ICAR-CIBA - a nodal R&D agency working in brackishwater aquaculture for the past three decades with a vision of environmentally sustainable, economically viable and socially acceptable aquaculture technologies, system interventions, technology backstopping and policy inputs by the institute, contributing to economic benefits of the sector which has already recorded annual export revenue of ₹ 23,000 crores apart from domestic consumption.

CarryCap –An online aquaculture planning tool for the estimation of carrying capacity of water bodies

ICAR-CIBA

Rationale

A key element in many definitions of sustainable development of shrimp farming is to stay within the "carrying capacity" of the ecosystem. The unplanned and uncontrolled expansion of shrimp aquaculture in developing countries poses risks of exceeding the carrying capacity of the source water bodies. This leads to negative impacts on the sustainability of aquaculture, through poor productivity and occurrence of diseases. Carrying capacity (CC) is the number of enterprises which can be supported by a defined area, ecosystem or coastline. The carrying capacity of coastal areas for aquaculture should be assessed and guidelines provided for considering further increase in area under shrimp farming in the coastal region.

Highlights of the technology

- Conceptual model and the methodology for the assessment of carrying capacity of water bodies in relation to aquaculture are translated into online tool.
- CarryCap tool defines the maximum nutrient loading which can be assimilated by the waterbody based on its dilution rate and flushing time without exceeding the permissible levels of waterbodies.
- Decision support online tool to estimate the optimum farming area forbrackishwater species on a particular water source.

Likely impact of the technology

This tool can be used for the estimation of carrying capacity of source water bodies for optimization of brackishwateraquaculture development. The online tool can help the state governments and other regulatory organisations to regulate the level of aquaculture activity and to develop guidelines for further development of farming area within suitably zoned areas. The CC models will provide information necessary for the formulation of strategies to integrate shrimp farming into coastal zone management. The importance and utility of the tool was presented to the Officers of Fisheries Department of the States Andhra Pradesh for the purpose of aquaculture zonation.

Site Registration

Personal information	
Name	
Email-id	
Occupation	
Address	
State	Andhra Pradesh
Mobile Number	
Location information	
Name of the Waterbody	
Location of the waterbody (District)	
Location (Mandal)	
Location (Villages)	
Total area developed on waterbody (ha)	
Species	Shrimp
Choose Starting month	January
Number of Months	1
Whether Paddy cultivation is included?	No

Register

"Brackishwater Aquaculture for Food, Employment and Prosperity"

ICAR-Central Institute of Brackishwater Aquaculture
(ISO 9001:2015 certified)
Indian Council of Agricultural Research,
75, Santhome High Road, MRC Nagar, Chennai 600 028 Tamil Nadu, India
Phone: +91 44 24618817, 24616948, 24610565 | Fax: +91 44 24610311
Web: www.ciba.res.in | Email: director.ciba@icar.gov.in, director@ciba.res.in