



REQUEST FOR CONSULTANT PROPOSAL

RFP #: MAT 2024 – CONSULTANT 05

International Fish Hatchery Expert

ISSUANCE DATE: Feb 12, 2024

LAST APPLICATION RECEIPT DATE: March 1, 2024, 5:00 PM EST USA

Components of this solicitation are as follows:

Appendix A: Terms of Reference and Requirements

Appendix B: Instructions for Application and Review Process

APPENDIX A:

Terms of Reference / Consultancy

Timeline and Reporting:

Title of proposed position/work: **International Fish Hatchery Expert**

Location: Simara, Bara District, Nepal (remote and field work to be decided at contracting stage)

Reporting to: DCoP, Project

Anticipated Start Date: March 2024

Anticipated End Date: July 2024

Consultancy Type: Individual or Firm

Contract type – initial contract of 50 days LOE with the possibility to extend.

Background

Nepal is a landlocked country ripe for investment in its growing aquaculture sector, with 5% of its total area occupied by different freshwater aquatic habitats, including rivers, lakes, reservoirs, swamps, ponds and irrigated paddy fields.¹ Only 2% of the available water resources are utilized for aquaculture production, but the environment is suitable for producing warm, temperate, and cold-water fish species across the country, offering many opportunities to increase both aquaculture production across the value chain and economic benefits for Nepalis.² Aquaculture appeared in Nepal in the 1950s, while capture fishing has existed for much longer. Nepal has 236 indigenous fish species and 16 exotic fish species, but aquaculture activities focus on seven types of carp, tilapia, pangasius catfish (pangas), and rainbow trout.³ Aquaculture and fisheries production continues to grow at a rate of 17.1% and contributes to 2.47% of the

¹ Jha, D.K. 2022. “Status of Fisheries and Aquaculture in Nepal.” In: T. S. Pathan; A.R. Chourpagar; S.V. Rankhamb; R.S. Shaikh (eds.), *Fisheries, Ecology and Environment*, pp. 45- 68.

² Alok Dhakal et al. 2022. Hindawi, *Advances in Agriculture*, Volume 2022. Article ID 4206401

³ Jha, D.K. 2022. “Status of Fisheries and Aquaculture in Nepal.”

⁴ Alok Dhakal et al. 2022. Hindawi, *Advances in Agriculture*.

⁵ OECD-FAO Agricultural Outlook 2020-2029 & FAO. 2022. *The State of World Fisheries and Aquaculture 2022*.



nation's agricultural gross domestic product.⁴ Average fish consumption per person in Nepal is approximately 2 kg per person (2020), much lower than the global average of 20.2 kg per person⁵. While fish consumption provides a nutritious protein source, the low average purchasing power of low contributing to low fish sales and production. Many farmers participate in the aquaculture sector, offering employment and business opportunities across genders, age segments, and social groups.

The anticipated United States Department of Agriculture (USDA) Food for Progress (FFPr) project in Nepal will leverage local, regional, and international technical expertise in aquaculture and extensive stakeholder engagement to make lasting change in Nepal aquaculture productivity, food safety, aquaculture marketability, nutritional awareness, enabling environment, and ultimately, trade.

Under Lutheran World Relief (LWR)'s leadership, the project will support direct and indirect individuals by working with aquaculture farmers, farmer groups, cooperatives, associations, hatcheries, nurseries, transporters, buyers/traders, institutions, equipment providers, and government bodies across sixteen districts in five provinces of Koshi, Madhesh, Bagmati, Gandaki, and Lumbini.

The project focuses on two USDA FFPr's strategic objectives:

- To increase agricultural productivity of fish farmers through improving producer access to improved inputs, services, financing, and end-market linkages.
- To expand trade of aquaculture products locally including aquaculture inputs, services, live fingerlings, and processed fish through improving access to finance, quality inputs, and end markets.

The project will carry out five activities, in capacity building, training, inputs, financial services and market access.

Consultant Opportunity:

The main aquaculture species popular in Nepal can be divided as carp, trout, pangas and tilapia. There are more than big and small pieces engaged in seed production required for aquaculture production. Nearly 80% of fish seed, including all species, are known to be produced and supplied from the private sector and the remaining from the government sector from various parts of the country. Nepal aquaculture production is known to be impacted by low quality hatchery product due to inbreeding, low technology available for nursing of pangas and poor management of all other species. For further prosperity of the aquaculture sector, it has been often advocated that there is need of fish seed regulations, permit, establishment, and operation working procedure and other regulations. The sources of fish in Nepal could be from neighboring countries or local hatcheries. To produce quality seed first the brood fish should be from known sources. The quality criteria of quality seed could be age, uniformity of size, growth percentage, mortality, deformity, behavior, and body shape. Causative agents responsible for fish mortality could be bacteria, fungi, internal and external parasites and other modes of stocking and transportation. Fish seed is also known to enter in Nepal from neighboring countries including that of ornamental and aquarium fishes. These aquarium fishes imported from abroad could be one of the gateways of many parasitic and non-parasitic diseases.

LWR is seeking a highly qualified and experienced Hatchery expert. This Hatchery Expert will review the status of carp, pangas, tilapia and trout hatcheries in project area, and ascertain and evaluate the situation of fish seeds. He/she will assess the existing fish seed production protocol and guideline, quarantine regulation for and develop a draft on fish seed regulation/Act., and quarantine procedures.

Expected Tasks



He/she will provide recommendations to improve the fish seed sector for better profit and opportunities. The Hatchery Expert will undertake, but not be limited to, the following activities to complete the task.

- a) Conduct a comprehensive assessment of the existing fish (carp, tilapia, pangas and trout) hatchery operations through evaluating infrastructure, equipment, and current practices. This will also involve consultation, implementation, and advisory work related to fish seed regulation and quarantine procedures.
- b) Identify areas for improvement in fish breeding, rearing, and production processes.
- c) Suggest ways to improve the quality of trout seed through foreign investment system its pros and cons, and improvement of carp seed survival from hatchlings to fry stage. Strategies on fish seed production at a provincial level. Recommendation to develop the known sources of brood fish supply to fish hatcheries.
- d) Offer insights into efficient fish seed production at the provincial level and propose recommendations for bolstering the supply of brood fish from known sources to fish hatcheries.
- e) Create a comprehensive dataset encompassing information on fish seed imports, table fish imports, and exports. This dataset will serve as a crucial resource for informed decision-making and strategic planning.

Deliverables

The following deliverables are expected from Hatchery Expert:

- a) Detailed assessment report outlining strengths, weaknesses, and recommendations for improvement in hatchery operations.
- b) A report on fish hatchery and seed production regulations.
- c) Proposal for the potential establishment of collaborative trout hatchery and tilapia using a corporate model with 49% foreign investment and 51% native sources.
- d) Strategies for the development of fish hatcheries at the provincial level.
- e) Support establishment of 3 tilapia breeding nucleus Recommendations for the development of brood fish resources at the federal and provincial levels.
- f) Comprehensive water quality management plan, including monitoring protocols and recommendations for maintaining ideal water conditions.
- g) A plan for monitoring fish health, disease prevention, and treatment protocols.
- h) Detailed feeding guidelines and nutrition programs for various fish species and life stages.
- i) Hands-on training materials for hatchery staff, including manuals and presentations.
- j) Report assessing the environmental impact of hatchery operations and recommendations for sustainability.
- k) Recommendations for cost-effective resource management and budget allocation within the hatchery.

Level of Effort and Timeline

The ToR is expected to be completed by both remote and field work. Field visits will be required to Simara and the implementation regions through the course of the consultancy. The perspective timeline for the selected consultant to start March 2024 and submit the deliverables by July 2024 for a total of 50 days level of effort. All terms will be agreed upon in the consultant contract.

Qualification and Experience

The Hatchery Expert should possess the following qualifications:

- a) Advanced degree in aquaculture genetics/breeding.
- b) Proven experience working with carp, trout, Tilapia, and Pangas hatchery and production of quality seed with certification system.
- c) Experience conducting Training for Trainers.
- d) Experience working with international development organizations and knowledge of donor-funded projects is advantageous.



- e) Strong verbal and written communication and writing and technical skills.
- f) Ability to communicate technical matters effectively to a wide audience.
- g) Microsoft package: Word, Excel; PowerPoint, preferred.
- h) English language, fluency in Nepali/Hindi/local languages is a plus.
- i) Willing to travel to Nepal, including to remote districts.

**APPENDIX B:
APPLICATION INSTRUCTIONS AND REVIEW PROCESS**

LANGUAGE REQUIREMENTS – All documents submitted in response to this solicitation, as well as all correspondence in connection with the solicitation, shall be in the English language.

EVALUATION – Evaluation of responsive and technically acceptable applications submitted pursuant to this solicitation will be carried out by LWR in accordance with the evaluation factors in, “Instructions for Application and Review Process.”

QUESTIONS – Questions should be addressed to the below email address 5 business days prior to the submission deadline.

APPLICATIONS – Applications are to be submitted electronically via email no later than the Last Application Receipt Date, which is defined as **March 1, 2024, 5:00 PM EST USA**. Electronic applications must be addressed and delivered to:

Attention: MATSYA Procurement – **International Fish Hatchery Expert**

Email: Matsyaprocurement@lwr.org CC: rbhandari@lwr.org

Last Proposal Receipt Date: **March 1, 2024, 5:00 PM EST USA**

EVALUATION CRITERIA

The selection process will be based on the following criteria:

- a) Proven experience in designing or operating fish hatcheries, with a focus on optimizing environmental conditions and resource efficiency.
- b) In-depth knowledge of hatchery operations, including broodstock management, spawning, larval rearing, and juvenile production.
- c) Understanding of the biological needs of various fish species in a hatchery setting.
- d) Expertise in managing water quality, including knowledge of filtration systems, water chemistry, and environmental controls.
- e) Relevant qualifications and experience in BMP or GMP related approaches
- f) Expertise on agriculture enterprises, regulations with certification system in aquaculture
- g) Track record of innovation or improvement in hatchery practices.
- h) Previous experience with international development projects
- i) Daily rate

Note: LWR will not accept responsibility for delays with transmission or receipt of applications/ proposals. Applicants are solely responsible for ensuring the timely receipt of their applications/ proposals. Applications/ proposals received after the date and time required will generally not be considered unless no other proposals are received.

Submissions shall be in accordance with the instructions provided in this solicitation, at the place and time specified. If submitting a proposal as a firm, please share the CVs of the proposed consultants and include a breakdown of tasks outlined in the ToR in the cover letter. Interested applicants are requested to submit:



1. **A recent CV or resume.** The CV/resume must include sufficient relevant information to evaluate the application in accordance with the stated evaluation criteria and must contain the following information:
 - Personal Information: Full name, mailing address, email address, phone number.
 - Education: School/ university name, type of any degrees received.
 - Work and Consultancy Experience: Job/consultancy title, duties, and accomplishments, starting and ending dates (month and year).
 - Other Qualifications: Other pertinent information related to the qualifications required for the position, as noted above, including job-related training courses (title and year), job-related skills, and notable accomplishments.
2. **A Cover Letter.** The cover letter must outline how you expect to use previous experience and expertise to complete the ToR. Include a proposed daily rate for services in the cover letter. Only include daily rate for services and not any other expenses.

Applicants that best fit the criteria may be invited for interview.