NSDC's objectives. Notably, the Pradhan Mantri Vishwakarma Yojana was identified as a collaborative platform to provide financial and technical support to 25,000 artisans, with a focus on gender inclusivity.

Parallelly, STRC established a groundbreaking partnership with Tata Memorial Centre (TMC), Mumbai, under the project *'Integrated Treatment of Cancer Combining Principles of Ayurveda and Allopathy'*. A virtual meeting on 17th October 2023 facilitated knowledge exchange between STRC's Indigenous Medicinal Knowledge team and TMC's clinical experts. The collaboration emphasizes co-creating a database of traditional healing practices and medicinal plants, alongside ex-situ conservation efforts. This initiative highlights C4D's role in bridging modern medical research with traditional knowledge systems through systematic documentation and interdisciplinary dialogue.

Community-Centric Advocacy and Outreach

STRC's C4D initiatives have actively engaged local communities to ensure inclusivity and ownership. The visit by Shri Bhupender Yadav, Union Cabinet Minister, to discuss the EKAL Gramsabha project highlighted STRC's advocacy for integrating indigenous medicinal knowledge into national policy frameworks. Similarly, interactions with Dr. Rajendra Singh ("Waterman of India") and Padmashree Girish Prabhune reinforced the need to communicate STRC's S&T interventions in resource conservation and tribal upliftment.

Special Visits to the Science and Technology Resource Centre (STRC), Gondwana University, Gadchiroli

The Science and Technology Resource Centre (STRC) at Gondwana University, Gadchiroli, has been privileged to host a diverse array of experts, dignitaries, and delegations throughout the 2023-24 year. These visits have facilitated valuable exchanges of knowledge, fostered potential collaborations, and provided recognition of STRC's ongoing initiatives in the region.

Engagement with Experts and Faculties

STRC has actively engaged with experts and faculty members from various state and regional agencies. In April 2023, Dr. Akhilesh Maurya, a Professor at IIT Guwahati, visited Gondwana University and expressed a keen interest in the STRC's Model Production Unit. Dr. Maurya sought to understand STRC's approach to bamboo craft-based livelihood development and its broader research and development activities. This visit has laid the groundwork for potential technical support and the establishment of a knowledge exchange platform between STRC and IIT Guwahati.

Following the advice of Dr. Anand Bang from SEARCH, Chatgaon, the Chief Program Officer and Head of STRC, along with the STRC team, visited SEARCH to explore collaboration opportunities with various development agencies operating in the Gadchiroli region. Dr. Bang offered his support for STRC's initiatives and provided valuable guidance on developing successful collaborations with other institutions in the area. He emphasized the potential for growth in sectors such as aquaculture, education, and bamboo, highlighting their importance for the advancement of Gadchiroli. STRC anticipates the development of significant partnerships as a result of this interaction.

Visits by Eminent Personalities

STRC was honored to host Dr. Rajendra Singh, a Ramon Magsaysay awardee and renowned as the "Waterman of India," during his visit to the university for a consultation meeting on river conservation. Dr. Singh expressed interest in learning about STRC's contributions to science and technology-driven development in the Gadchiroli region. He toured the STRC's Model Production Unit and engaged in discussions with Shri Ashis Gharai, Chief Program Officer and Head of STRC, and the STRC team.

Shri Bhupender Yadav, Union Cabinet Minister of Labour and Employment, Environment, Forests & Climate Change, Government of India, visited Gondwana University to participate in discussions with stakeholders of the EKAL Gramsabha project, a joint initiative of Gondwana University and the District Administration, with representation from Vanvasi Kalyan Ashram. During this visit, Shri Ashis Gharai presented STRC's work, with a focus on indigenous medicinal knowledge and its conservation. The Minister acknowledged the work of STRC and offered suggestions for strengthening ongoing efforts. The meeting was also attended by Shri Ashok Nete, Member of Parliament for Gadchiroli-Chimur Lok Sabha, and Dr. Devrao Holi, Member of the Legislative Assembly for Gadchiroli.

Dr. Namdev Usendi, Former Member of the Legislative Assembly, visited the STRC Model Production Unit. He inquired about the unit's assembly line and expressed interest in the skilled human resources employed there. Bamboo diploma students had the opportunity to interact with Dr. Usendi, and discussions were held regarding potential collaborations, particularly concerning his upcoming bamboo tiles factory at MIDC Gadchiroli

Padmashree Girish Prabhune, a social activist known for his work with the nomadic Pardhi community, Mrs. Nirupama Deshpande of Sampurna Bamboo Kendra, and Dr. Rajendra Sapkal, a bamboo artisan, visited Gondwana University. They engaged in detailed discussions with the Hon'ble Vice Chancellor, Dr. Prashant Bokare, regarding the university's role in conserving and promoting indigenous knowledge, culture, and traditions in the tribal region. The team visited STRC, with a particular focus on the Model Production Unit, and showed considerable interest in the skilled workforce. Dr. Rajendra Sapkal interacted with the bamboo diploma students, and the visit provided an opportunity to explore potential collaborations related to his bamboo tiles factory project.

Conclusion

The Communication for Development vertical has been instrumental in positioning STRC as a nodal agency for collaborative innovation in Gadchiroli. By fostering stakeholder alliances, documenting traditional knowledge, and advocating for community-centric solutions, the vertical has strengthened the nexus between science, technology, and societal well-being. Moving forward, STRC aims to expand its digital outreach, establish a formal knowledge-sharing platform with academic partners, and scale participatory models like the Bamboo Mobility Aids initiative. These efforts will continue to prioritize inclusivity, ensuring that communication remains a transformative force in rural development.

Gondwana Craft

GondwanaCraft Initiative: Preserving Heritage, Empowering Artisans

The Science and Technology Resource Centre (STRC) at Gondwana University, Gadchiroli, has spearheaded Gondwana Craft, a dynamic social entrepreneurship initiative dedicated to amplifying the visibility and value of the region's traditional art forms. By uniting diverse cultural practices such as Bamboo Craft, Dokra Craft, Gond Paintings, and Earthen Pottery under a single umbrella brand, STRC is revitalizing these art forms and positioning them as symbols of Gadchiroli's rich heritage. The initiative addresses the gradual erosion of their prominence in contemporary markets, driven by shifting consumer preferences and limited exposure, and seeks to reinvigorate their relevance through innovation, collaboration, and strategic outreach.

STRC's approach centers on empowering artisans by bridging tradition with modernity. Skill-enhancement programs equip craftsmen with contemporary techniques while preserving the authenticity of their work, ensuring adaptability to evolving market demands. Intergenerational knowledge transfer remains a priority, fostering continuity by engaging youth in apprenticeship models. Digital platforms, including e-commerce channels, have been leveraged to broaden market access, while events, workshops, and exhibitions highlight the cultural and artistic significance of these crafts, fostering pride within local communities and curiosity among wider audiences.

A significant milestone in the reporting year was STRC's successful bid to secure a Traditional Craft Outlet at Nagpur's Futala Lake Viewing Gallery, in collaboration with Maha Metro Corporation. Following a rigorous competitive process, STRC's proposa-showcasing its cohesive product range, artisan collaborations, and sustainable business model-was shortlisted for final approval. Once sanctioned, the outlet will serve as a flagship space to showcase Gondwana Craft's offerings, amplifying regional art forms on a prominent urban platform and connecting artisans with broader consumer bases.

Partnerships have been instrumental in scaling the initiative. STRC Foundation formalized collaborations through Memoranda of Understanding (MoUs) with key stakeholders, including देवराई कला ग्राम LLP, a Bhamragarh based entity specializing in Dokra Craft artefacts. These alliances ensure demand-driven production, quality assurance, and efficient supply chain management. By uniting artisans under the Gondwana Craft brand, STRC fosters collective growth, enabling craftsmen to gain recognition as custodians of cultural excellence while securing sustainable livelihoods

Promotion and Outreach Efforts

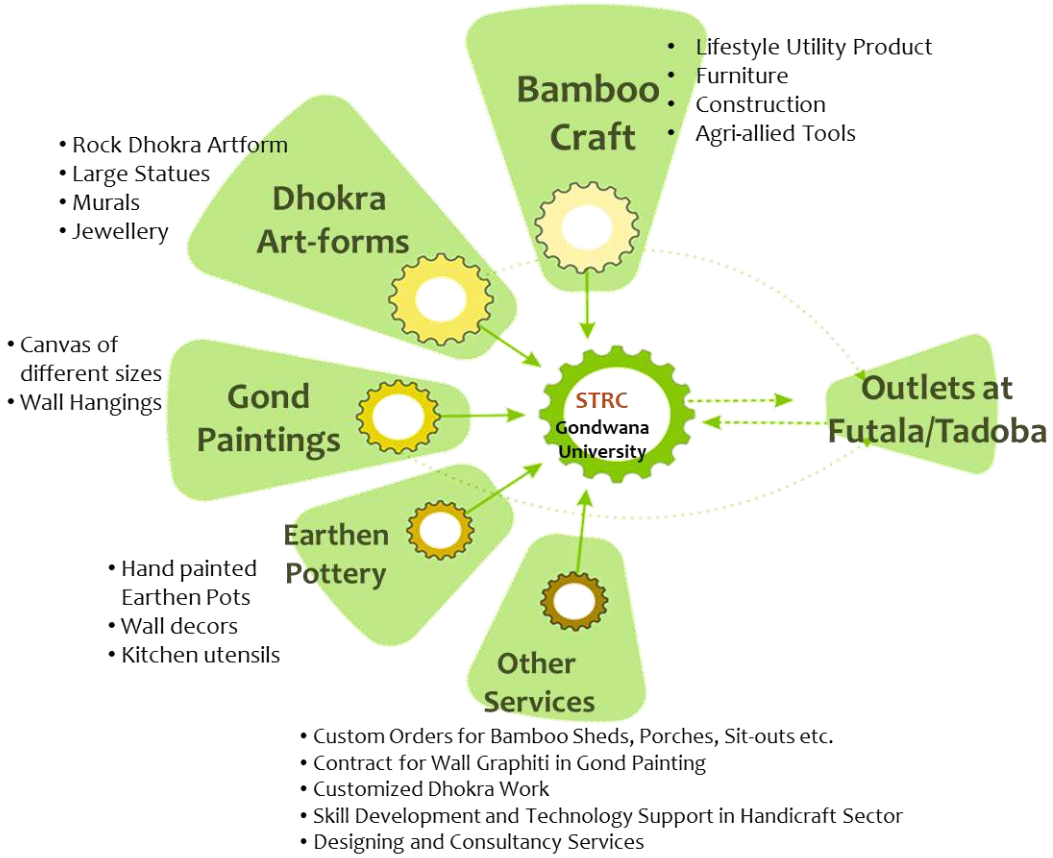
STRC leveraged a dual approach—physical and digital—to elevate the reach of *Gondwana Craft*. A series of exhibitions and cultural events were organized across Maharashtra, drawing attention to the aesthetic and historical significance of Gadchiroli's art forms. These events not only fostered community pride but also attracted patronage from art connoisseurs and collectors.

On the digital front, STRC expanded its e-commerce capabilities, enabling artisans to access national and global markets. Social media campaigns highlighted artisan stories, showcasing their creative processes and the cultural narratives embedded in their work. Virtual workshops and webinars further democratized access to these art forms, engaging audiences beyond geographical constraints.

Future Outlook

As *Gondwana Craft* moves into the next fiscal year, STRC aims to deepen its impact through scalable models. Plans include expanding the artisan network, introducing advanced training modules in collaboration with design institutes, and exploring international partnerships for cross-cultural exchanges. The upcoming Futala Lake outlet will serve as a hub for cultural dialogue, hosting regular craft demonstrations and interactive sessions to educate visitors about the region's heritage.

In conclusion, the 2023-24 year has been transformative for *Gondwana Craft*. By intertwining cultural preservation with socio-economic empowerment, STRC has laid a foundation for a future where tradition and modernity coexist harmoniously. This initiative stands as a testament to the power of community-driven innovation, ensuring that Gadchiroli's artistic legacy thrives for generations to come.



Way Forward

As STRC steps into the next phase of its work, the Centre envisions a deeper and more integrated approach to rural development, rooted in science, sustainability, and community participation. Building on its diverse initiatives—from aquaculture and bamboo-based livelihoods to traditional medicine, non-timber forest produce (NTFP), and environmental education—STRC aims to strengthen its role as a regional knowledge and innovation hub. Efforts will focus on expanding successful models to more villages and blocks while customizing interventions to local needs and capacities.

In the aquaculture and integrated farming sector, STRC will scale its support to more Fish Farmer Interest Groups (FIGs), increase the number of portable hatcheries, and strengthen market linkages through fish vending units. In parallel, forest-based livelihood initiatives will expand with improved support for NTFP processing, sustainable harvesting, and value-chain development, particularly in mahua, honey, and bamboo. Capacity-building programs will continue to be embedded across all verticals, ensuring that local communities have the knowledge and skills to manage these initiatives independently.

On the knowledge systems front, STRC plans to further institutionalize its work on indigenous medicinal practices through documentation, research collaborations, and expansion of the Vaidya Chikitsalay model. The Farmers' Open School initiative will also grow, with new modules addressing climate-resilient agriculture, soil health, and sustainable water use. Environmental education programs for schoolchildren will be strengthened, helping to instill conservation values from a young age.

Looking ahead, STRC will place greater emphasis on convergence—linking grassroots innovation with academic research, public policy, and market ecosystems. Through expanded partnerships with technical institutions, government agencies, and civil society organizations, the Centre will work toward creating scalable, inclusive, and resilient models of development. Whether through digital tools, institutional platforms, or hands-on community work, STRC remains committed to improving lives through science and technology rooted in local realities.

Financial Summary

UTILIZATION CERTIFICATE

(Financial Year – 1st April 2023 to 31st March 2024`)

1	**Title of the Project**	**Science and Technology Resource Centre (STRC)**
2	**Name of the Organization / Institute**	Gondwana University Gadchiroli
3	**Principal Investigator**	Shri. Ashis Gharai Chief Program Officer & Head STRC-GUG
4	**Rajiv Gandhi Science and Technology Commission, Mumbai Sanction Order No and Date of Sanctioning the project**	RGSTC/File-2013/CR-25, issued by RGSTC on May 20,2013
5	**Period of Project**	2013-2018 (Initially Sanctioned) Last Extension Received till July 2025
6	**Amount brought forward from the previous financial year**	Rs. 85,21,007/-
7	**Amount received from RGSTC during current financial year (Please give No. & dates of Sanction Orders showing the amounts paid)**	1)Vide Letter No. RGSTC/File-2013/DPP122/CR-70/157, Dated 19th Apr. 2023, **Rs. 52,19,000/-** 2) Vide Letter No. RGSTC/File-2013/DPP122/CR-70/32, Dated 1st Feb. 2024, **Rs. 3,30,30000/-** **Rs.3,82,49,000/-**
8	**I) Interest received in the current financial year (Deductible from the next installment**	NIL
	II) Other receipt if any	NIL
9	**Total amount that was available for the expenditure during the financial year (Sr. No 6+7+8).**	Rs. 4,67,70,007/-
10	**Total expenditure in current financial year.**	Rs. 1,99,79,100/-
11	**Unspent balance at the end of the financial year.**	Rs. 2,67,90,907/-
12	**On closure, unspent balance refunded/ to be refunded to RGSTC, if any (Please give details of cheque No. and date)**	NIL

Certified that the amount of Rs. 1,99,79,100/- (Rupees One Crore Ninety Nine lakhs Seventy Nine thousand One Hundred only) mentioned against col. 10 has been utilized on the project for the purpose for which it was sanctioned and that the balance of Rs. 2,67,90,907/- (Rupees Two Crore Sixty Seven Lakh Ninety Thousand Nine Hundred Seven only) remaining unutilized at the end of the financial year ending 31/03/2024 will be adjusted towards the grant–in–aid payable during the next year.

Certified that I have satisfied myself that the conditions on which the grant–in–aid was sanctioned by the Rajiv Gandhi Science and Technology Commission has actually been utilized for the purpose for which it was sanctioned.

(Signature of Principal Investigator)
Chief Program Officer & Head
Science & Technology Resource Centre
Gondwana University Gadchiroli

(Signature of the Comptroller/ Finance and Accounts Officer/Director of Research)
Finance & Accounts Officer
Gondwana University, Gadchiroli

(Signature of the Head of Institution)
Registrar
Gondwana University, Gadchiroli

STATEMENT OF EXPENDITURE

Statement showing grants received from Rajiv Gandhi Science and Technology Commission, Mumbai and the Expenditure incurred the period **01/04/2023** to **31/03/2024** and requirement of funds up to **31/03/2025** for the Project Entitled **"Science and Technology Resource Center, Gondwana University, Gadchiroli"**

Item	Unspent balance carried forward from previous year	Grant received from RGSTC during the year 2023 to 2024	Other receipts interest earned if any, on the grant received	Total of Col. (2+3+4)	Expenditure incurred from 01/04/2022 to 31/03/2023	Balance (5-6)	Requirement of fund for financial year 2024-2025
1	2	3	4	5	6	7	8
1. Non- recurring							
a) Equipment	48,63,266	1,00,00,000	0	1,48,63,266	12,62,252	1,36,01,014	10,00,000
2. Recurring				0		0	
a) Manpower	13,83,205	1,00,00,000	0	1,13,83,205	1,06,74,935	7,08,270	60,00,000
b) Consumables	525636	1,30,00,000	0	1,35,25,636	52,50,405	82,75,231	50,00,000
c) Travels	1,43,702	12,00,000	0	13,43,702	5,27,023	8,16,679	16,75,000
d) Contingencies	11,55,265	12,19,000	0	23,74,265	18,06,910	5,67,355	20,00,000
e) Overheads (if applicable)	0	0	0	0	0	0	
Other if any	4,49,933	28,30,000		32,79,933	4,57,575	28,22,358	19,43,000
TOTAL	**85,21,007**	**3,82,49,000**	**0**	**4,67,70,007**	**1,99,79,100**	**2,67,90,907**	**1,76,18,000**

Principal Investigator
Chief Program Officer & Head
Science & Technology Resource Centre
Gondwana University Gadchiroli

Finance & Accounts Officer
Finance & Accounts Officer
Gondwana University, Gadchiroli

Head of Institution
Registrar
Gondwana University, Gadchiroli

Seal

STATEMENT OF EXPENDITURE

Statement showing grants received from Rajiv Gandhi Science and Technology Commission, Mumbai and the Expenditure incurred the period **01/04/2023** to **31/03/2024** and requirement of funds up to **31/03/2025** for the Project Entitled **"Science and Technology Resource Center, Gondwana University, Gadchiroli"**

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e) Overheads (if applicable)	0	0	0	0	0	0	
Other if any	4,49,933	28,30,000		32,79,933	4,57,575	28,22,358	19,43,000
TOTAL	**85,21,007**	**3,82,49,000**	**0**	**4,67,70,007**	**1,99,79,100**	**2,67,90,907**	**1,76,18,000**

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