



Webinar: Culture-based Fisheries for Rural Development

31 May 2021, via Zoom (11:00 – 15:00 GMT +7)

Prospectus



Rationale

There is a consensus among fisheries scientists, planners and practitioners that increasing global food fish needs, estimated to be around 30-40 million tonnes by 2050, will have to come from inland waters. This will require a rational development of the inland fisheries sector as well as inland aquaculture^{1,2}.

Culture-based fisheries (CBF), a form of stock and recapture in public water bodies, offer a practical way for rural communities to improve their income and nutritional status³. Existing water resources, such as small village agricultural dams managed by local communities, are harnessed to produce fish as an additional crop utilising the natural productivity of the water body. The technology is simple and requires little capital investment as usually no feeding is involved. The improvements in fish yield through CBF adoption have been demonstrated in many countries such as Cambodia, Lao PDR, Sri Lanka, and Vietnam^{4,5}. Direct increases in fish production increase access to animal protein in nutritionally challenged communities and improve incomes. The community-based management approaches utilised are also known to generate synergies within communities, bringing about harmony and improving resilience and wellbeing⁶.

It is estimated that in Asia alone there are nearly 66 million hectares of such waters with a potential for use of CBF. As such even a small percentage of this area, when used effectively for CBF, will enable an extra 10 million tons of inland fish to be produced. Importantly, because such water bodies are in rural areas the bulk of the benefits will go to rural, rather impoverished communities. It has been projected that an extra 10 million tons of fish could be obtained through adoption of CBF in a small percentage of the available water bodies, in Asia alone, contribution significantly to food security and rural development⁷.

Culture-based fisheries are of relevance to most NACA member governments. They have exceptionally low capital cost requirements and concern more efficient utilisation of *existing* resources and unfed systems, which permits the participation of all members. They are therefore good candidates for technical exchange.

¹ Beard Jr. T. Douglas, Arlinghaus Robert, Cooke Steven J., Peter, McIntyre, De Silva Sena, Bartley Devin, Cowx Ian G., 2011. Meeting Report Ecosystem approach to inland fisheries: research needs and implementation strategies. *Biology Letters*, 7, 481-483. (doi:10.1098/rsbl.2011.0046)

² Youn, S.-J., Taylor, W.W., Lynch, A.J., Cowx, I.G., Beard Jr., T.D., Bartley, D. and Wu, F. (2014) Inland capture fishery contributions to global food security and threats to their future. *Global Food Security* (2014), <http://dx.doi.org/10.1016/j.gfs.2014.09.005>. 7 pp

³ De Silva, S. S., 2003. Culture-based fisheries: an underutilized opportunity in aquaculture. *Aquaculture*, 221, 221-243.

⁴ Pushpalatha, K.B.C. and Chandrasoma, J. (2010). Culture-based fisheries in minor perennial reservoirs in Sri Lanka: variability in production, stocked species and yield implication. *Journal of Applied Ichthyology*, 26, 99-104.

⁵ Phomsouvanh, A., Saphakdy, B. and De Silva S.S. (2015). Production trends, monetary returns and benefit sharing protocols from culture-based fisheries in rural communities in Lao PDR. *Aquaculture*, 439, 29-38. DOI: 10.1016/j.aquaculture.2015.01.02

⁶ Saphakdy, B., Phomsouvanh, A. Davy, B., Nguyen, T.T.T., De Silva, S.S., 2009. Contrasting community management and revenue sharing practices of culture-based fisheries in Lao PDR. *Aquaculture Asia Magazine*, XIV (3), 2-6.

⁷ De Silva, S.S., 2016. Culture based fisheries: a strategy to augment food fish security in developing countries. *Food Security*, 8; 585- 596. DOI 10.1007/s12571-016-0568-8

Objectives

The objectives of the meeting are to:

1. Assess the benefits of CBF in improving the nutritional security, incomes, and social fabric of rural communities and in meeting conservation objectives, based on examples from throughout the region.
2. identify better planning, management, and performance monitoring/evaluation practices for development of CBF programmes.
3. Identify research needs, and opportunities for technical exchange and capacity building in CBF.
4. Discuss the prospect of establishing an ongoing network of practitioners of CBF and stock enhancement to promote collaborative research, sharing of experience, capacity building and advance the state of the art.

Participation

The meeting will include key CBF practitioners from throughout the region, nominated representatives of NACA member governments and research centres, and resource persons from relevant regional and international development organisations.

The proceedings will be broadcast as a public webinar via Zoom. Feedback from members of the public will be permitted via a question-and-answer session with an expert panel. Presentations will also be recorded and made available as an educational resource via Youtube.

In the interests of sound quality, all participants are **required** to use a headset during proceedings (essential to prevent audio feedback loops). Use of an external microphone (ie. *not* laptop built-in microphones) is **requested** to improve sound quality.

Further information

For more information please contact the NACA Secretariat at info@enaca.org, or visit the NACA website <https://enaca.org>.

Indicative programme [Bangkok time, GMT+7]

Please note that specific presentation times may shift in the event of internet-related technical difficulties.

Monday, 31 May 2021

11:00 – 11:05	Introduction <i>Dr Huang Jie, Director General, NACA</i>
11:05 – 11:20	Role of culture-based fisheries in global food and nutrition security: An underutilized opportunity <i>Upali Amarasinghe, Professor Emeritus, University of Kelaniya</i>
11:20 – 11:35	Socio-economic impact of culture-based fisheries on rural livelihoods: Sri Lanka experience <i>Mohottala G. Kularatne, Department of Economics, University of Kelaniya</i>
11:35 – 11:50	Technical constraints to the development of culture-based fisheries in Sri Lanka <i>W.M.H. Kelum Wijenayake, Department of Aquaculture and Fisheries, Wayamba University of Sri Lanka</i>
11:50 – 12:05	Approaches for sustainable culture-based fisheries in Sri Lankan reservoirs <i>K.B.C. Pushpalatha, National Aquaculture Authority of Sri Lanka</i>
12:05 – 12:20	Monitoring and impact evaluation of culture-based fisheries in Sri Lanka's man-made reservoirs <i>Jayantha Chandrasoma, State Secretary to the Ministry of Fisheries and Aquatic Resources, Sri Lanka</i>
12:20 – 12:35	Combined stocking of piscivorous and filter-feeding fishes can efficiently utilize food organisms and improve water quality in Chinese lakes <i>Jiashou Liu</i>
12:35 – 12:45	10-minute break
12:45 – 13:00	Biodiversity considerations in culture-based fisheries <i>Thuy Nguyen, Stakeholder Relations Manager, DataGene Limited</i>
13:00 – 13:15	Development of culture-based fisheries in India- Opportunities and challenges <i>V.V. Sugunan</i>
13:15-13:30	Inclusion of micro-nutrient rich small fish in aquaculture and culture-based fisheries <i>Mostafa Hossain, Bangladesh Agricultural University</i>
13:30-13:45	Success stories of culture-based fisheries in Thailand <i>Tuantong Jutagate, Ubon Rachathani University</i>
13:45 – 14:00	[Culture-based fisheries in Lao PDR – title to be advised] <i>Akhane Phomsouvanh, Division of Fisheries, Ministry of Agriculture and Forestry, Lao PDR</i>
14:00-14:15	Culture-based fisheries: A tool for rural development in Vietnam <i>Bui The Anh, Department of Science, Technology and Environment, Ministry of Agriculture and Rural Development-Vietnam</i>
14:15 –	Panel discussion [open ended] <ul style="list-style-type: none"> • Developing a CBF practitioner's network • Research needs, opportunities for technical exchange and capacity building in CBF • Q&A from participants [subject to time constraints] • Closing remarks and next steps