

CASE STUDY: THE SUCCESS STORY OF SEAWEED CULTIVATION PILOT PROJECT AT MUNDRA, KACHCHH, GUJARAT





Abstract:

Mundra, a coastal village in Gujarat, has traditionally relied on fishing as its primary occupation. However, seasonal fluctuations in the fishing industry left many residents unemployed during the off-season and rainy periods. To address this issue, the Indian Center for Climate and Societal Impact Research (ICCSIR) initiated a pioneering project to introduce seaweed cultivation as an alternative livelihood option for the local fishermen in Mundra. This case study explores the positive transformation and impact of seaweed cultivation in Mundra, highlighting its potential to provide economic stability and ecological benefits to the coastal community.

Introduction:

Mundra, a picturesque coastal village in Gujarat, is known for its fishing community. The livelihood of its residents is intricately woven with the ebb and flow of the Arabian Sea. However, the dependence on fishing has its challenges, particularly during the off-season and monsoon periods when fishing activities are severely limited. Recognizing the economic vulnerability of Mundra's fishermen during these times, the Indian Center for Climate and Societal Impact Research (ICCSIR) set out to explore seaweed cultivation as an innovative alternative.

ICCSIR's objectives were clear: to not only improve the economic stability of the coastal communities but also to promote ecological benefits through seaweed farming. This case study delves into the transformative journey that seaweed cultivation has brought to Mundra.

Objectives of ICCSIR:

ICCSIR's comprehensive objectives included the following:

1. **Mapping Suitable Areas for Seaweed Cultivation:** Identifying areas along the Mundra coastline suitable for seaweed cultivation to ensure optimal growth.
2. **High-Yielding Quality Seed Material Selection:** Identifying seaweed strains that not only yield well but also exhibit resilience to various environmental conditions, including the harsh coastal environment.
3. **Seaweed Cultivation and Scaling Up** Implementing seaweed cultivation practices and expanding the operations to maximize yield and impact.
4. **Seed Bank Development:** Establishing a seed bank for the preservation and propagation of high-quality seaweed seeds.



5. **Integrated Seaweed Village Development:** Fostering community participation through awareness, training, and capacity-building programs to ensure the active involvement of local coastal residents.
6. **Branding, Promotion, and Market Infrastructure:** Creating branding and promotional strategies and developing the necessary market infrastructure to promote seaweed products.
7. **Convergence with Ministries:** Collaborating with government ministries and agencies to maximize the benefits of seaweed cultivation and secure necessary support.

Implementation and Impact:

During the financial year 2022-23, ICCSIR successfully carried out seaweed cultivation in Mundra, setting the stage for a positive transformation in the village. A total of 22 fishermen and 11 women from Mundra were actively engaged in this project, transitioning from their previous daily wage labor.

One of the key aspects of the project was providing comprehensive training to the local community in various aspects of seaweed cultivation. The training covered everything from crafting ropes and building rafts to the actual seaweed planting, cultivation, and harvesting. ICCSIR implemented a combination of raft and tub net cultivation methods, which proved to be effective in the coastal environment.

The success of the project was further enhanced by the active involvement of the Fisheries Department in Mundra and Kutch, which played a pivotal role in supporting and implementing the initiative. Additionally, the Adani Foundation and the Vivekanand Research & Training Institute provided valuable ground support, contributing to the project's success.

The impact of seaweed cultivation in Mundra was significant and multifaceted:

1. **Employment Opportunities:** The project created full-time employment opportunities for many local youths, mitigating the seasonality of the fishing industry and reducing economic vulnerability.
2. **Seed Preservation:** The introduction of a tank-based cultivation pilot plant facilitated the preservation of seaweed seeds, enabling off-season planting and better yield.
3. **Skill Development:** Local fishermen were equipped with a wide range of skills related to seaweed cultivation, promoting self-sufficiency and empowerment.
4. **Economic Diversification:** The introduction of seaweed cultivation diversified the income sources of the coastal community, reducing their dependence on fishing and its inherent fluctuations.



5. **Environmental Benefits:** Seaweed cultivation has the potential to contribute to the restoration and protection of marine ecosystems, benefiting both the environment and the community.

Conclusion:

The positive transformation witnessed in Mundra due to seaweed cultivation, spearheaded by ICCSIR, highlights the potential of this alternative livelihood option. Beyond economic benefits, the project brings ecological advantages and underscores the importance of sustainable development. This case study serves as a powerful example of how innovative initiatives can bring about positive change in vulnerable coastal communities.

ICCSIR's commitment to the expansion of seaweed cultivation in Gujarat signifies its dedication to improving the lives of coastal communities and enhancing their livelihoods. The success of seaweed cultivation in Mundra underscores its potential to serve as a valuable source of income and a catalyst for positive change in coastal regions across India.

Annexure:

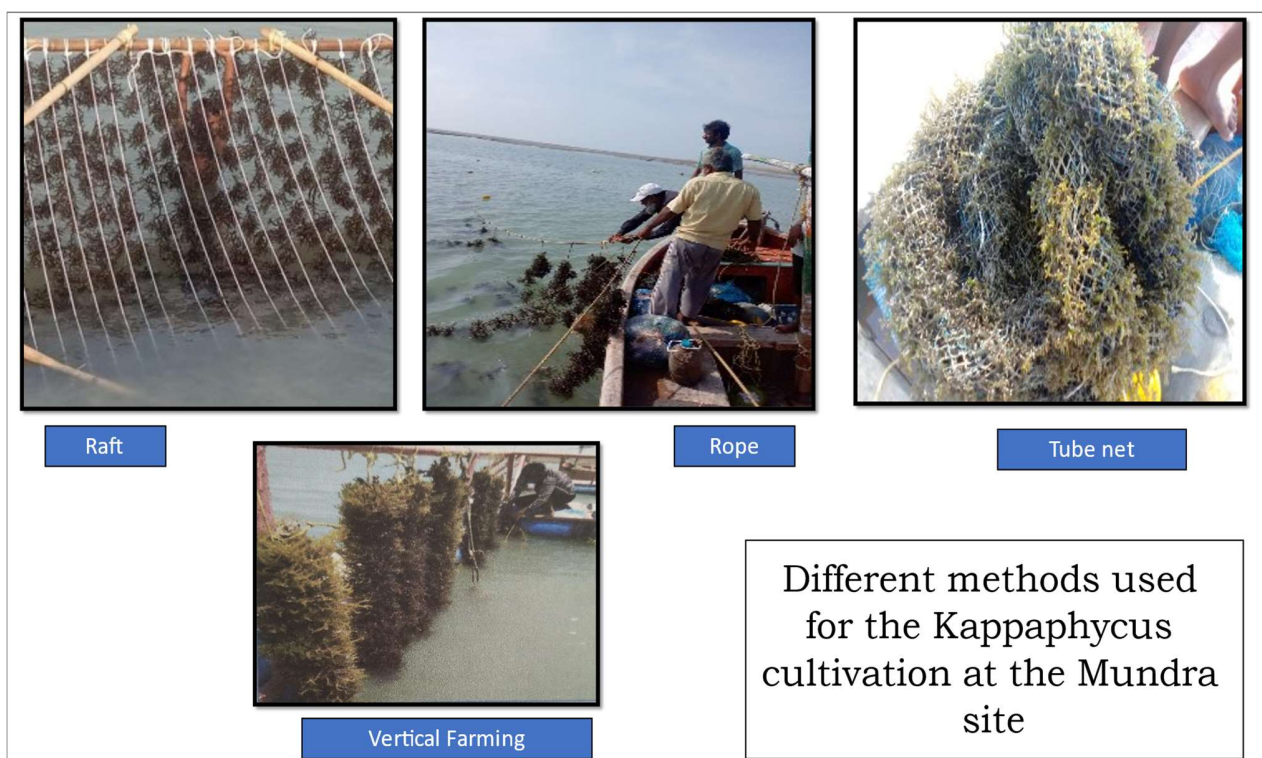




Fig.2 - A total of 285 rafts is deployed at Mundra Farm



Fig. 3 - A Seed Bank near shore with 40 rafts



Fig. 5 - Seaweed Harvesting process by local fisherman folks.



Fig. 4 - The onshore Pilot Plant is situated in Mundra Juna Bunder for R & D activities