

SOCIALIST REPUBLIC OF VIETNAM
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TRAINING WORKSHOP REPORT

International Training cum Workshop on “Sustainable Fisheries and Dairy”
ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata,
West Bengal, India; 6-19 December 2023

Prepared by Vietnamese Participants



Ministry of External Affairs
Government of India



India



Cambodia



Vietnam



Lao PDR



Myanmar

Hanoi, Jan 2024

To: Embassy of India in Hanoi

TRAINING WORKSHOP REPORT

Based on Diplomatic Note No.NV966/POL/2023 of the Indian Embassy dated 25 October, 2023; and on the request of the Vietnam Academy of Agricultural Sciences on assigning staffs of RIA1 to attend the training program on "Sustainable Fisheries and Dairy", from 6 to 19 December, 2023 of the Indian Embassy;

The International Training cum Workshop on "Sustainable Fisheries and Dairy" training course has been successfully completed. On behalf of the participants from Vietnam, we would like to report a summary of the main results as follows:

1. Participants Details:

The Participants of training course includes for 24 members, 6 each from Vietnam, Laos, Cambodia, and Myanmar. The Vietnamese delegation has 6 members including 3 members from Research Institute for Aquaculture No. 1 (RIA1) and 03 members from National Institute of Animal science (NIAS) has attended the training. The detailed information is as given below

- MSc. Nguyen Thi Dieu Phuong (Principle researcher), Deputy Head, Department of Science - International Cooperation and Training, RIA1.
- MSc. Luu Thi Ha Giang (Researcher), Deputy Head, Department of Technology, Center of Aquaculture Consulting, Service and Technology Transfer, RIA1.
- Ms. Ngo Khanh Thuy Linh (Engineer) Deputy Head, Department of Aquaculture Technology, National Center for Freshwater Aquatic Breeds in Northern Vietnam, RIA1.
- MSc. Hoang Thi Ngan – Vice Director, Ruminant Research and Development Centre, NIAS
- MSc. Pham Vu Tuan – Deputy Head, Science and Technology Transfer Division, Vietnam Ruminant Breeding Center, NIAS
- MSc. Dang Thuy Duong – Head of livestock experimental farm, Ba Vi Cattle and Forage Research Center, NIAS

2. Location and period of the Training workshop

The Training workshop was held at ICAR-Central Inland Fisheries Research Institute, Barrackpore, Kolkata, West Bengal, India; from 6th to 19th December 2023 (14 days)

3. Summary of the International Training Cum Workshop on Sustainable Fisheries and Dairy.

Training Objectives

- To review the current management practices and critically identify and address the constraints, risks and other problems and propose possible improvements
- To demonstrate relevant technologies/skills that are essential for fisheries enhancement/CBF/enclosure culture practices and to generate trained manpower
- To disseminate principles and practices of inland open-water fisheries management in the context of food and nutritional security

Training Approach

- *Trainee central approach:* The overall training sessions are designed to facilitate maximum experience sharing and interaction among participants and resource persons.
- *Focus on skill enhancement/improvement:* The analytical assessment and application tools will be developed and provided to participants for planning, operation, monitoring, and evaluation of management practices along with theoretical and practical sessions.
- *Focus on practicals and problem-solving inclination:* Trainees will be encouraged to present their cases, identify the issues, and problems and apply the knowledge and skills to plan for appropriate management practices/solutions with proposed approaches.

3.1. Key findings of Fisheries Sessions:

Inland Open water Fisheries Resources of India and their Management towards Sustainable Development; Integrated Fish Farming; Small Indigenous Fish Species (SIF), Breeding and Culture Practises; Aquatic Pollution; Cage culture in Inland Open waters; Probiotics; Fish Feed Formulation and Feeding Management; Riverine Fisheries Conservation and Habitat Improvement; River Ecosystem Health Assessment; Environmental Flow; Fish Passes; Wetland Fisheries Management; Use of Antimicrobials; Statistical Tools for Ecological and Fisheries Data Analysis; Ecological Modelling; Application of Artificial Intelligence, PMMSY (national strategy for sustainable fisheries development)

3.2. Key findings of Dairy Sessions:

Sustainable breeding programs for cattle and goats in India; Clean milk production towards sustainable dairy; Reproduction management in farm animals; Recent advancement in dairy production with focus on embryonic transfer; Protozoan parasitic diseases in Dairy animals and their control; Neonatal calf health management for sustainable dairy herd performance; Recent advances in assisted reproductive technologies for sustainable dairy farming.

3.3 Summary of the training course:

- Total number of theoretical lessons: 32
- Practice and field visits: 13
- New concept learnt: 2 (River ranching towards biodiversity conservation and Krishi Vigyan Kendra for integrated farming towards SDG)
- Other Institute exposure: 1 (National Dairy Research Institute)
- Cultural exchange (session): 03
- Final presentation (country): 01
- Overall rating: 95%

4. Lessons Learnt

Understanding overall picture on current status of inland open water resources in India; management, fish species. Wetland Fisheries management; Cage and Pen culture; Integrated fish farming, Production systems in practice, Marketing fish seed in India. Fish Nutrition, formulation, scale experiment and local available; Probiotic...Aquatic Ecosystem and assessment; Fisheries data analysis and modelling; Ecology advance software; Ecosystem services of wetland. Application of AI in inland open water Sustainable Fisheries: environmental flow; fish migration demonstration in India. Ranching program in India and practice. How sustainable fisheries towards second blue revolution; Schemes of Fisheries in India.

Understand the breeding program for dairy cows and goats (dairy cow and goat breeds, dairy farming orientation in India...). Overall flow of Ministry of Fisheries and Husbandry and Dairy; Institutional structures of fisheries extension organizations and systems approach. Clean milk production, sustainable dairy farming (quantity, quality of milk), some diseases and management and treatment methods... Cloning program for Murrah buffalo, sexed semen production, AI technology on cows...

Sharing knowledge; exchange information's; Indian cultural; excellent management of CIFRI.

7. Recommendations/suggestions for future works and international cooperation

Mutual contributions to develop direction, plan, research projects towards sustainable fisheries and dairy for nutritional security, livelihood improvement, biodiversity conservation, and efficient utilisation of water and energy under the common goal of SDG following schemes of MARD - RIA1 and NIAS (2030-2050);

For Fishery sector: In future, international cooperation between India and Vietnam is of more importance and collaborations are essential on important areas including climate change and fisheries, biodiversity conservation in rivers and wetlands, fish passess, environmental flows, sustainable livelihood and gender equity in fisheries, and systemic approaches in fisheries and aquaculture towards attainment of SDGs through collabarative projects; exchange of genetic improved fish species, exchange of scientific knowledge through research staff for short study/exposure tours, students exchange of internship, Post Doctoral. Cooperation in develop and apply Aquaculture technologies, data analysis and data management in open water resources. Building network to share knowledge and technologies in advance.

Concept for livelihood and gender studies:

Cage culture in inland open waters is an important and emerging fisheries technology of India. ICAR – CIFRI is one of the pioneers of cage culture in India. This technology has been already adopted by entrepreneurs and fishers through groups and clusters in different parts of the country to augment the productivity of the inland fisheries resources. Cage culture is also highly developed in Vietnam, and is an important economic and livelihood activity in the fisheries sector. In such cases, the contributions and gender roles in cage culture activities are important to be recognized towards attainment of gender equality in cage culture as a livelihood through SDG 5 in fisheries (SDG 14). This can be analyzed in terms of the SDG targets and indicators according to the national priorities of both the countries through mutual sharing of research experience and expertise.

For Dairy sector: Exchange Murrah buffalo to produce frozen semen (10 heads). Join training courses about cloning, sex semen. Cooperate to develop buffalo farming more in the future.

8. Other outputs

Training handbook, Training manual, workshop presentations, the certificate of participation...

Network contact list of all Trainees from 05 countries, Invited Delegates, Co-ordinating Committee, Supporting Technical Assistants and Resource Persons in India.

9. Acknowledgments

We extend our sincere thanks to the Ministry of External Affairs, Embassy of India in Vietnam support all financial allow us opportunity to undergo the training. We would like to extend our appreciation thanks to ICAR-Central Inland Fisheries Research Institute, Indian Government for organizing a wonderful the 14-day International Training cum Workshop on Sustainable Fisheries and Dairy. Thanks to RIA1 and NIAS allow us to join the training. The hands-on experience and practical knowledge we gained have significantly enhanced our skills, knowledge, and professional capabilities. We look forward to continuing to exchange expertise with India so that we can develop the future collaboration.

10. For further information, please contacts:

Vietnam	India
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Workshop activities Pictures



Orientation day at CIFRI



**ICAR-CENTRAL INLAND FISHERIES RESEARCH INSTITUTE
BARRACKPORE, KOLKATA**



RANCHING PROGRAM IN GANGE RIVER



**NAHAMI
GANGE**

**नमामि
गंगे**

INDIAN CULTURE



Santiniketan West Bengal



Victoria Memorial Hall, Kolkata



Gandhi Memorial Museum, Barrackpore