Name of Solution:

Cage Culture in Open-waters

Submitter: Indian Council of Agricultural Research (ICAR)

Solution Overview: *What is it, and what problem does it solve? Brief 2–3 sentence description.*

The technology of cage culture in open-waters can support the dwellers around the open-water bodies in African and Caribbean countries possessing vast natural water resources.

Key Features & Benefits: *Main components and why it is useful? Bullet points summarizing methods, tools, and value added.*

- Cage culture is a low- cost technology perceived to be a boon for the landless farmers
- Culture-based fisheries offer food and livelihood support to the farming community
- Community-based management system suitable for developing and under-developed countries
- Higher benefit:cost ratio.

Where It Works and Where It Can Work: *Existing and potential target regions, agroecologies, or farming systems. Include examples if available*

The Indian fisheries sector has recorded consistent growth in production, with an annual growth rate of over 7% during the last four decades, reaching a new high of around 18.5 million tonnes in 2024. The technological breakthrough involving diversified aquaculture practices through pen and cage culture in open-waters have contributed immensely to this surge.

Cage culture in lakes and reservoirs with carps, catfish species and tilapia can be undertaken in the several African and Caribbean countries where suitable inland open-water resources are available.

Evidence & Impact: *What results has it shown? Stats, pilot outcomes, or testimonials*

Presently, the technology has been adopted in the inland lakes and reservoirs of the country, and currently around 20,000 cages (6 m x 4 m x 4 m per cage) has been installed in various states with a production of about 70,000 tonnes. This technology is vital for community development and offers food and livelihood support to the economically weaker sections of the society.

Scalability & Adoption Support: *Why it can be scaled and what's needed to adopt it? Low-cost, adaptable, partner-ready, etc.*

Cage culture can be established in any suitable inland open-waters including lake and reservoirs, with proper water conditions, quality seed, and effective feeding strategies for exploiting the un¬der-used water resources to produce fish.

Small enclosure of pens and cages eases operations with respect to seed stocking, feeding, growth and health monitoring and harvesting. Being a low-cost technology, where the inputs are readily available, horizontal and vertical expansion in production can be easily obtained through intensification.

Partners & Contact Info: *Who's involved and how to connect? List of key contact.*

Dr. J.K. Jena
Deputy Director General (Fisheries Science Division)
Indian Council of Agricultural Research
Krishi Anusandhan Bhawan-II
PUSA, New Delhi-110012, India
Email: ddgcs.icar@nic.in

Phone: 0091-1125846738