

# 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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**Transforming Independence into Opportunities**  
Celebrating 79<sup>th</sup> Independence Day at Gondwana University



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Shri Swapnil Girade  
Chief Program Officer & Head (In-Charge), STRC

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Ms. Priyanka Durge  
Scientific Officer,  
Communication for Development through ICT, STRC



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# From the CPO's Desk

## Exploring the Potential of Aquatic Crops in Gadchiroli: A Pathway to Alternative Livelihoods

Gadchiroli district, though richly endowed with forests, rivers, and fertile landscapes, has one of its most underutilized resources in its aquatic wealth. With over 8,500 water bodies, along with perennial rivers and seasonal streams, the district holds immense untapped potential beyond the conventional focus on fisheries. With strategic interventions, these wetlands can support a diverse portfolio of aquatic crops, creating a parallel economy that complements aquaculture. This is particularly relevant in Gadchiroli, where much of the population depends on agriculture, forest produce, and seasonal labor. Introducing aquatic crops such as Azolla, Water Chestnut (Singhara), Lotus, Makhana, and Water Hyacinth can transform water bodies into hubs of sustainable livelihoods, nutritional security, and local entrepreneurship, while also offering pathways for community-level adoption and integration into larger value chains.



**Shri Swapnil Girade**  
Chief Program Officer and Head  
(In-Charge), STRC

### 1. Azolla – Tiny Fern with Big Potential



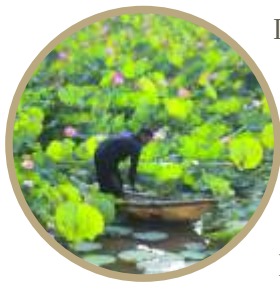
Often referred to as “Green Gold”, Azolla is a fast-growing floating fern that requires minimal inputs. Rich in protein and essential nutrients, it has extensive applications as animal feed, biofertilizer, and compost. In Gadchiroli, where livestock and smallholder farming are integral to rural life, Azolla can directly improve soil fertility and livestock nutrition while reducing dependence on costly chemical fertilizers, making it a low-cost, high-impact livelihood resource.

### 2. Water Chestnut (Singhara) – The Aquatic Superfruit

Water chestnut cultivation is already practiced at large in Gadchiroli and adjoining districts and its potential is immense. This nutrient-rich fruit, popular for its use during fasting seasons, is not only consumed fresh but also processed into gluten-free flour, snacks, and sweets. Singhara's high market demand, both locally and nationally, opens pathways for value chain integration in Gadchiroli. Farmers can diversify their income by exploring Singhara-based processed products, linking traditional practices to modern consumer markets.



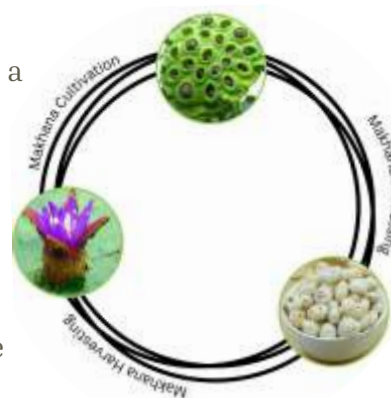
### 3. Lotus – The Sacred Bloom of Abundance



Lotus is more than a sacred flower—it is a multi-utility aquatic crop. Its seeds, roots, and leaves are consumed in various culinary traditions, while extracts are widely used in herbal medicines and skincare industries. Gadchiroli's serene ponds and lakes offer an ideal environment for lotus cultivation. By promoting value-added products such as roasted lotus seeds, root chips, and herbal teas, communities can access niche markets. Beyond economic returns, lotus cultivation enhances the aesthetic and ecological value of local water bodies, linking livelihood with cultural and environmental significance.

### 4. Makhana – The Wetland Wonder

Also known as fox nut or gorgon nut, Makhana is globally recognized as a superfood. Traditionally valued for its therapeutic properties, it is rich in antioxidants, proteins, and minerals. While Bihar dominates global Makhana production, Gadchiroli's underutilized wetlands and lakes provide scope to introduce this high-value crop. Processed products such as roasted Makhana, sweets, and health snacks are already popular in urban markets and hold export potential. Introducing Makhana in Gadchiroli can create new livelihood avenues while positioning the district in an emerging global value chain.



### 5. Water Hyacinth – From Aquatic Invader to Opportunity



Water hyacinth, notorious as an invasive plant choking Indian water bodies, is also prevalent in Gadchiroli. While it threatens aquatic ecosystems, innovative solutions can turn this challenge into opportunity. The plant can be repurposed into handicrafts, eco-friendly furniture, organic fertilizers, biochar, and biofuels. For Gadchiroli's artisans and rural households, Water hyacinth valorisation offers a pathway to both sustainable income generation and ecological restoration, effectively transforming a menace into a resource.

Recognizing the vast but underutilized potential of the district's wetlands, STRC, Gondwana University, Gadchiroli, is planning to explore aquatic crop cultivation through small-scale pilot initiatives in selected sites, initially focusing on crops such as Singhara, Lotus, and Makhana for their nutritional, cultural, and market relevance. These efforts will assess feasibility, community acceptance, and value chain linkages, laying the foundation for future scale-up. In doing so, STRC will facilitate science- and technology-based solutions—from improved cultivation methods, post-harvest processing, and product development to capacity building and market integration while fostering significant collaborations with institutions like MAFSU for aquaculture expertise, Jaljeevika for livelihood promotion, and the National Research Centre for Makhana (NRCM) for technical knowledge. By blending local knowledge, scientific innovation, and institutional partnerships, STRC aims to transform Gadchiroli's water bodies from being used primarily for fisheries into multi-dimensional resources that sustain livelihoods, enhance nutrition, and promote ecological balance, thereby advancing its mandate of bridging science with society and contributing to a self-reliant Gadchiroli.



## Article

# Data-Driven Development Tracking Impact

In the era of digital transformation, the ability to generate, analyze, and act upon data has become a cornerstone of effective development. Data is not just collected—it is transformed into insights that guide decisions, shape strategies, and measure real-world impact.

### Why Data Matters in Development

Development initiatives often operate in complex environments where resources are limited, needs are diverse, and outcomes are hard to quantify. Without reliable data, it becomes difficult to understand what works, where challenges persist, and how resources can be better utilized. Integrating data-driven systems ensures that interventions are evidence-based and community-focused.

### Measuring What Matters

From livelihood development initiatives to community based programs, data systems are increasingly shaping how impact is understood. Modern digital platforms allow organizations to track outreach, engagement, and effectiveness across multiple channels. Each workshop, training program, and community campaign becomes more than an event it becomes a valuable data point.

Analytics highlight which resources generate the most interest, communication systems provide insights into audience preferences, and interactive dashboards transform raw numbers into visual stories that decision-makers can act upon quickly. Social media monitoring further reveals which messages resonate most with different audiences. Together, these approaches ensure that communication strategies remain agile, evidence-based, and aligned with real community needs.

### From Numbers to Narratives

While data provides the numbers, equal emphasis is placed on interpreting what those numbers mean for the community. Tracking the number of farmers adopting climate-smart techniques, artisans gaining new markets, or students improving digital skills offers more than statistics it tells a story of progress. Documenting these stories alongside metrics ensures that development remains people-centered and relatable.



**Ms. Priyanka Durge**

Scientific Officer,  
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through ICT, STRC



## Ensuring Accountability and Transparency

Data-driven monitoring serves as a foundation for accountability by linking outcomes directly to defined goals. Transparent reporting demonstrates not only what has been achieved but also where gaps remain and future efforts must be directed. Regular dissemination through reports, publications, and newsletters emphasizes measurable results rather than activities alone, reinforcing credibility and fostering trust among stakeholders, partners, and the wider community.

## Looking Ahead

As the Science and Technology Resource Centre (STRC), Gondwana University, continues to advance its mission, the focus on data-driven development will only strengthen. Future priorities include enhancing real-time data collection, broadening the use of impact assessment frameworks, and equipping community members with the skills to interpret and apply data themselves. This evolution—from being passive recipients of information to becoming active participants in knowledge systems—will be central to fostering long-term sustainability.

Ultimately, data is more than numbers. It acts as a compass to guide resources, a mirror to reflect progress, and a bridge to connect efforts with impact. By monitoring outcomes with precision and clarity, STRC reaffirms that its mission of empowering underserved communities is not merely aspirational but measurably effective.



## Cover Story



### Transforming Independence into Opportunities *Celebrating 79<sup>th</sup> Independence Day at Gondwana University*



Gadchiroli / 15th August 2025

On the occasion of India's 79th Independence Day, Gondwana University, Gadchiroli, hosted a flag-hoisting ceremony at its campus. The program was presided over by Hon'ble Vice-Chancellor, Dr. Prashant Bokare, and graced by Lt. Col. Vikram Mehta, Residential Director, Lloyds Metals & Energy Limited, as the chief guest.

On the occasion of Independence Day, the Hon'ble Vice Chancellor highlighted the need for Gadchiroli's growth to be aligned with skill development that meets the demands of future markets. He particularly emphasized the opportunities emerging from the mining sector in Gadchiroli and underlined the role of the University Institute of Technology in preparing a skilled workforce. The establishment of the University Institute of Technology at Gondwana University, with the support of Lloyd Metals and Energy Pvt. Ltd., marks a crucial milestone in this direction. By fostering technical education and practical training, the Institute aims to equip local youth with industry-relevant skills, ensuring their active participation in the region's economic transformation.

Encouraging students, Dr. Bokare urged them to take advantage of the institute's opportunities, pursue their studies with dedication, strive for academic excellence, and prepare themselves for bright and promising careers.





# What's Making News

## Project Update:

### Climate Smart and Regenerative Agriculture Project

 Gadchiroli / 1st August 2025

Under the Agricultural Initiative for Sustainable Livelihoods, the Climate Smart and Regenerative Agriculture (CSRA) Project is progressing steadily in Chamorshi. The STRC team, in collaboration with students from Kewalramji Harde College of Agriculture, is carrying out regular crop monitoring to ensure robust and healthy growth.

Current observations show that the fields are largely free from weed infestation. With consistent monitoring and timely corrective measures, the team is working to maintain crop vitality and ensure sustainable outcomes.



## Jaljeevika Launched Rural Aquaculture Incubation Centre (RAIC) with STRC's Support in Gadchiroli

 Gadchiroli / 25th August 2025

With the support of the Science and Technology Resource Centre (STRC), the Centre for Aquatic Livelihoods – Jaljeevika launched the Rural Aquaculture Incubation Centre (RAIC) at Gondwana University, Gadchiroli. The initiative aims to strengthen aquaculture-based livelihoods by nurturing new fishery entrepreneurs and building a model for fisheries development in the district.

The launching event brought together fish farmers, women's self-help groups, youth, and representatives from leading banks, UMED, and the District Industries Centre.

The inauguration of the program was graced by Dr. Sachin Bonde, Dean, College of Fishery Science, Maharashtra Animal and Fishery Sciences University, Nagpur, while the proceedings were presided

over by Dr. Shriram Kawale, Pro Vice-Chancellor, Gondwana University, Gadchiroli.

On this occasion, Shri Neelkanth Mishra, CEO & Founder - Jaljeevika, outlined the objectives of RAIC and shared the its vision, opportunities, and future potential of aquaculture in Gadchiroli.

Distinguished guests included Dr. Anil Hirekhan, Registrar, Gondwana University; Shri Gurudas Kamdi, Member, Management Council, Gondwana University; Dr. Prashant Telvekar, Associate Dean, College of Fishery Sciences, Nagpur; Shri Sameer Dongre, Assistant Commissioner of Fisheries, Gadchiroli; and Team Jaljeevika.

Marking the occasion, Jaljeevika released an information booklet and launched a dedicated website/platform for aquapreneurship to provide knowledge, resources, and networking support for fishery entrepreneurs, farmer producer organizations (FPOs), women's self-help groups, startups, and other stakeholders in the aquaculture sector.

The newly launched RAIC at Gondwana University is envisioned as a catalyst for fostering innovation, entrepreneurship, and sustainable growth in fisheries, making Gadchiroli a rising hub for rural aquaculture.



## STRC Visits College of Fishery Science, Nagpur

 Nagpur / 12th August 2025

The STRC team, comprising Shri Swapnil Girade, Chief Program Officer & Head (In-Charge), and Shri Gandharv Pilare, Scientific Officer, visited the College of Fishery Science, MAFSU, Nagpur to discuss strategies and low-cost innovations in fisheries, specifically in the context of Gadchiroli. During the visit, the team also explored the hatchery unit of the college and gained valuable insights into the ongoing academic and practical initiatives in the fisheries sector.





# Visit by Eminent Personalities

## The Chief Information Commissioner of Maharashtra Shri. Rahul Pandey and Nagpur Information Commissioner Shri. Gajanan Nimdeo Visit to STRC

 *Gadchiroli / 1st August 2025*

The Chief Information Commissioner of Maharashtra, Shri. Rahul Pandey and Nagpur Information Commissioner Shri Gajanan Nimdeo paid a visit to STRC, Gondwana University, Gadchiroli.

Team STRC extended a warm welcome to the dignitaries. During the visit, the Commissioners interacted with STRC officials and appreciated the initiatives being undertaken by the Centre in the field of science, technology, and community development.



## Dr. Vaibhav Datrange, BAIF, Pune

 *Gadchiroli / 20th August 2025*

Dr. Vaibhav Datrange, Associate Program Manager, BAIF Development Research Foundation, Pune, along with a district representative, recently visited STRC.

The visit focused on discussions around the Bamboo Task Force initiative and gaining insights into STRC's various programs. Dr. Datrange was briefed on STRC's work in the bamboo sector, explored the assembly line at the STRC Model Production Unit, and learned about the network established with bamboo artisans. Discussions also covered how STRC can provide bamboo craft training to the community groups developed by BAIF.



## Shri Dattatrey Jagtap along with Shri Mahesh Sal from Satara, Maharashtra

 *Gadchiroli / 2nd August 2025*



Shri Dattatrey Jagtap along with Shri Mahesh Sal from Satara, Maharashtra recently visited STRC to learn about STRC's ongoing initiatives in the Non Timber Forest Produce sector and to discuss potential collaboration opportunities.

During the visit, STRC staff provided an overview of various programs and shared insights on how technological and community driven interventions are supporting sustainable development in the minor forest produce sector. The discussions highlighted avenues for future partnerships aimed at empowering local communities and strength-ening livelihood initiatives in the region.

## Bachelor of Social Work (BSW) Students' Educational Visit

 *Gadchiroli / 18th August 2025*

Students from the Bachelor of Social Work (BSW), Fule-Ambedkar College of Social Work, Gadchiroli visited STRC. The purpose of the visit was to provide students with practical exposure to how science and technology are being applied for social transformation and community development in the region. On this occasion, the students were introduced to STRC's key initiatives and Rural Livelihood Enhancement Programs. They also gained an understanding of how STRC engages with local communities, supports self-help groups, promotes sustainable practices, and creates livelihood opportunities.

This interaction offered the students a chance to connect their academic learning in social work with real-world applications in rural development, giving them valuable insights into field-level challenges and innovative solutions.







## A Team of Nandanwan Shahar Upjivika CLF, Chikhaldara

 Gadchiroli / 20th August 2025

As part of their exposure tour in Gadchiroli, the Nandanwan Shahar Upjivika CLF, Chikhaldara (SPV-H&K SFURTI Cluster) visited STRC.

The visit provided participants with an opportunity to explore STRC's livelihood initiatives, including bamboo craft, aquaculture, non-timber forest produce enterprises and technology-driven solutions. Team engaged with STRC staff and local artisans, gaining valuable insights into the processes of developing, strengthening, and scaling sustainable livelihood models at the grassroots level.



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### 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  
(In-Charge), 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  
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