





















FOREWORD

It gives me great pride to introduce the transformative projects spearheaded by the Meghalaya Basin Development Authority (MBDA), which are dedicated to fostering sustainable growth and enhancing livelihoods across our state. MBDA's work is a testament to Meghalaya's commitment to responsible development one that balances the various developmental needs while preserving our natural heritage and empowering our communities to thrive.

The MBDA has been at the forefront of our developmental journey, playing a pivotal role as one of the drivers that are shaping sustainable growth across the state. MBDA's work reflects our government's commitment to building a solid foundation that will have a resounding effect for generations. Through knowledge management, strategic partnerships, and targeted interventions, MBDA has effectively mobilized resources, knowledge, and local capacities and brought about impactful change across various sectors, serving as practical models on which to build on.

The various externally aided projects entrusted to MBDA and the Meghalaya Basin Management Agency (MBMA) under it embody the vision of a Meghalaya that is resilient, inclusive, and prosperous. Each of the projects addresses critical aspects of community well-being and sustainable resource management, creating pathways to better lives and stronger local economies. Further, initiatives such as PRIME and FOCUS are comprehensive programs meant to ensure the development of thriving economic environment where aspirations of farmers, entrepreneurs and other practitioners can be realised.

Together, these initiatives reflect MBDA's and MBMA's holistic approach to development, where economic acceleration, environmental stewardship and community well-being go hand in hand. I am deeply appreciative of the dedication shown by MBDA, MBMA team, our partners, and the resilient communities that make these achievements possible. Their collective efforts inspire us all to envision a future where every citizen of Meghalaya can realize their full potential.

I look forward to the continued success of these projects, confident that they will serve as a foundation for lasting, meaningful change across Meghalaya.



Chief Minister of Meghalaya



MESSAGE

At the Meghalaya Basin Development Authority (MBDA) and the Meghalaya Basin Management Agency (MBMA), our mission is rooted in uplifting Meghalaya's communities through sustainable, community-centric initiatives. Our work reflects a commitment to conserving natural resources while fostering livelihoods that empower rural communities across the state.

We focus on holistic, long-term development through integrated approaches. MBDA is dedicated to managing natural resources, ensuring our initiatives address critical issues faced by rural communities. We emphasize sustainable practices across resource management, enterprise development, knowledge sharing, and governance reform, benefiting current and future generations. Meanwhile, MBMA brings a specialized focus on livelihoods, supporting rural enterprises, enhancing market access, and building linkages that are vital for economic resilience.

Projects like MegLIFE (Community-Based Forest Management & Livelihood Improvement), Community-Led Landscape Management Project (CLLMP), Megha-Livelihoods Access to Market Project (Megha-LAMP), Sustainable Land Management (SLM), and MegARISE exemplify our shared vision. Meglife enhances quality of life by addressing community needs, focusing on resource conservation and livelihood improvement. CLLMP empowers villages to lead in landscape restoration, while Megha-LAMP promotes inclusive growth through market access and rural enterprise development. SLM expands the farmer base, and MegARISE safeguards the state's critical water catchments.

These projects align with our belief in ground-up development, collaborating with communities who know their land and resources best. Each initiative marks a step toward a resilient, sustainable Meghalaya where communities thrive in harmony with their environment.

My deepest gratitude goes to our partners, community members, and the dedicated teams bringing these initiatives to life. Your commitment drives our mission forward, making a tangible difference in the lives of Meghalaya's people.

Together, we will continue to build a future where Meghalaya's natural wealth and community strength go hand in hand, creating lasting, positive change across the state.

Dr. Vijay Kumar Damera, IAS

Commissioner & Secretary to the Government of Meghalaya, Chief Executing Officer, MBMA, Deputy Chief Executing Officer, MBDA, Project Director, MegLIFE, and Project Director, Megha-LAMP



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Against All Odds CHESRANG AND LAMKUPAR'S PATH TO STRENGTH

he State of Meghalaya is uniquely designated as a Sixth Scheduled State under Article 244 of the Constitution of India. This means the indigenous people of the state are granted authority and autonomy by the constitution for self-governance. In this regard, the government of Meghalaya accords high importance to social inclusion and empowerment to ensure inclusive and sustainable development of the state. This commitment has resulted in a plethora of inspirational stories such as those of Chesrang S. Marak and Lamkupar Syiem who, despite facing physical challenges, contribute actively to their communities and serve as symbols of resilience.

Chesrang S. Marak grew up with a deep love for football, inspired by his idol Neymar Jr., the Brazilian football star. Football wasn't just a game for him; it was his passion and a cherished dream. However, a life-altering accident during a friendly match would change his course forever. While sprinting to catch the ball, Chesrang took a misstep and twisted his ankle severely. Though he received immediate care, the injury didn't heal completely, leaving him unable to walk normally and dashing his hopes of playing the game he loved.



The impact of his injury weighed heavily on him, leading him into a period of depression. The once-joyful boy who had envisioned a bright future in sports now felt isolated and adrift. Yet, even in these challenging moments, Chesrang drew on his inner resilience. He gradually found solace by redirecting his energy to support his community and adapting to a new role as a farmer. Farming gave him a renewed sense of purpose, helping him regain a connection to his roots and his community.

In 2022, Chesrang's path took another turn when he discovered the MegLIFE Project. Drawn by its mission to restore natural resources and uplift communities, he joined the project as Secretary of the Village Project Implementation Committee (project implementation committee) in Watregre. Despite his physical limitations, he devoted himself to the project with unwavering commitment. His contributions included monitoring project activities, assisting office staff, and overseeing the community nursery.

He often worked extra hours, tending to plants and nurturing seedlings, taking pride in the tangible impact his efforts were making.

Far from Chesrang Village, a similar story in the tranquil village of Lumdieng under Ri Bhoi District, Lamkupar Syiem's story is one of unyielding perseverance and unwavering determination. His journey began in the most challenging of circumstances. As an infant, Lamkupar lost his mother, and it was his grandparents who became his pillars of support. They gave him love, guidance, and a sense of belonging in a world that seemed so uncertain. However, life had more trials in store for him. His right hand was left disabled, and his education was cut short after the eighth grade, yet Lamkupar's spirit remained unbroken.





From a young age, he learned to adapt. Lamkupar used his left hand for everything—from daily labour to small electrical repairs—finding strength in his independence and the memory of his grandparents' love. Despite the loss of his caregivers, he remained resolute, taking on whatever work he could find to sustain himself.

When the MegLIFE project reached Lumdieng, Lamkupar saw an opportunity for something more. While some in his community doubted whether his disability would hinder his ability to contribute, Lamkupar's resolve only grew stronger. He joined the Village Project Implementation Committee (VPIC) with a commitment to make a difference. His role quickly expanded beyond expectations, as he became a key figure in decision-making, monitoring plantation sites, and overseeing nursery activities. Lamkupar poured his heart into every task, proving that his disability was not a limitation but a challenge he was determined to overcome.

His efforts didn't go unnoticed. Lamkupar's perseverance and leadership became an inspiration to his community. He has demonstrated that real power lies not in physical strength but in the strength of character and willpower. Through his journey with the MegLIFE project, Lamkupar has shown that no matter the obstacles life throws at us, we all have the ability to rise, inspire, and lead.



Seeds Of Change LAITMYNSANG'S WOMEN LEADING ENVIRONMENTAL AND ECONOMIC REVIVAL

aitmynsang's Village Project Implementation Committee (project implementation committee) shines as a symbol of progress, championing a bold, women-led vision that is reshaping the path toward environmental sustainability. Being one of 500 villages supported under a large JiCA funded project in the state - MegLIFE, Laitmynsang has chosen to entrust its reforestation efforts to women-owned Self-Help Groups (SHGs), allowing them to take charge of the village's environmental stewardship.

The SHGs have turned a simple community nursery into a thriving hub of activity. From planting saplings to tending them with care, these women manage every step of the process. Their dedication is not only reflected in the lush greenery they nurture but also in their entrepreneurial spirit. By controlling the nursery, they've unlocked new streams of income—selling saplings at affordable rates to both the project implementation committee and other surrounding villages. Over 6,000 saplings were sold at ₹2 each, while higher-value saplings fetched ₹15, boosting the SHGs' financial independence.

But the true brilliance of Laitmynsang lies in the way these women have reinvested their earnings. The funds they generate go back into the nursery, ensuring its long-term growth. A revolving fund set up through the project implementation committee has enabled them to maintain the nursery, procure new saplings, and cover labour costs, creating a self-sustaining cycle of growth.

This success story is more than just about reforestation; it's about empowerment. The women of Laitmynsang are leading their community toward a future of resilience and sustainability. They're not only restoring the environment—they're redefining what it means to be leaders in their village. Through their efforts, Laitmynsang has become a model of how women's leadership can drive both ecological and economic transformation.



Rebuilding Roots SALT'S IMPACT ON MEGHALAYA'S AGRICULTURE

n Meghalaya, abundant rainfall—averaging around 11,500 mm each year—has nurtured a land of rich biodiversity, yet it also brings a formidable challenge. High rainfall contributes to significant soil erosion and nutrient depletion, especially on hillsides where farming is not carefully managed. Traditional practices like Jhum agriculture, with its shortened fallow periods and repeated cycles, along with the widespread monocropping across the region, further strain the soil, leading to reduced fertility, declining crop yields, and growing threats to both food security and livelihoods. While farmers have tried to control waterlogging by constructing bunds along slopes, these efforts can inadvertently accelerate land degradation, causing some fields to be abandoned altogether. In response to these difficulties, a movement toward sustainable farming is taking root in Meghalaya. Increasingly, farmers are embracing Sloping Agricultural Land Technology (SALT), a conservation method designed to combat soil erosion and boost fertility. Among the 1,091 SALT farmers now cultivating across 272 villages, many are already seeing the benefits of this approach.



One such farmer, Joshan N. Sangma from Bangsi Aga village in the North Garo Hills, has found new hope in SALT. Joshan had long faced the frustrations of declining soil quality, inconsistent yields, and the rising costs of chemical fertilisers. With only a single hectare of land, he struggled to sustain his family, caught between limited options and dwindling resources. In February 2023, Joshan attended a SALT training session organised by the MegLIFE project. Inspired by its potential to rejuvenate his land, he committed to adopting the SALT method. By May, Joshan had constructed five contour lines along the hillside, effectively reducing soil erosion and improving water retention.

In just one year, Joshan witnessed remarkable results: his crop yields increased by 30%, while his land became more resilient to extreme weather. Encouraged by his success, Joshan has since become a vocal advocate for SALT, sharing his experiences and encouraging neighbouring farmers to consider this sustainable path.

In the Khasi Hills, 53-year-old Kong Aihun Nongspung from Tynring village has her own story of transformation. With an education that ended in the eighth grade, Kong has long relied on farming and livestock rearing to provide for her family of eight children. Over time, however, she had seen her yields dwindle and her soil lose its fertility. In 2023, after attending a SALT training session in her Block, Kong decided to try the approach herself. She carefully set up 10 contour lines on her 0.1-hectare plot and planted 1 kg of Tephrosia seeds along them. These hedgerows took root successfully, reducing soil erosion during heavy rains while enriching the soil with valuable nutrients. Later, Kong planted potatoes between the Tephrosia lines and saw her yields increase by as much as 50%.

With a vision to turn her farm into a model for sustainable practices, Kong hopes her journey will inspire others in her community to embrace SALT. Together, the stories of Joshan and Kong underscore the transformative potential of sustainable agriculture in Meghalaya, illuminating a pathway toward resilience, ecological balance, and renewed prosperity for farmers across the region.



Sloping Agricultural Land Technology (SALT) is a sustainable agroforestry system developed for hilly regions with high rainfall, like Meghalaya. By planting nitrogen-fixing hedgerows along contour lines, SALT slows surface runoff, reduces soil erosion, and enriches soil fertility. The hedgerows' roots help bind the soil, while their biomass serves as organic mulch, retaining moisture and suppressing weeds. Regularly pruned, these hedgerows provide a nitrogen boost that enhances soil health, making it possible for communities to cultivate a variety of crops between the hedgerows, supporting both ecological stability and agricultural productivity.



or decades, unscientific coal mining in Meghalaya has impacted its landscape, leaving nearly 20% of the land as barren wastelands and causing lasting harm to both the environment and local communities. Among the most affected areas is the village of Arenggittim in South Garo Hills District under Baghmara Block. Once thriving on the promise of coal, the village now contends with the aftermath— large swathes of land scarred by severe degradation with more than 50 hectares turned to barren land since mining was ceased by the country's National Green Tribunal in 2003.

With the end of mining, life for Arenggittim's 264 residents changed drastically. The Seelpang stream, once a steady lifeline, has now dwindled, its volume sharply reduced by the shifting landscape. Rogo Chiring, a spring revered by locals, now only flows seasonally, drying up during the months of February to June. This decline captures the deep effects of coal mining on the area's hydrology and the challenges now facing the community.







As erosion deepens, siltation has filled nearby streams and springs, compromising drinking water and impacting the water quality downstream in the Simsang River, now marred by coal sediments. The combination of barren landscapes and eroded lands presents a stark environmental challenge for Arenggittim. Lacking vegetation, the land has seen biodiversity dwindle, habitats degrade, and water sources diminish, amplifying water scarcity and ecological instability.

Amid these trials, hope has emerged through the MegLIFE project in collaboration with the Megh Aroma Mission. Together, they have rejuvenated 14 hectares of degraded mining land by transforming it into a flourishing Citronella plantation, planting over 700,000 slips. Once bare, the soil is now shielded, supporting soil organisms and reducing erosion. Additionally, a large-scale afforestation effort—with 400 saplings planted per hectare across 36.92 hectares—promises to bolster the region's biodiversity.

This project has achieved an impressive 95% survival rate, inspiring the community and renewing ecological balance.

Further adopting sustainable practices, farmers in Arenggittim have turned to SALT farming to restore groundwater and conserve soil. Equipped with training, they've implemented contour lines using the A-frame method and introduced nitrogen-fixing plants like Tephrosia and Indigofera along these lines. Through zero tillage, this approach has boosted soil moisture retention and minimised runoff, conserving soil and water for the future.

Ultimately, ambitious EAP projects show how even the most remote areas can be revitalised. By uniting the community under a shared goal, these initiatives have made strides toward a future of sustainable forest management, environmental restoration, and renewed livelihoods for the people of Arenggittim.



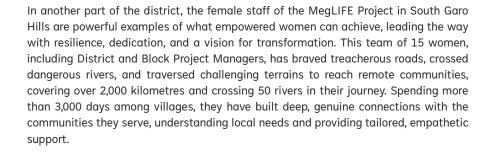


Guardians of Tradition, Pioneers of Change HOW MEGHALAYA'S WOMEN ARE RESHAPING LEADERSHIP AND LEGACY

n Meghalaya, where society is structured along a matrilineal system, lineage and inheritance are passed through the mother. This unique social fabric has fostered a perception that women in Meghalaya inherently experience privilege and empowerment, by passing the struggles often faced by women elsewhere. While true to a large extent when compared to other states in the country, this assumption however overlooks the profound challenges these women encounter as they balance deeply rooted traditions with the demands of modernization. They are not only caretakers but also leaders, navigating complex roles that extend far beyond the expectations of matrilineal society.

While the matrilineal system in Meghalaya grants women notable societal roles, the reality of their struggles and resilience is more complex than it may appear. The stories of remarkable figures like Kong Bestfrida VCF of Nongmawlong village, the dedicated female staff of South Garo Hills, and the women within the traditionally patriarchal Mahila Reserve Committee in Tikrikilla Block highlight a layered journey of courage and leadership. These women challenge conventional norms and defy stereotypes, navigating and reshaping roles within both matrilineal and patriarchal structures.

In a village steeped in expectation, where women of her age are traditionally tied to matrimony and motherhood, Kong Bestfrida Lyngdoh stands defiantly apart. Unmarried and in her early thirties, she is the second of ten siblings, a pillar of strength and support for her family, ardently advocating for the education of her siblings. A parttime teacher, Bestfrida ignites the spark of curiosity in her students, particularly among the village's elders, while her role as a Village Community Facilitator places her at the forefront of sustainable development initiatives. Her story transcends personality and is a clarion call for women's potential as changemakers, illuminating the path for others to follow, a testament to the power of dedication to family, education, and community.







Their commitment goes beyond bringing resources—they bring hope, inspiration, and empowerment to every village they reach, setting an inspiring example for women in these communities. Through their leadership and resilience, they are paving the way for others to follow, embodying the true spirit of empowerment and creating a lasting impact in South Garo Hills.

Situated 180 kilometres away from the South Garo Hills, the Rabha women have crafted a narrative of remarkable transformation against the backdrop of a patriarchal society. The MAHILA Women Group from Tikrikilla Block of West Garo Hills, emerged in Borogobol Village in 2004, driven by a fervent desire to empower their community and safeguard their environment. Once an economic stronghold due to relentless rock mining, the Mahila reserve had succumbed to ecological degradation, its rich landscape marred by deforestation and the loss of medicinal flora. Awakening to the cost of their environmental sacrifices, these women courageously halted the mining and pivoted towards restoration. Under the resolute leadership of Smt. Saymabala Rabha and Smt. Ajan Debi Rabha, they transformed their narrative from one of exploitation to sustainable stewardship, launching campaigns that educated their community on the vital importance of ecological preservation.

Initially wary of external influences, fearing encroachment on their land, the women slowly embraced the MegLIFE project, recognizing it as a tool for reclaiming and enhancing their territory rather than a threat. Their extensive reforestation efforts have redefined the oncebarren landscape into a thriving forest, a living testament to their labour. Through this labour, they have cultivated local employment opportunities, earning their livelihoods while nurturing their homeland, reinforcing their agency in a context that often diminishes women's roles. Their achievements not only challenge the prevailing stereotypes but also inspire their community to rethink the capacity of women as stewards of the environment.

As we reflect on these tales of the women of Meghalaya, we uncover a rich tapestry of resilience and empowerment, both in the matrilineal and patriarchal domains. From the intrepid women of South Garo Hills to the trailblazing Kong Bestfrida and the transformative Rabha women, each story serves as a potent reminder that women's leadership knows no cultural boundaries. They are everyday heroes, wielding the power of commitment to personal and community growth. Their endeavours illuminate the path towards healing the environment and nurturing the communities they inhabit. In their collective legacy of empowerment and resilience, future generations find a beacon of hope, guiding them toward their own journeys of transformation.

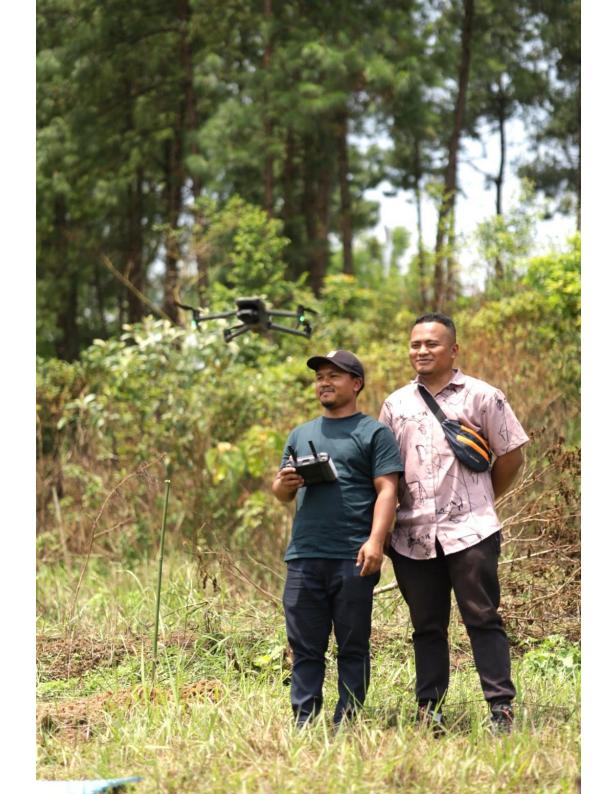




ne of the biggest challenges for administrators of Meghalaya is the lack of baseline on the state for making impactful decisions. Meghalaya is a 6th Schedule state under the Constitution of India which uniquely puts the power to govern in the hands of the communities and their traditional institutions. However, while revolutionary, this comes with its own sets of challenges, lack of information and data being one of them.ne of the biggest challenges for administrators of Meghalaya is the lack of baseline on the state for making impactful decisions. Meghalaya is a 6th Schedule state under the Constitution of India which uniquely puts the power to govern in the hands of the communities and their traditional institutions. However, while revolutionary, this comes with its own sets of challenges, lack of information and data being one of them.

In 2015, the GIS lab was established with the aim of providing technical and technological support to its various projects and programs. The lab utilised geospatial applications and tools to assist in planning, monitoring, and management activities. Key functions include generating detailed maps of boundaries and land use/land cover, creating thematic geospatial data and statistics, and composing informative maps that aided planning and decision-making. In addition to resource mapping and data generation, the GIS lab placed significant emphasis on capacity building. It conducted regular training programs, workshops, and exposure visits to impart GIS knowledge and skills to local youth and professionals. Through these initiatives, the lab not only increased the efficiency of project implementation but also empowered communities to actively adopt technology and participate in sustainable development works. The lab's determined efforts were recognized and honoured with the prestigious National Geospatial Awards (FICCI) for Geospatial Excellence in Sustainable Development for works and contributions under CLLMP. This accolade acknowledged their exceptional use of GIS skills and tools, as well as their dedication to empowering local communities through education and training.

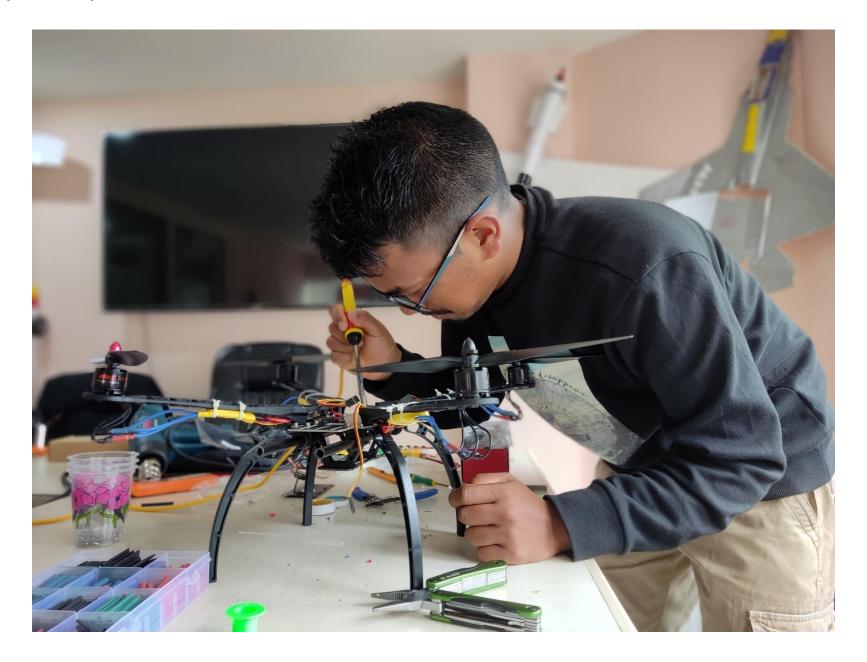
(Geographical Information System)





MBMA is actively engaged in various community empowerment initiatives aimed at driving positive change and fostering sustainable development. Ongoing projects encompass a range of sectors and contribute to the wellbeing of the community. By utilising Unmanned Aerial Vehicles (UAVs), or drones, aerial documentation and mapping of villages are conducted, offering valuable insights for informed decision-making and resource allocation. Moreover, LiDAR technology is employed to map living root bridges, forests, and other ecologically significant areas, thereby supporting the state's conservation and preservation efforts. The comprehensive multispectral survey facilitates the identification of diverse species and contributes to environmental research and management. Furthermore, innovative methods for seed ball dispersal and targeted bio-pesticide spraying using UAVs have been introduced to promote sustainable agriculture and environmental stewardship. For public safety, real-time traffic monitoring systems are being implemented and search and rescue operations are being strengthened. Lastly, the organisation's commitment to capacity-building is evident in the regular conduct of training sessions and workshops for local youth and departments. This not only empowers individuals but also fosters knowledge sharing, playing a crucial role in community development and sustainability.

(Unmanned Aerial Vehicles)



Meghalaya State Geo Portal: **DEMOCRATIZING DATA**

eghalaya faced a significant challenge in managing and accessing critical geographic and spatial data. Information was fragmented across various departments, stored in inconsistent formats, and difficult to access, resulting in delays and inefficiencies. The lack of coordination hindered decision-making and collaboration, leading to duplicated efforts and unnecessary costs.

Launched in 2023, the Meghalaya Geo Portal has transformed data management by centralizing geospatial data into one accessible platform with a range of innovative features. Beyond data-sharing, the platform includes storytelling tools, time-series analysis, dashboards, and various interactive applications that make it easier to visualize and present data dynamically. Users can track changes over time, create custom maps, and utilize resources like ecological data, night-time imagery, and water balance visualizations. The portal also provides access to a digital archive called Wayback Imagery, which allows users to view past versions of geographic data.

The Meghalaya State Geo Hub has brought about remarkable improvements. The number of datasets available has increased from 50 to 250, significantly enhancing the quality and scope of information. Time required for datadriven decision-making has dropped from 30 days to just 5 days, and the number of personnel trained in geospatial technologies has grown from 10 to 100. Additionally, inter-departmental data-sharing instances have increased from 10 to 100 per year, fostering greater collaboration across departments.

The Geo Portal also supports the state's Sustainable Development Goals (SDGs) by providing data to track progress and identify areas for improvement. With training resources and applications like Survey123 for data collection, the platform encourages wider use of geospatial technology, empowering local communities. Since its launch, the portal has expanded its datasets, reduced decision-making time, and enhanced inter-departmental collaboration, contributing to more efficient governance.

AWC Dashboard Anganwadi Centre District Wise EKH 1,286 **EJH 231** WKH 371 EWKH 214 NGH 417 WJH 428 RB 520 WGH 1,045 SGH 331 SWGH 434 **SWKH 241** Anganwadi Centre Block Wise 250 200 150 Earthstar Geo 50 **Total Anganwadi Centre** out of 5,897

AWCT

Anganwadi Centre





nce abundant with greenery, Meghalaya is seeing a gradual degradation of its landscapes with over 200 square kilometres of forest lost in the last decade, impacting not just the ecosystem but also the livelihoods of indigenous communities. This alarming decline calls for urgent action and innovative solutions to restore balance between nature and human existence.

To combat this, the government of Meghalaya with funding support from the World Bank launched an ambitious community driven project - the Community-Led Landscape Management Project (CLLMP). Unlike interventions of the past, this project is unique in that it seeks to bring transformation at the root - a revolution and empowerment of local communities to reclaim their forests, reshaping their destinies. At the heart of this movement is the Forest Management Plan (FMP), a strategy that ultimately encompassed over 1.1 lakh hectares across 500 villages. The plan is designed to facilitate sustainable forest management that benefits both the environment and the economy, supporting the community's needs while safeguarding this vital resource.

Central to the FMP is the recognition that local communities are the true stewards of their forests. Indigenous practices have long protected these lands, and the FMP seeks to revitalise these traditions while integrating modern conservation techniques. By inviting communities to actively participate in forest management, the MBMA fosters a cooperative relationship between people and nature, ensuring that cultural connections to the land are honoured.



One key aspect of the FMP is the mapping of forest resources using advanced technologies like satellite imagery and GPS. Over 1,200 trained Village Community Facilitators (VCFs) have undertaken rigorous inventory exercises, gathering data on the health and diversity of local ecosystems. This meticulous approach equips communities with a comprehensive understanding of their forest resources, empowering them to make informed decisions regarding conservation and sustainable use.

Training is integral to this process. The MBMA has developed a two-stage model where Master Trainers first educate district officials, who then train VCFs across the state. This strategy not only enhances data accuracy but also fosters a sense of ownership among community members. The resulting Forest Management Plans become living documents crafted by those who depend on the forests for their livelihoods.

The implementation of practical conservation strategies is where the FMP truly shines. Assisted Natural Regeneration (ANR) has become a cornerstone of restoration efforts, enabling degraded areas to recover through the removal of invasive species and the planting of indigenous seedlings. Communities are proactive in combating wildfires, establishing firebreaks and organising community watch programs during dry seasons. This collective vigilance cultivates a shared responsibility for forest health.

Additionally, nurseries for indigenous tree species have been established, enhancing food security and promoting biodiversity. Villages use GPS technology to delineate forest boundaries, allowing them to monitor changes in forest cover over time. Enrichment planting in degraded areas is prioritised, filling open patches with native saplings to bolster habitat diversity.

The FMP emphasises the conservation of rare and endangered species, with villagers identifying flora critical to their cultural heritage. Protected zones for in-situ conservation are established, and ex-situ measures relocate threatened plants to safer areas. This blend of traditional knowledge and structured management enriches the biodiversity tapestry of each village's forest.



The impacts of the FMP are already tangible. Communities now possess a detailed forest inventory and management framework, enabling sustainable timber harvesting while adhering to yield limits that encourage replanting. The sustainable harvesting of non-timber forest products enhances community incomes without degrading the forest.

Throughout this journey, important lessons have emerged. Communities have learned to balance ecological, economic, and social goals, gaining the tools to assess forest health and monitor degradation. Technology, such as GPS and mobile applications, facilitates precise data collection, ensuring that information is actionable. Close collaboration with government agencies highlights the benefits of a unified approach, demonstrating that forest conservation can thrive by merging traditional practices with modern strategies.

Challenges remain, particularly in navigating rough terrains that complicate data collection. Yet, advanced tools have helped overcome these obstacles, allowing communities to persist in their conservation efforts. Engaging local stakeholders has proven vital, ensuring that the FMP addresses concerns and resolves conflicting land-use needs through continuous dialogue. As Meghalaya's forests gradually rejuvenate, the Forest Management Plan stands as a testament to the commitment of its communities to conservation. It empowers them to protect their forests and secure sustainable livelihoods, honouring their traditions while embracing innovative solutions. The people of Meghalaya are not just guardians of the green; they are architects of a legacy that fosters a deep, enduring connection between humanity and the natural world for generations to come.

Green Bonds MEGHALAYA'S PIONEERING PATH TO COMMUNITY CONSERVATION

or centuries, Meghalaya's forests have been more than a backdrop—they're integral to community identity and survival. They represent a harmony that binds people to nature through stories, rituals, and sustainable practices. But over the past two decades, these forests have been whittled down at an alarming rate, with over 21,000 hectares lost since 2001. For a state where the majority of the forests are communally owned, this loss has taken a profound toll. The erosion of forests is more than an environmental setback; it's a loss of heritage and the ecological basis of livelihoods for countless communities.

In response, Meghalaya's government launched the GREEN Meghalaya initiative in June 2022. Managed by the Meghalaya Basin Management Agency (MBMA) under the Community-Led Landscape Management Project (CLLMP), this effort to conserve the state's forests rests on a radical concept: trust the people who live closest to the land to be its stewards. At the core of GREEN Meghalaya is an innovative Payment for Ecosystem Services (PES) model. This approach rewards local communities for sustainable land practices, placing the power of conservation directly in their hands while providing them with a stable income.

This ambitious program has achieved notable success in its first year. By protecting over 51,000 hectares and directly benefiting 3,000 community members, GREEN Meghalaya has provided over ₹48 crore in financial incentives. But reaching this milestone wasn't simple. MBMA embarked on extensive outreach, holding awareness

programs and education sessions in remote areas to build understanding and trust within the communities. Through these efforts, GREEN Meghalaya has become a shining example of community-led conservation that's supported by accurate data collection and evidence-based strategies.

In 2024, building upon the success of GREEN Meghalaya the government expanded the program with GREEN+ Meghalaya, taking the initial success to a new level with additional financial incentives, improved eligibility, and more flexible funding criteria. This new phase allows communities to earn more through conservation efforts, with increased base incentives and added rewards for protecting unique ecological or culturally significant areas.

The expanded GREEN+ initiative aims to empower Meghalaya's communities as active guardians of their lands, recognizing the vital role they play in preserving both cultural and natural legacies. The overwhelming response speaks to the power of community-centred conservation; thousands of hectares of land are now protected under community leadership, with more joining every year.

GREEN+ Meghalaya is more than a conservation program. It's a testament to the potential of communities to drive meaningful change. As they safeguard their forests, Meghalaya's residents are deepening their bonds with the land and securing a legacy of resilience, natural beauty, and stewardship for future generations.





ne of the big challenges to Meghalaya's natural resource management issues is the low awareness of the implication of climate change and the loss of natural capital. With funding from the World Bank under the CLLMP project, a unique initiative was undertaken, directly targeting the children and youth through a collaborative and activity filled program - the seedball initiative.

Spearheaded by the Centre for Excellence on Natural Resource Management and Sustainable Livelihoods, a centre established under the MBDA/MBMA, this initiative brings together local school children to teach them through participation, the importance of natural resource management and environmental conservation. The initiative involves the making of seedballs using simple low cost technology where a mixture of local seed, manure and biochar in the appropriate proportions are rolled into a ball that can then be thrown onto the and will germinate into a plant. This technology has enabled the rapid and cost effective dispersal of seeds across the state at a cost of approximately ₹1,000 - 2,000 per hectare, which would have otherwise been very expensive using conventional means.

From October 2022 to June 2023, over 75,000 students from 1,800 schools dispersed more than 3.5 million seedballs. Today, this has become a spectacle, being celebrated around the state every World Environment Day.

A survey conducted by MBDA/MBMA found a germination rate of over 55%, an impressive achievement given the low cost and the tough terrain wherein they are thrown. This initiative underscores the power of community involvement and the importance of using native species for reforestation. By integrating students and rural communities into the process, the Seedball Initiative has strengthened local ties, educated youth, and provided a scalable model for reforestation in Meghalaya and beyond. Through simple, effective techniques, the program is helping to reclaim the region's green legacy, one seedball at a time.







Fragrance of the Hills CULTIVATING MEGHALAYA'S AROMATIC FUTURE THROUGH SUSTAINABLE FARMING

n 2019, the State Government launched the Megh Aroma Mission to rehabilitate Meghalaya's vast wastelands, which accounted for over 17% of its total geographical area. Led by the Institute of Natural Resources, Meghalaya (INR), the mission promoted the large-scale cultivation of aromatic crops such as lemongrass, citronella, vetiver, geranium, lavender, and peppermint. The mission aims to empower farmers by cultivating medicinal and aromatic plants (MAPs) and is supported by CSIR-CIMAP, a multidisciplinary research institute focused on biological and chemical sciences and providing technology support to farmers. Over 3000 farmers have participated in the initiative, leading to the revitalization of rural areas and the generation of employment opportunities. Since its inception, wastelands spanning 520 hectares have been reclaimed and transformed into flourishing landscapes teeming with aromatic plants.

The Mission has also produced 13-15 metric tons of essential oils to meet the growing demands of the market. Meghalaya's aromatic revolution extends beyond economics—

it showcases sustainable agriculture, preservation of natural heritage, and the empowerment of farming communities.

The cultivation of aromatic plants in Meghalaya offers numerous advantages that make them ideal for the region's diverse agro climatic conditions. These crops require significantly fewer inputs than traditional agricultural and horticultural varieties, which, combined with their hardiness, allows them to thrive despite adverse and changing climatic conditions. Their regenerative properties enhance soil productivity and facilitate the reclamation of degraded land through intercropping systems. Furthermore, aromatic plants generate better returns than conventional crops, creating opportunities for farmers to diversify their livelihoods through value-added essential oils and products. With low maintenance costs resulting from their robust nature and minimal input needs, farmers face fewer pest attacks, making these crops even more appealing. Additionally, the recycling of biowaste from the distillation process aids in carbon sequestration on marginal lands, increasing biomass yield. The Megh Aroma Mission aims to expand aromatic plant cultivation to 1,000 hectares, prioritising high-value crops like wintergreen, lavender, damask rose, and wild marigold, while also establishing a field distillation unit for every 10 hectares of aromatic crops to enhance the production of value-added products. This initiative includes the potential for creating a variety of items from biowaste, such as incense sticks, biochar, and sanitary products, focusing on capacity building for farmers to maximise these opportunities.

From Limestone to Lifeline REVITALIZING WATERSHEDS WITH OPEN CHANNELS

n Meghalaya, the impact of unscientific coal mining has severely degraded water resources, with once-clear streams now affected by Acid Mine Drainage making them highly acidic, often registering pH levels between 2 and 4. To tackle this crisis, a community-driven solution has emerged: Open Limestone Channels (OLCs). These cost-effective channels, lined with layers of limestone aggregate, neutralise acidity by enabling reactions between limestone carbonate and acidic ions in the water.

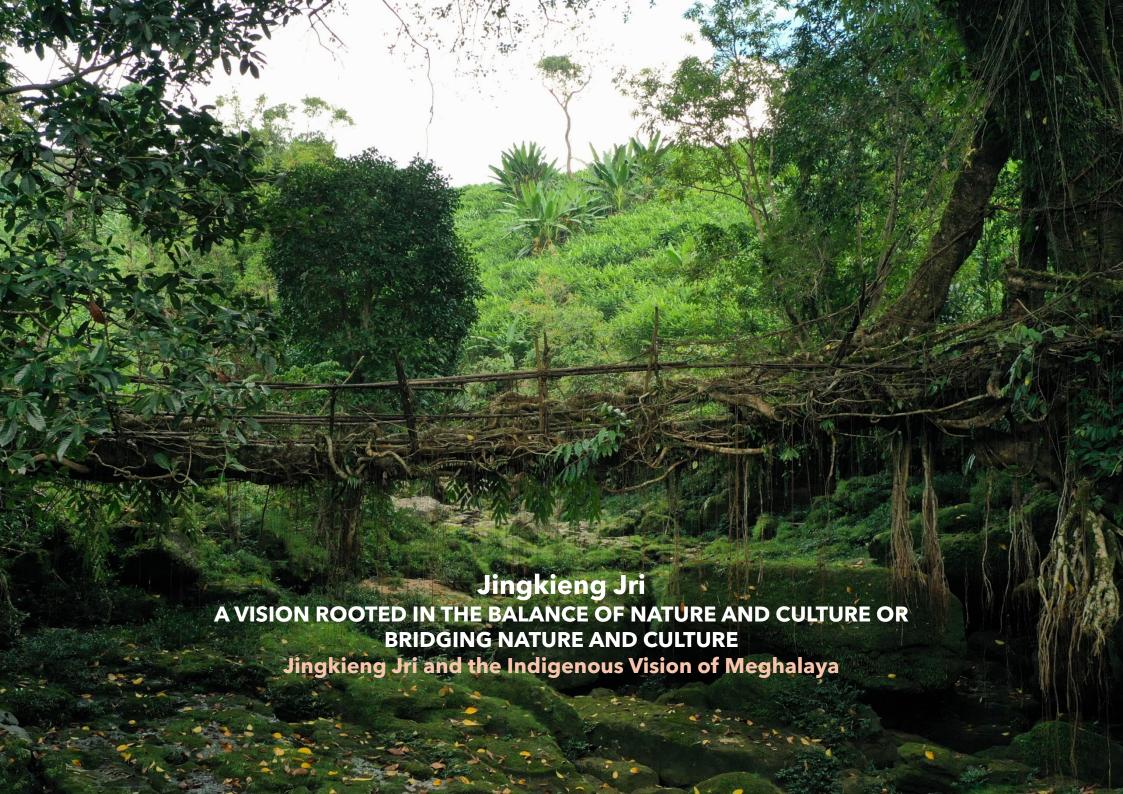
Constructing OLCs requires precision. The gradient is critical, as steep slopes can reduce neutralisation, while overly flat terrain can slow water flow, impairing effectiveness. In collaboration with the Community-Led Landscape Management Project (CLLMP) and the Meghalaya Livelihoods and Access to Markets Project (MLAMP), local communities have embraced OLCs as a pathway to reclaim safe water sources. On May 18, 2021, the first OLC at Thanglooh spring in East Jaintia Hills District began delivering 1.65 litres of treated water per minute, providing relief to over 60 households.

This achievement has not only alleviated a long-standing water scarcity issue but has also reduced the need for households to purchase water. Community ownership has been vital to the initiative, with locals maintaining the channels to ensure sustainable operation. Encouragingly, the OLCs are now boosting pH levels to safe standards, making the water suitable for domestic use.

The success of the first 31 OLCs has sparked interest across Meghalaya. With the involvement of the state's forest and environment department, plans are underway to replicate these channels in coal mining-affected regions. Through such innovative, community-driven conservation efforts, Meghalaya is restoring its waterways, enhancing water security, and strengthening village resilience.





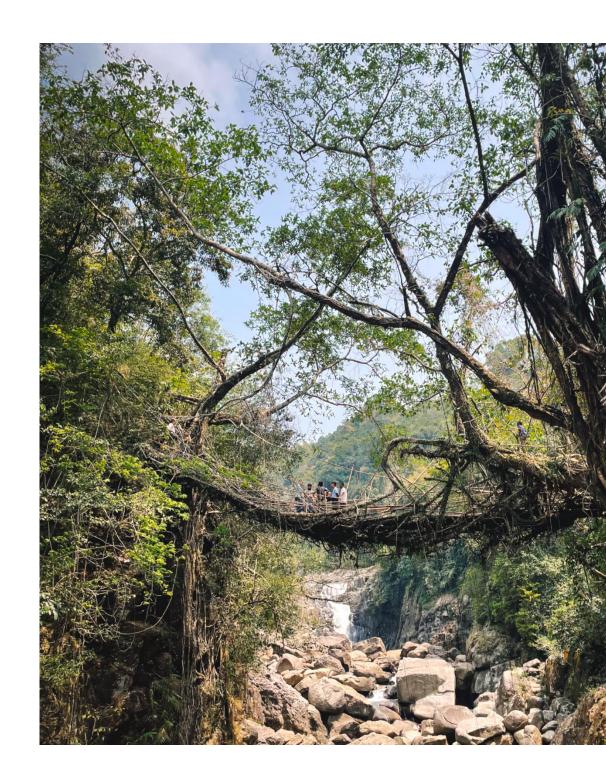


t the heart of this initiative is a blend of Indigenous knowledge and modern science. Research within the Khasi-Jaintia communities reveal a sophisticated understanding of conservation rooted in tradition, guiding the preservation and sustainable management of their natural surroundings. This wisdom is actively fostered by the establishment of 42 Mariang (Mother Nature) Jingkieng Jri Cooperative Societies, uniting 74 villages under a state federation. These cooperatives protect critical elements of their cultural landscape—Living Root Bridges (Jingkieng Jri), forests (ki khlaw), stone markers (ki maw), and paths (ki lynti iaid kjat)—that define this region.

Innovative mapping efforts now combine elders' memory maps with GPS technology, engaging youth in these projects and strengthening their connection to heritage. This collaborative approach has led to the conservation of 131 Living Root Bridge sites and the creation of 74 Protection and Management Plans, safeguarding the future of these landscapes.

Central to these efforts are 26 ling Mariang (nature homes), which serve as centers for conservation education, community gatherings, and capacity-building. Complementing these are 25 community-run nurseries dedicated to cultivating Ficus Elastica saplings, essential for the sustainability of the Living Root Bridges and broader ecological restoration. Additionally, the Shlem Jingtip, a learning center, ensures that Indigenous knowledge is passed to younger generations, linking tradition with modern conservation.

Through these united efforts, the Jingkieng Jri initiative is contributing not only to Meghalaya's sustainable development goals and the UNESCO World Heritage nomination but also to a model of balanced, sustainable growth where tradition meets innovation.







PRIME Meghalaya FORGING PATHWAYS FOR PURPOSEDRIVEN ENTREPRENEURSHIP

n a land where ambition meets opportunity, the PRIME initiative stands as a powerful force of transformation. Launched by the Government of Meghalaya in 2019, PRIME is far more than a collection of business resources—it's a movement, a call to action for Meghalaya's people to awaken the spirit of entrepreneurship bringing the creativity spirit within them.

Through PRIME, Meghalaya is nurturing an ecosystem that empowers individuals from bustling urban centres to the farthest rural stretches, turning local visions into resilient enterprises. The initiative offers a world where aspiring entrepreneurs find not just guidance but a gateway to bring their dreams to life. Here, ideas are not just supported—they are cultivated, challenged, and turned into action through holistic support systems like incubation, mentorship, and funding access.

PRIME creates a bridge between potential and purpose, from the youth with fresh ideas to the seasoned artisan with a legacy of skills, providing them with a path forward.

Each PRIME HUB serves as a sanctuary for ambition—a one-stop shop for entrepreneurs of all kinds, offering tools to guide them at every step. Through structured incubation programs like the Chief Minister's E-Championship Challenge, the top entrepreneurs of Meghalaya are propelled forward, equipped with training, mentorship, and the opportunity to connect with like-minded innovators. This structured 9-month incubation journey is more than skill-building; it's an awakening of possibility, instilling resilience and inspiring new ways of thinking.

PRIME connects entrepreneurs directly with critical resources, providing financial and institutional support, as well as training and development to sustain their dreams through the challenges of growth. With the launch of the PRIME Sauramandala Rural

Entrepreneurship Fellowship (PSREF), rural entrepreneurs now receive specialised mentorship in financial literacy, marketing, and market access, empowering even the most remote ventures to thrive and grow.

Bridging tradition and ambition, the EED&O (Education, Empowerment, Development & Outreach) initiative stands as a torchbearer for the next generation, lighting the path for young dreamers, empowering them with skills, and nurturing the seeds of transformation. Through storytelling and media outreach, EED&O ensures that each tale of resilience—each victory, no matter how modest—reaches others, sparking a fire within the hearts of those who dare to dream. In this tapestry of progress, individual stories become shared inspirations, feeding a growing movement for change.



One such story is that of Ronaldo Marboh and his journey with Roka Cane & Bamboo Works, which began as a quiet ambition deeply rooted in the verdant hills of Ri Bhoi, Meghalaya. In 2001, Ronaldo took the bold step of travelling to China to learn the nuances of incense stick manufacturing. Returning home, he faced countless obstacles—machinery breakdowns, fierce competition, and a constantly shifting market. Yet, Ronaldo's determination never wavered. In 2019, he found a glimmer of hope when import duties shifted, giving a lifeline to local manufacturers. Guided by PRIME's support, Ronaldo turned his small workshop into a thriving, sustainable business, expanding into bamboo charcoal production and collaborating with interns from IIM Shillong to streamline operations and reach new markets. Today, Roka Cane & Bamboo Works embodies the spirit of resilience and environmental stewardship, turning bamboo—a humble resource—into a livelihood and a symbol of sustainable growth.

PRIME, Meghalaya's visionary initiative, serves as a cradle for over 13,000 individuals seeking to build something greater than themselves. It celebrates the entrepreneurial spirit, making it not just possible but powerful. PRIME offers more than resources; it offers hope, turning dreams into action and profits into purpose. In a land where business is as much about community as it is about commerce, PRIME supports each courageous step forward, helping entrepreneurs like Ronaldo create a legacy of perseverance, unity, and a future of boundless potential—one enterprise, one visionary idea at a time.





Empowering Farming Households THE HUMAN TOUCH BEHIND THE INTEGRATED VILLAGE COOPERATIVE SOCIETIES LTD.

cross Meghalaya's remote areas, the Integrated Village Cooperative Societies Ltd. (IVCS) have sparked a quiet revolution. For countless farming households, what was once a difficult and exhausting journey to access basic financial services has become a story of empowerment, development, and community-driven progress. These farmer-led cooperatives, born from the collective vision of village communities, are more than just financial institutions. They serve as a lifeline to those unserved by the formal banking sector—households that, for generations, faced limited access to credit, fair markets, and improved livelihood opportunities. With the establishment of 500 IVCS across the Khasi, Jaintia, and Garo hills, more than 87,000 households now have access to savings, credit, and other essential services within their own villages.

The impact of these cooperatives is profound. The IVCS have mobilised deposits worth ₹59.3 crore and disbursed loans exceeding ₹28.4 crore, directly supporting local economies and enabling members to pursue higher-level activities. With over 79,000 deposit accounts and more than 20,000 loan accounts, these cooperatives are now integral to the financial fabric of their communities. Most recently, they have also begun serving as banking correspondents, acting as the last-mile link between formal financial institutions and rural communities.

What sets IVCS apart from other financial institutions is the deep trust embedded within these cooperatives. Managed by local villagers, they are tailored to the unique needs of their communities, offering not just financial services, but also guidance and support in agricultural and entrepreneurial ventures.

Beyond banking, the IVCS have evolved into growth hubs that offer services in areas such as crop aggregation, farm mechanisation, collective marketing, processing and branding, and retailing, enabling farmers and agri-entrepreneurs to sell their produce at better prices and access wider markets.

For a farmer, it means investing in better tools and seeds. For a small business owner, it is expanding their services. And for countless women, it is about provision of an enabling work environment that translates into economic independence.





Collective Marketing Centres: IMPROVED PRICES AND GREATER CONTROL FOR LOCAL FARMERS

n Meghalaya's agricultural landscape, Megha-LAMP is promoting collective marketing initiatives to address a key challenge faced by rural farmers: limited control over supply chains. These initiatives help farmers regain bargaining power, reduce transportation and storage costs, and bypass middlemen, enabling fair and competitive market prices for their produce. The effort emerged after recognising that individual farmers were struggling to keep pace with shifting market dynamics, lacking the support and knowledge to navigate production and marketing effectively.

To tackle this, Megha-LAMP established Collective Marketing Centres (CMCs), local hubs where farmers can gather to sell, process, and store their crops directly. These centres, nearly 300 established across Meghalaya since initiation, serve as one-stop shops for aggregating, marketing, processing, and supply chain management, owned and managed by the Integrated Village Cooperative Societies Ltd. (IVCS).

Each CMC empowers farmers with greater control over their crops and access to fairer prices. Alongside facilities for collection, drying, and retail, the CMCs offer a communal space that promotes collaboration and support. Farmers managing the CMCs are also trained in various aspects of marketing and finance, equipping them with skills to improve both their incomes and the sustainability of the centres. With Megha-LAMP's investment of over ₹14 crore in working capital and ₹19 crore in infrastructure—and an additional ₹2 crore contributed by the farmers themselves—these centres have become a crucial support system for communities, helping families earn better incomes.

Through these CMCs, Megha-LAMP has not only strengthened the agricultural supply chain but has also restored a sense of independence among Meghalaya's farming community.



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