

From Roots to Growth: Transforming Women's Entrepreneurship in Meghalaya with BioNEST's Orchid Floriculture

Background and Context

Meghalaya, known as the "Abode of Clouds," is one of the most biodiverse regions in India, and its rich flora includes a wide variety of orchids. The state's unique climate, with its frequent rainfall, high altitude, and misty conditions, makes it an ideal habitat for many species of orchids. Leveraging on the state's rich biodiversity, favorable climate, and the growing demand for ornamental plants, a project "**Setting up of BioNEST Incubator to Develop Women Bio-Entrepreneurship through Orchid Floriculture in Meghalaya**" was launched to empower women by transforming floriculture into a sustainable business. A collaborative effort between the **Institute of Bio-Resources and Sustainable Development (IBSD) and the Bio-Resources Development Centre (BRDC)**, the project established a **BioNEST Incubator in Ri Bhoi District**, offering training, resources, and market access to women eager to venture into orchid farming.

The vision was to create livelihoods, strengthen economic independence, and build a sustainable floriculture ecosystem led by women. What started as an initiative to cultivate ***Dendrobium* orchids for the cut flower industry** quickly became a movement of resilience, self-reliance, and transformation.

The Project

The **BioNEST Incubator** became the heartbeat of this initiative, serving as a hub of innovation and learning. Here, women were trained not only in orchid cultivation but also in modern farming techniques, organic practices, and business development.

The project wasn't just about growing flowers-it was about growing businesses, expanding income opportunities, and encouraging diversification. Many women expanded beyond orchids, integrating chrysanthemums, gerberas, cymbidium orchids, poultry farming, cattle rearing, and crop plantations into their livelihoods. This multi-pronged approach ensured that the impact of the project went beyond individual success stories-it became a model for community-driven entrepreneurship and long-term sustainability.

Problem Statement and Baseline Indicators

Before the project, the women of Umsning Block faced limited access to training, resources, and market opportunities. Farming was primarily traditional, with little exposure to modern techniques that could improve yield and profitability. The lack of structured market access meant that even those who wanted to scale up their businesses struggled to find buyers or fair prices for their produce.

This project sought to bridge that gap-equipping women with the knowledge, skills, and networks needed to succeed in bio-entrepreneurship through floriculture. By focusing on the entire value chain-from cultivation to market access-the initiative created a comprehensive model for women-led agricultural enterprises.

Best Practices

One of the most inspiring success stories to emerge from the project is that of **the Director, Fernando Speech and Hearing Centre**, a woman who turned her passion for farming into a thriving business.

Her journey began with a single step—learning how to cultivate Dendrobium orchids using organic and sustainable methods. She adopted best practices such as chemical-free farming to meet the growing market demand for organic flowers. But what set her apart was her strategic approach to diversification—she didn't just stop at orchids.

By expanding into chrysanthemums, gerberas, and cymbidium orchids, as well as poultry and cattle farming, she created a resilient farming model that ensured multiple income streams, year-round production, and financial stability. Her success became an inspiration for others, proving that floriculture could be more than just a hobby—it could be a sustainable livelihood.

Beneficiaries and Impact

The project directly impacted **11 Self-Help Groups (SHGs)**, empowering over 100 women with modern farming techniques and business acumen. These women not only learned how to cultivate orchids efficiently but also gained access to better resources, structured training, and market linkages—all of which transformed their economic independence.

The success metrics of this intervention is the income generated from the Central Hub located at the Fernando Speech and Hearing Centre, which earned ₹80,000 from the sale of the cut flowers harvested from cultivated and well managed **12,000 numbers of** Dendrobium orchids supported by the project. This remarkable feat demonstrated the project's impact in adoption of new livelihood opportunities.

The project's influence extended beyond financial gains—it fostered confidence, skill development, and collective empowerment. With better market connections through the **BioNEST Incubator**, women expanded their reach, secured stable incomes, and laid the foundation for a resilient network of women entrepreneurs driving Meghalaya's floriculture industry.

Achievements

The initiative led to several groundbreaking achievements, including:

- **Successful Implementation of the BioNEST Incubator**—The incubator became a pillar of support, providing hands-on training, networking opportunities, and direct market access for women farmers.
- **Economic Empowerment**—The additional income generated by women through the project highlights the economic potential of floriculture, demonstrating how it can empower more women to pursue this trade.
- **Strengthening Women's Entrepreneurship**—The participation of **11 SHGs** created a ripple effect, with more women gaining the skills and confidence to manage their own farms and businesses.

- **Community Upliftment**-With collective participation, women-led enterprises flourished, contributing to the economic and social development of their communities.

Challenges During Implementation

Every transformation comes with its challenges, and this initiative was no exception. Some of the major obstacles faced were:

- **Technical and Knowledge Gaps**-Orchid cultivation requires specific temperature, humidity, and light conditions, and many farmers initially struggled to maintain optimal growing conditions. The project worked to bridge this gap through intensive training and mentorship.
- **Market Access & Infrastructure**-Limited transportation and weak market linkages posed challenges in delivering flowers on time. Without proper storage and supply chain systems, some flowers were lost before reaching the market. Efforts with focus on improving logistics and building a robust market infrastructure is ongoing.

Key Learnings and Takeaways

Through the success and challenges of this initiative, several key lessons emerged, shaping the roadmap for future bio-entrepreneurship programs:

- **Training & Capacity Building Are Crucial**-The success of the project highlighted the importance of continuous training and support. Women who received hands-on training in modern floriculture techniques saw higher productivity and profitability than those who relied solely on traditional methods.
1. **Diversification is Key to Sustainability**-Diversifying farm activities, was a key strategy for minimizing risks associated with market fluctuations and crop failures. Encouraging beneficiaries to engage in multiple farming activities helped stabilize incomes and reduce financial risks..
 2. **Community Engagement Drives Change**-Involving multiple SHGs in the project proved that collective action and community engagement are powerful tools for driving change. The women gained strength in numbers, sharing knowledge and resources for mutual benefit.
- **Infrastructure Development is Essential**-For floriculture businesses to thrive, better transportation, storage facilities, and structured market access must be prioritized.
 - **Ensuring Long-Term Sustainability**-The IBSD-BRDC partnership laid the groundwork for women-led entrepreneurship, but continued support is needed to maintain momentum beyond the project's completion.

Conclusion

The BioNEST project was not just about growing orchids-it was about growing opportunities, strengthening women's roles in horticulture, and creating a lasting impact on Meghalaya's economy.

Women who once had limited resources are now entrepreneurs, leaders, and changemakers, building a future where floriculture is not just a business-but a thriving industry led by women.

From a single orchid to a flourishing network of empowered women, this initiative proves that with the right support, knowledge, and determination, growth has no limits.

This is more than a success story—it's the beginning of a movement.

