



Technical Assistance Report

Project Number: 54197-002
Transaction Technical Assistance (TRTA)
December 2020

New Hope Singapore Private Limited: Climate Resilience Capacity Building for Women in Poultry and Fish Farming (Bangladesh, Philippines)

This is an abbreviated version of the document that excludes commercially sensitive and confidential business information that is subject to exceptions to disclosure set forth in ADB's Access to Information Policy.

Asian Development Bank

CURRENCY EQUIVALENTS

Currency unit – dollars (USD)

ABBREVIATIONS

ADB	–	Asian Development Bank
NHS	–	New Hope Singapore Pte. Ltd.
PPCF	–	Pilot Program for Climate Resilience
TA	–	Technical Assistance

NOTES

- (i) The fiscal year (FY) of the Government of the Philippines and of New Hope Singapore Pte Ltd ends on 31 December. The fiscal year of the Government of Bangladesh ends on 30 September.
- (ii) In this report, “\$” refers to United States dollars unless otherwise stated.

Vice-President	Ashok Lavasa, Private Sector and Public-Private Partnerships
Director General	Michael Barrow, Private Sector Operations Department (PSOD)
Director	Christopher Thieme, Deputy Director General, Office of the Director General (OPSD), PSOD
Team leader	Xiaole Wang, Investment Specialist, OPSD, PSOD ^a
Project advisor	Martin Lemoine, Principal Investment Specialist, OPSD, PSOD ^b
Team member	Genevieve Abel, Principal Transaction Support Specialist, Private Sector Transaction Support Division (PSTS), PSOD
	Edwin David, Senior Investment Officer, OPSD, PSOD
	Sheila Estacion, Senior Operations Assistant, OPSD, PSOD
	Naja Penas, Project Analyst, PSTS, PSOD

^a Outposted to the People's Republic of China Resident Mission

^b Outposted to the ADB Singapore Office

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CONTENTS

	Page
TRANSACTION TECHNICAL ASSISTANCE AT A GLANCE	
I. THE ENSUING PROJECT	1
II. THE TECHNICAL ASSISTANCE	1
A. Justification	1
B. Outputs and Activities	3
C. Cost and Financing	4
D. Implementation Arrangements	4
III. THE PRESIDENT'S DECISION	5
APPENDIXES	
1. Cost Estimates and Financing Plan	6
2. List of Linked Documents	7

TRANSACTION TECHNICAL ASSISTANCE AT A GLANCE

1. Basic Data		Project Number: 54197-002	
Project Name	Climate Resilience Capacity Building for Women in Poultry and Fish Farming	Department/Division	PSOD/OPSD
Nature of Activity Modality	Capacity Development Regular	Executing Agency	Asian Development Bank
Country	REG (BAN, PHI)		
2. Sector	Subsector(s)	ADB Financing (\$ million)	
✓ Agriculture, natural resources and rural development	Agricultural production		0.20
		Total	0.20
3. Strategic Agenda	Subcomponents	Climate Change Information	
Inclusive economic growth (IEG)	Pillar 2: Access to economic opportunities, including jobs, made more inclusive	Climate Change impact on the Project	Low
Environmentally sustainable growth (ESG)	Global and regional transboundary environmental concerns	ADB Financing Adaptation (\$ million)	0.10
4. Drivers of Change	Components	Gender Equity and Mainstreaming	
Partnerships (PAR)	Commercial cofinancing Private Sector	Effective gender mainstreaming (EGM)	✓
Private sector development (PSD)	Promotion of private sector investment		
5. Poverty and SDG Targeting		Location Impact	
Geographic Targeting	No	Regional	High
Household Targeting	No		
General Intervention on Poverty	Yes		
SDG Targeting	Yes		
SDG Goals	SDG1, SDG2, SDG5, SDG12, SDG13		
6. Risk Categorization	Low		
7. Safeguard Categorization	Safeguard Policy Statement does not apply		
8. Financing			
Modality and Sources		Amount (\$ million)	
ADB		0.20	
Transaction technical assistance: Technical Assistance Special Fund		0.20	
Cofinancing		0.30	
Strategic Climate Fund - PPCR (Full ADB Administration)		0.30	
Counterpart		0.00	
None		0.00	
Total		0.50	
Currency of ADB Financing: USD			

I. THE ENSUING PROJECT

1. The proposed transaction technical assistance (TA) grant is designed to complement the ensuing loan of up to \$20 million loan to New Hope Singapore Pte. Ltd. (NHS), for the New Hope COVID-19 Working Capital Support Project (Regional).¹ The loan will support NHS' emergency response operating expenses and increased working capital needs in nine countries of South and Southeast Asia during the coronavirus disease (COVID-19) outbreak².

2. The proposed TA will complement the loan by providing capacity building support to 7,200 women poultry and fish farmers in Bangladesh and the Philippines on (i) climate resilient farming best practices in either poultry or aquaculture, adapted to the needs of women and the local context; and (ii) functional financial literacy, including a focus on access to credit facilities. The topics are highly aligned with assisting climate resilient recovery from COVID-19 related impacts in the poultry and aquaculture industries, as identified in the FAST report. The capacity building will also help boost women's participation in the poultry and aquaculture industries and accelerate gender equality by improving their financial and technical capabilities.

II. THE TECHNICAL ASSISTANCE

A. Justification

3. **Climate change in South and Southeast Asia.** Modelling by the Intergovernmental Panel on Climate Change (IPCC) estimates that countries in South and Southeast Asia will experience and increase in average temperatures and precipitation by the mid-21st century.³ The IPCC classifies Bangladesh as one of the countries which will be most affected by climate change, with changing rainfall and water flow patterns being particularly impactful in a country located in a river delta with low-lying floodplains. Those living in poverty will be the most impacted, of which 85% reside in rural areas.⁴

4. **Innovative techniques to strengthen climate resilience of poultry farming and aquaculture.** Poultry farmers in South and Southeast Asia are experiencing higher temperatures for longer period as well as more extreme precipitation patterns, both associated with climate change, leading to higher animal mortality and lower farm productivity. These effects can be mitigated through innovative techniques, including real-time temperature and hygrometry sensors and monitoring systems, insulation, passive and active poultry shed ventilation and energy-efficient evaporating cooling systems. These techniques are increasingly implemented in developed countries with warm climates (e.g. Southern US States, Australia), but their usage remains very limited in South and Southeast Asia. The TA will therefore train women to these techniques, to ensure innovation adoption in the poultry sector.

5. Aquaculture is also experiencing the effects of climate change, including ocean acidification in coastal zones, extreme events (more frequent and intense precipitation events,

¹ ADB. 2020. *FAST: Proposed Loan to New Hope Singapore Pte Limited for New Hope COVID-19 Working Capital Support Project (Regional)*. Manila.

² Bangladesh, Cambodia, Indonesia, Lao People's Democratic Republic (Lao PDR), Nepal, Philippines, Sri Lanka, and Viet Nam.

³ Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014 – Impacts, Adaptation and Vulnerability: Part B: Regional Aspects: Working Group II Contribution to the IPCC Fifth Assessment Report*. Cambridge: Cambridge University Press. doi:10.1017/CBO9781107415386

⁴ ADB. 2016. *Country Partnership Strategy: Bangladesh, 2016–2020*. Manila

floods, droughts), climate variability, sea level rises, and surface water temperature rises⁵. Climate change presents a large variety of risks to aquaculture depending on the local conditions, and context-specific solutions are critical to providing farmers with effective adaptation measures.⁶ Additionally, access to financial services and credit facilities is often a barrier to adoption of climate change adaptation measures by small holder fish farmers.⁷ The TA will focus on adaptive measures at the farm and community level, with a primary focus on farm management practices and financial literacy. Farm management trainings will include diet and nutrition, management and engineering solutions, and breed selection as primary methods of improving climate resilience. The selection of thermal tolerant breeds and management of diet and nutrition helps reduce the impact of climate change on farm productivity. Management and engineering solutions can reduce climate-related risk. Financial literacy trainings will focus on farm budgets, access to financial services and credit facilities, which are particularly important for those farmers that may want to implement more costly adaptive. The TA will train women to these techniques to ensure innovation adoption in the aquaculture sector.

6. **COVID-19 recovery.** The effects of the COVID-19 crisis and related containment measures have led to bottlenecks in food supply chains and the poultry and fish industries have been impacted. In Bangladesh, disruptions to supply chain disruptions and false accusations of chickens as a source of COVID-19 caused an unprecedented reduction in demand and farmgate prices plunged.⁸ Approximately 50% of broiler farmers were estimated to be out of business by May 2020. While not impacted as dramatically as poultry, fisheries in Bangladesh experienced a significant reduction in prices especially for exports. The largest impact on fisheries may still be to come, with dramatic reductions in sales of fish spawn and fingerlings.⁹ The Philippines instigated an early and strict community quarantine system that initially impacted supply chains, and lead to price fluctuations for both fish and poultry. The government later established “food lanes” and “food passes” that allowed food and agricultural products to move unabated. Despite these efforts, poultry prices fell dramatically by over \$1 per kilogram in some areas, leading poultry farmers to lobby the government for a ban on imported poultry.¹⁰ Fish prices, conversely, increased above and despite price ceilings set by the government.¹¹

7. The TA will support economic recovery from the COVID-19 crisis for female fish and poultry farmers, by providing them with training to increase their productivity and profitability. Integrating climate resilience considerations in the recovery process will be critical to ensure the communities build resilience to all types of future crises.

8. **South-South cooperation.** The TA will build capacity in farm financial and business management as well as climate-resilient farm management, notably by drawing upon the client's experience in the PRC. Strengthening such enabling factors is critical to ensure women are able to successfully apply resilience building measures in their day-to-day lives.

⁵ Reid GK, Gurney-Smith HJ, Flaherty M, Garber AF, Forster I, Brewer-Dalton K, Knowler D, Marcogliese DJ, Chopin T, Moccia RD, Smith CT, De Silva S. 2019. Climate change and aquaculture: considering adaptation potential. *Aquacult Environ Interact*. 11(603-624). <https://doi.org/10.3354/aei00333>

⁶ Galappaththi EK, Ichien ST, Hyman AA, Aubrac CJ, Ford JD. 2020. Climate change adaptation in aquaculture. *Rev Aquac*. 1-17. <https://doi.org/10.1111/raq.12427>

⁷ IFAD. 2014. *Guidelines for Integrating Climate Change Adaptation into Fisheries and Aquaculture Projects*.

⁸ FAO. 2020. *Rapid Assessment to Evaluate the Impact of the Ongoing COVID-19 Epidemic on the Poultry Sector in Bangladesh*.

⁹ FAO. 2020. *Rapid assessment of food and nutrition security in the context of COVID-19 in Bangladesh*.

¹⁰ Rosario B. 2020, June 12. *House panel probes move to limit local poultry production*. Manila Bulletin (accessed on 23 October 2020 at <https://mb.com.ph/2020/06/12/house-panel-probes-move-to-limit-local-poultry-production/>)

¹¹ FAO. 2020. *The effect of COVID-19 on fisheries and aquaculture in Asia*.

9. **Focus on women.** By focusing on women in rural environments in low-income countries, the TA will target populations particularly vulnerable to the impact of climate change and in the post COVID-19 context. The TA will result in improved capacity to take part in farm management, contributing to strengthening women's positions within farms and improving their position to access financing to expand the businesses in which they are involved. Such empowerment of women in decision-making positions is critical to achieve transformational changes. The TA will also improve women's meaningful participation, including within household–enterprise units.

10. **Scalability of impact beyond TA scope.** NHS develops extension services alongside many of their subsidiaries to support their contract and customer farmers.¹² As NHS is expanding rapidly in South and Southeast Asia, many of these extension programs are newly established and focus solely on basic farm management with no climate-resilient farming methods or financial literacy training focus. The company anticipates the incorporation of TA products into their future training programs which would extend beyond the temporal and spatial¹³ scope of the TA.

11. **Consistency with ADB strategy and country strategy.** The project is aligned with Strategy 2030 which calls for ADB “to scale up its financing for agribusiness” and “to promote gender equality in at least 75% of the number of ADB's committed operations by 2030”.¹⁴ The project is consistent with ADB's country partnership strategies of the three DMCs which: (i) support increasing the productivity of agriculture; (ii) support managing climate change-related vulnerabilities; and (iii) promote gender equality.¹⁵

12. **Consistency with sector strategy and ADB sovereign operations.** The project is consistent with Strategy 2030's Operational Plan for Priority 1 to addressing poverty and reducing inequality, Operational Plan for Priority 2 by accelerating progress in gender equality, Operational Plan for Priority 3 for support of climate-smart agriculture and sustainable land-use management, including supporting community-based adaptation, and Operational Plan for Priority 5 to promote rural development and food security.¹⁶ The project will complement sovereign COVID-19 response projects in South and Southeast Asia¹⁷ to provide emergency response to support the poor and vulnerable households who have been adversely affected by the COVID-19 pandemic.

B. Outputs and Activities

13. Impacts and outcome of the TA are in line with the financing project and also focus on accelerating gender equality in fish and poultry farming. Impacts are: (i) tackling climate change,

¹² In total, NHS serves over 200,000 farmers in South and Southeast Asia, including 28,000 in Bangladesh and 23,000 in the Philippines.

¹³ NHS has additional subsidiaries in Cambodia, India, Indonesia, Lao, Nepal, Sri Lanka, and Viet Nam.

¹⁴ ADB. 2019. *Strategy 2030: Achieving a Prosperous, Inclusive, Resilient, and Sustainable Asia and the Pacific*. Manila.

¹⁵ ADB. 2016. *Country Partnership Strategy: Bangladesh, 2016–2020*. Manila; ADB. 2018. *Country Partnership Strategy: Philippines, High and Inclusive Growth, 2018–2023*. Manila

¹⁶ ADB. 2019. *Strategy 2030 Operational Priority 1 Addressing Remaining Poverty and Reducing Inequalities, 2019–2024*. Manila; ADB. 2019. *Strategy 2030 Operational Plan for Priority 2 Accelerating Progress in Gender Equality, 2019–2024*. Manila; ADB. 2019. *Strategy 2030 Operational Plan for Priority 3 Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability, 2019–2024*. Manila; ADB. 2019. *Strategy 2030 Operational Priority 5 Promoting Rural Development and Food Security, 2019–2024*. Manila.

¹⁷ ADB. 2020. *RRP: Proposed Loan to Philippines for COVID-19 Active Response and Expenditure Support Program*. Manila; ADB. 2020. *RRP: Proposed Loan to Bangladesh for COVID-19 Active Response and Expenditure Support Program*. Manila; ADB. 2020. *Proposed Technical Assistance to Cambodia, Indonesia, Lao People's Democratic Republic, Myanmar, Philippines, Viet Nam for Policy Advice for COVID-19 Economic Recovery in Southeast Asia*. Manila.

building climate and disaster resilience, and enhancing environmental sustainability¹⁸ and (ii) promoting gender inclusive rural development and food security.¹⁹ The major outputs and activities are summarized in Table 1.

Table 1: Summary of Major Outputs and Activities

Major Outputs	Delivery Dates	Key Activities with Milestones
1. 3,600 rural women trained in climate-resilient poultry farming best-practices in Bangladesh and the Philippines	Jan 2021 to Aug 2021 June 2021 to Dec 2021 June 2021 to Dec 2023	1.1 Development of training curriculum, based on results of desktop review of materials and ground-truthing tour 1.2 Training of trainers (ToT) and client technical and extension staff, if and as agreed to with client 1.3 Training of 3,600 female poultry farmers in Bangladesh and the Philippines
2. 3,600 rural women trained in climate-resilient fish farming best-practices in Bangladesh and the Philippines	Jan 2021 to Aug 2021 June 2021 to Dec 2021 June 2021 to Dec 2023	2.1 Development of training curriculum, based on results of desktop review of materials and ground-truthing tour. 2.2 Training of trainers (ToT) and client technical and extension staff, if and as agreed to with client 2.3 Training of 3,600 female fish farmers in Bangladesh and the Philippines
3. 7,200 rural women trained in financial literacy in Bangladesh and the Philippines	Jan 2021 to Aug 2021 June 2021 to Dec 2021 June 2021 to Dec 2023	3.1 Development of training curriculum, based on results of desktop review of materials and ground-truthing tour. 3.2 Training of trainers (ToT) and client technical and extension staff, if and as agreed to with client 3.3 Training of 7,200 female poultry and fish farmers in Bangladesh and the Philippines

C. Cost and Financing

14. The TA is estimated to cost \$400,000, of which (i) \$136,000 will be financed on a grant basis by ADB's Technical Assistance Special Fund (TASF-donor contribution)²⁰; (ii) \$264,000 will be financed on a grant basis by the Strategic Climate Fund²¹ and administered by ADB; and (iii) \$196,400 in the form of in-kind contributions from NHS (staff time for logistics and administrative support, technical consultation and review, training attendance and support, as well as conference room and farm facility provisions to host some of the training sessions).

15. Pilot Program for Climate Resilience (PPCR) funded projects, when administered by ADB, are subject to ADB's implementation guidelines. There are no additional requirements related to monitoring and reporting and no ineligible and/or eligible expenditure items outside of those already adopted by ADB. PPCR funds are disbursed on a pro rata basis.

D. Implementation Arrangements

16. ADB will administer the TA; the implementation timeline is to be finalized in conjunction with the external consultants and NHS. ADB expects outputs 1, 2 and 3 to be implemented over 36 months starting January 2021. NHS contract farmers will be the ultimate beneficiaries of the TA services and NHS is best position to coordinate the work of the consulting firm or independent consultants and share learning with farmers, governments and other stakeholders in Bangladesh

¹⁸ Asian Development Bank. 2019. *Strategy 2030 Operational Plan for Priority 3 Tackling Climate Change, Building Climate and Disaster Resilience, and Enhancing Environmental Sustainability, 2019-2024*. Manila.

¹⁹ Asian Development Bank. 2019. *Strategy 2030 Operational Plan for Priority 2 Accelerating Progress in Gender Equality, 2019-2024*. Manila.

²⁰ From the TASF special pool for COVID-19

²¹ Under the Pilot Program for Climate Resilience (PPCR). These funds have been earmarked for TA expenditures related to improving climate resilience and adaptation to the adverse effects of climate change on the target farming community.

and the Philippines. Because of NHS's contract farming model, the company has a direct relationship with farmers and will ensure that they fully benefit from the TA. The interests of NHS and the farmers are completely aligned in relation to the TA outcome, since NHS needs a sustainable demand for feed and, in Bangladesh, for hatchlings and chicks. NHS is committed to promote green and sustainable agriculture to improve standards of living for people across Asia in countries where they operate.

17. NHS and ADB have agreed on the principal terms of a draft TA implementation agreement. The draft agreement sets out the outcome and outputs of the TA, the amount of financing to be provided by ADB, the terms of reference of the consulting firm to be appointed, the proposed budget, and a realistic implementation timetable. The implementation arrangements are summarized in Table 2.

Table 2: Implementation Arrangements

Aspects	Arrangements		
Indicative implementation period	January 2021 – December 2023		
Executing agency	Asian Development Bank (ADB)		
Implementing agencies	New Hope Singapore Private Limited		
Consultants	To be selected and engaged by ADB		
	Firm: Quality and Cost-Based Selection	Output 1: Poultry Farming	\$120,000
	Firm: Quality and Cost-Based Selection	Output 2: Fish Farming	\$120,000
	Firm: Quality and Cost-Based Selection	Output 3: Financial Literacy	\$160,000
Equipment	The consulting firms will be in charge of procuring the equipment required for the TA		
Disbursement	The TA resources will be disbursed following ADB's <i>Technical Assistance Disbursement Handbook</i> (2020, as amended from time to time). Disbursements from the two funding sources will be made as per Appendix 1.		

18. **Consulting services.** ADB will engage one consulting firm following the ADB Procurement Policy (2017, as amended from time to time) and its associated project administration instructions and/or staff instructions.²² The contract will be required to be a lump-sum-payable, performance-based, and output-based contract. The consulting firms will be responsible for procuring the equipment required for the TA.

19. ADB and NHS will form a TA task force comprising representatives from ADB and NHS as well as staff from the consulting firm(s) to be hired. The task force will meet regularly to assess the progress of the assistance.

III. THE PRESIDENT'S DECISION

20. The President, acting under the authority delegated by the Board, has approved (i) the Asian Development Bank (ADB) administering a portion of technical assistance not exceeding the equivalent of \$264,000 to be financed on a grant basis by the Strategic Climate Fund²³ and (ii) ADB providing the balance not exceeding the equivalent of \$136,000 on a grant basis to New Hope Singapore Private Limited for Climate Resilience Capacity Building for Women in Poultry and Fish Farming, and hereby reports this action to the Board.

²² Terms of Reference for Consultants (accessible from the list of linked documents in Appendix 2).

²³ Under the Pilot Program for Climate Resilience.

COST ESTIMATES AND FINANCING PLAN

[Redacted]

LIST OF LINKED DOCUMENTS

<http://www.adb.org/Documents/LinkedDocs/?id=54197-002-TARreport>

1. Terms of Reference for Consultants

TERMS OF REFERENCE FOR CONSULTANTS

Background:

ADB proposes to provide a corporate loan to New Hope Singapore Pte Ltd (NHS) to support NHS' emergency response operating expenses and increased working capital needs in South and Southeast Asia during the coronavirus disease (COVID-19) outbreak. The sustainable operations of NHS' feed mills, livestock farms, and contract farmers will ensure the stable local supply of affordable animal proteins, which will contribute to food security in the nine developing member countries (DMCs) included in the project scope. The project will also help to preserve the livelihoods of workers and smallholder farmers and will promote South-South investment and trade.

The proposed TA costs around \$400,000 as follows: (i) \$120,000 to train at least 3,600 female farmers in climate-resilient poultry farming best practices adapted to the needs of women and the local context; (ii) \$120,000 to train at least 3,600 female farmers in climate-resilient fish farming best practices adapted to the needs of women and the local context; (ii) \$160,000 to provide the same 7,200 female farmers with financial literacy training.

This TA seeks to increase the capacity and empowerment of women and incentivize their involvement in the poultry and aquaculture sector across Bangladesh and the Philippines. Delivery of the training would be a combination of classroom-based teaching as well as hands-on training, including on-farm for women farmers. ADB strongly encourages a design that promotes farmer to farmer training and knowledge sharing. Also, delivery of the trainings should be suited for participants with basic level of literacy. The bidding entities should demonstrate their experience in working with similar target groups and their approaches in working with all female groups.

International civil society organizations (CSOs), or coalitions/consortia of CSOs are specifically encouraged to apply.

For Output 1, the training will be for three full days (including preparation) and focused on teaching female farmers climate-resilient poultry farming best practices including:

- (i) work requirements for a poultry farm;
- (ii) brood management (including animal welfare);
- (iii) health management ;
- (iv) climate change and poultry farming;
- (v) preventing climate-related stress in poultry farms; and
- (vi) maintenance of farm equipment, building, and environment (including waste management).

For Output 2, the training will be for three full days (including preparation) and focused on teaching female farmers climate-resilient fish farming best practices including:

- (i) work requirements for a fish farm;
- (ii) health management;
- (iii) climate change and fish farming;
- (iv) preventing climate-related stress in fish farms;
- (v) methods for mitigating the effects of climate change-related extreme weather events; and
- (vi) maintenance of farm equipment, building, and environment.

For Output 3, the training will be for one full day (including preparation) and focused on teaching female farmers financial literacy covering farm finance and household finance including:

- (i) utilizing savings and credit;
- (ii) simple budgeting and calculating profit;
- (iii) understanding contracts; and
- (iv) banking electronically.

Participants will be farmer-members (or spouses of farmer-members¹) to which NHS sells feed or chicks. Women will be selected based on their experience with agricultural work, basic level of literacy, basic level of physical abilities, be over the age of 18 years, and be involved in poultry or fish farming. To maximize development impact for the TA, the consultant shall work with NHS's staff for selection of candidates where NHS operates.

A. Scope of Service

The firm will report to the ADB project officer through the assignment team leader and will perform the following:

- (i) Consult stakeholders to develop appropriate course curriculum including lectures and practical demonstrations for the training program;
- (ii) Prepare training manual of course materials for use in the training program;
- (iii) Network with stakeholders to enhance effectiveness of the training program;
- (iv) Evaluate effects and impact of the training program;
- (v) Prepare a report on training programs conducted; and
- (vi) Prepare TA progress reports.

1. Output 1: Train at least 3,600 women and/or households headed by women in climate-resilient poultry farming best practices

The training should cover the following key topics:

- (i) **Climate change and poultry farming**
 - Potential effects of climate change on poultry and farmers, including growth rates, feeding habits, mortality and potential impact on farm productivity and profits.
 - Real-time or predictive information to inform climate risks, including climate and weather information, digital information services, real-time monitoring of shed climate and understanding conditions that may create stress in birds.
 - Identifying climate-related stress in poultry.
 - Reacting to climate stress in poultry.
- (ii) **Preventing climate-related stress in poultry farms**
 - Affordable passive and active air or water ventilation options.
 - Litter spreading and de-caking in chicken houses.
 - Use of energy efficient bulbs
 - Use of vitamins and medicines
 - Adoption of local or climate-resilient breeds
 - Earlier bird stocking times.
 - Increased frequency of litter changing during heat stress periods.

¹ Where the customer or contract farmer is a male household member, training may be provided to a female household member where that female is responsible for or contributes to farm management.

- (iii) **Work requirements for a poultry farm;**
 - Key work requirements in setting up and operating a poultry farm.
 - Typical daily schedule over the production lifecycle, and critical stages of the lifecycle.
 - The amount of labor and the kind of skills required across the production cycle.
 - Identify various design types best suited for smallholder broiler sheds in rural Bangladesh and the Philippines based on cost considerations, availability of materials, biosecurity, animal welfare requirements and climate resilience considerations.
 - Training should cover common design mistakes and their impact on productivity.
- (iv) **Brood management (including animal welfare)**
 - Production lifecycle, critical stages during the lifecycle and key management requirements.
 - Introduce key issues around animal welfare and their impact on meat and egg quality and quantity.
 - Organize on farm demonstration for participants.
- (v) **Health management**
 - Selection of feed.
 - Key biosecurity risks, causes, impact on production, symptoms, prevention and curative measures
 - Appropriate use of antibiotics.
- (vi) **Maintenance of farm equipment, building, and environment (including waste management)**
 - Key equipment required for efficient farm management, their uses and maintenance of sheds.
 - How to effectively manage poultry waste.

2. **Output 2: Train at least 3,600 women and/or households headed by women in climate-resilient fish farming best practices**

The training should cover the following key topics:

- (i) **Climate change and fish farming**
 - Potential effects of climate change on fish and farmers, including growth rates, feeding habits, mortality and potential impact on farm productivity and profits.
 - This will include an assessment of available information sources that could predict or provide early warnings of climate-change related extreme events;
 - Real-time or predictive information to inform climate risks, including climate and weather information, digital information services, real-time monitoring of water temperatures and levels and understanding conditions that may create stress in fish.
 - Identifying climate-related stress in fish.
 - Reacting to climate stress in fish.
- (ii) **Preventing climate-related stress in fish farms**
 - Diet and nutrition management (as informed by nutritional bioenergetic models, where available, and feed availability)

- Fish genetics, and the use of climate-resilient species or, where such species are not accessible, maintaining genetic diversity to mitigate climate risks and preserve epigenetic response potential.
- Stocking times.
- (iii) **Methods for mitigating the effects of climate change-related extreme weather events**
 - Implementation of flood and storm protections.
 - Cultural diversification and localized mitigation.
- (iv) **Work requirements for a fish farm**
 - Key work requirements in setting up and operating a fish farm.
 - Typical daily schedule over the production lifecycle, and critical stages of the lifecycle.
 - The amount of labor and the kind of skills required across the production cycle.
 - Identify various design types best suited for ponds in rural Bangladesh and the Philippines based on cost considerations, availability of materials, biosecurity, animal welfare requirements and climate resilience considerations.
 - Training should cover common design mistakes and their impact on productivity and climate risk.
- (v) **Health management**
 - Selection of feed.
 - Key biosecurity risks, causes, impact on production, symptoms, prevention and curative measures.
 - Appropriate use of medicines).
- (vi) **Maintenance of farm equipment, building, and environment**
 - Key equipment required for efficient farm management, their uses and maintenance of ponds and related structures.

3. **Output 3: Train at least 7,200 women and/or households headed by women on financial literacy including personal finance training**

The training should cover the following key topics:

- (i) **Utilizing savings and credit**
 - Engage with participants to understand their sources of savings and credit and its utilization.
 - Train them on various saving options available, qualification requirements and key benefits. Process to avail them.
 - Training on available sources of credit, how to evaluate various credit options and how to use credit effectively.
- (ii) **Simple budgeting and calculating profit**
 - Train participants on calculating activity costs and profitability.
 - Provide training on how to calculate simple cash flow-based profitability and return on investment for each production cycle.
 - Provide training on how maintain simple farm records.
 - Provide templates for basic bookkeeping.
 - Engage with participants to understand how they budget their cash flows.
 - Provide training on simple budgeting techniques and how these help in planning for expenditures, cash management and credit requirements.
 - Provide simple budgeting templates.
- (iii) **Understanding contracts**

- Engage with farmers to understand if they are aware of the key terms of the contracts with NHS.
- (iv) **Banking electronically**
- Engage to understand if participants have knowledge or experience with mobile banking, if any.
 - Train participants on how to access mobile banking services, payment methods, how to ensure security of their transactions and key benefits of using mobile banking.

The above training topics would be clustered into four modules as below:

Module	Theme	Topics (Poultry Farmers)		Topics (Fish Farmers)	
A (1 day)	Poultry or Fish Farming (Classroom + onsite training)	(i)	Work requirements for a poultry farm;	(i)	Work requirements for a fish farm
		(ii)	Brood management (including animal welfare)	(ii)	Health management
B (1 day)	Poultry or Fish Farming (Classroom + onsite training)	(iii)	Health management	(v)	Climate change and fish farming
		(iv)	Climate change and poultry farming	(vi)	Preventing climate-related stress in fish farms
C (1 day)	Poultry or Fish Farming (Classroom + onsite training)	(vii)	Preventing climate-related stress in poultry farms	(ix)	Methods for mitigating the effects of climate change-related extreme weather events
		(viii)	Maintenance of farm equipment, building, and environment (including waste management)	(x)	Maintenance of farm equipment, building, and environment
D (1 day)	Financial Literacy (Classroom training)	(xi)	Utilizing savings and credit	(xv)	Utilizing savings and credit
		(xii)	Simple budgeting and calculating profit	(xvi)	Simple budgeting and calculating profit
		(xiii)	Understanding contracts	(xvii)	Understanding contracts
		(xiv)	Banking electronically	(xviii)	Banking electronically

For efficiency and ease of coordination, the proposing entities for this TA are encouraged to submit a comprehensive proposal that cover all modules outlined above. The proposing entity may form a consortium with other consultants (including with CSOs) or partner with subcontractors (which may also be CSOs) in the delivery of the training.

The selected consultant will report to the ADB project officer through the assignment team leader. Progress updates with key metrics and progress reports will be required every quarter.²

An exam will be taken at the end of the trainings by all the participants to ensure the quality of the trainings. The consultant to provide a detailed training program as part of his or her proposal to ADB. The final structure and topics to be finalized in consultation among, ADB, the consultant, and NHS.

B. Key Expertise Required

Poultry farming expert

- (i) A master's degree, or equivalent, in poultry science, agricultural economics, environmental management, or other related fields. A University degree in poultry science,

² Progress reports to include detailed updates on each of the outputs, highlighting any obstacles and contingencies. Comments on the progress reports will be provided within 2 weeks of submission.

agricultural economics, environmental management, or other related fields, combined with relevant professional experience can be considered.

- (ii) Proven experience in integrating climate change adaptive measures with smallholder poultry farmers.
- (iii) Proven experience and familiarity with poultry production in Bangladesh, the Philippines or other leading countries with developing poultry sector would be preferable.
- (iv) Prior experience with conducting training program for smallholder farmers in the poultry farming sector is a must.
- (v) Prior experience of working with women farmers is a must.
- (vi) Strong verbal and written communication skills in English; ability to communicate in the relevant local languages would be a strong asset.

Fish farming expert

- (i) A master's degree, or equivalent, in aquaculture science, agricultural economics, environmental management, or other related fields. A University degree in aquaculture science, agricultural economics, environmental management, or other related fields, combined with relevant professional experience can be considered.
- (ii) Proven experience in integrating climate change adaptive measures with smallholder fish farmers.
- (iii) Proven experience and familiarity with aquaculture production in Bangladesh, the Philippines or other leading countries with developing aquaculture sector would be preferable.
- (iv) Prior experience with conducting training program for smallholder farmers in the fish farming sector is a must.
- (v) Prior experience of working with women farmers is a must.
- (vi) Strong verbal and written communication skills in English; ability to communicate in the relevant local languages would be a strong asset.

Financial literacy expert

- (i) The business consultant will have a Masters or a PhD in the area of financial literacy.
- (ii) Be an expert with over 10 years of experience in the field of financial literacy in the developing world.
- (iii) Experience and good understanding of agricultural economics is a must.
- (iv) Prior experience in organizing trainings for women.
- (vii) Strong verbal and written communication skills in English; ability to communicate in the relevant local languages would be a strong asset.

In addition to the above, the proposing entities should also include in their technical proposal a personnel work plan and in their financial proposal, all key experts and other “non-key experts” required in accordance with their proposed approach and methodology. All experts engaged under the contract, whether key or non-key experts, must be citizens of one of the ADB eligible countries.

C. Preparation of Proposal

Proposing consulting firms have the flexibility to structure and organize the TA team involved in the implementation of the proposed technical assistance, and determine the number and nature of any additional team members required to deliver the objectives and outputs.

Proposing consulting firms are requested to prepare a detailed description for the professional backgrounds of the experts who shall be the key trainers of the training sessions and share sample presentations of previous training the experts have conducted.

Proposing consulting firms are required to designate one team leader responsible for the overall delivery of the technical assistance project, including managing staff, conducting an impact assessment, and advising and reporting to NHS management and ADB. Detailed qualification requirements for the team leader will be provided separately. All experts to be engaged under the contract, whether key or non-key, must be citizens of an eligible ADB member country.

The contract will be awarded on a lumpsum, output-based contract, to be determined after review of the proposals and proposed deliverable timeframe.

Only one curriculum vitae (CV) must be submitted for each key and non-key expert included in the proposal. Only the CVs of key experts will be scored as part of the technical evaluation of proposals. The CVs of non-key experts will not be scored, however ADB will review and individually approve or reject each CV for each non-key expert position in the proposal.

All positions under the contract, both key and non-key experts, must be included and budgeted for in the financial proposal in accordance with the person-month allocation required for each as defined by the proposing organization.

D. Terms of the assignment

The duration of the assignment is up to 36 months from the start date for Outputs 1, 2 and 3. The assignment of experts is intermittent in nature. The terms may be modified to reflect consultations between the parties involved in the assignment or to incorporate additional requirements identified during implementation. It is expected that the terms will be finalized during contract negotiations with a first-ranked firm.

E. Payment schedule

The proposed payment schedule is shown in the table below.

Payment milestone	Week	Percent	Amount (USD)
Upon Contract Signing	0	15%	60,000
Approval of workshop report 1, which should include proposed (i) agreed selection criteria for participants; (ii) detailed training course curriculum and (iii) draft training manual of course materials, following consultation with stakeholders (20% completion of outputs 1-3)	30	17%	68,000
Approval of progress report 2 (40% completion of outputs 1-3)	60	17%	68,000
Approval of progress report 3 (60% completion of outputs 1-3)	90	17%	68,000
Approval of progress report 4, which should include results from exams taken by participants at the end of the trainings and an assessment of program impact (80% completion of outputs 1-3)	120	17%	68,000
Approval of completion report	156	17%	68,000
<i>Total</i>			<i>400,000</i>