BANGLADESH AGRICULTURAL UNIVERSITY, MYMENSINGH

Project Title: Climate-resilient aquatic food systems for healthy lives of young women and girls in Bangladesh (AQUAFOOD) funded by DANIDA

Call for Applications

2 PhD Scholarships Available under Work Package 2 (WP2)

The AQUAFOOD project is inviting applications for a total of 4 PhD scholarships. Two scholarships under WP2 details can be found on the website of Bangladesh Agricultural University (https://bau.edu.bd), while the remaining two scholarships details are available under other WPs on the webpage of Noakhali Science and Technology University (https://nstu.edu.bd).

PhD scholarship # 1

Environmental consequences of climate change using Life cycle Assessment (LCA) of aquatic food harvesting and consumption, with a focus on livelihoods, nutrition and health

Background: Aquatic foods play a vital role in both the diets and economy of Bangladesh, for export markets as well as for domestic consumption and local markets. Bangladesh faces significant challenges due to climate change, particularly impacting coastal aquaculture farming communities. Bangladesh struggles with effective risk management of climate change. In response to these challenges, the AQUAFOOD project is aiming to generate new knowledge about the connections between aquatic food systems, aquatic food consumption and human health, particularly in the context of climate change.

This PhD research project will advance our understanding of environmental impacts of the export-driven aquaculture production in context of human livelihoods, nutrition and health by the application of Life Cycle Assessment (LCA).
The main research activities for the PhD project include the following areas:

- Together with the project team, design and implement a 12-month high-resolution survey with a sampling scheme designed to evaluate the associations between aquatic environment and supply chains on socio-economic aspects of the dependent households, including aquatic food consumption and health and nutrition with focus on young women and girls, and the perception to climate change and climate-mitigating practices.
- Examining the environmental consequences of aquaculture systems across the entire production chain, from feed to farms to consumer plate (encompassing input markets, fish markets, etc.), using Life Cycle Assessment (LCA) technique.
- The LCA survey results will be mapped across the region by superimposing on GIS distributions developed in other project PhDs to compare environmental impacts, nutritional consumption and health outcomes as well as production efficiency related to climate change resilience.
- Data will be sourced from primary survey data from the aquaculture value chains, household and market surveys and data sources shared from other project PhD research activities, in combination with secondary data.
- The LCA will be conducted taking into account socio-economic, environmental and nutritional outcomes such as protein and other key nutrients.

- The LCA will support the identification and understanding of bottlenecks, both for the impacts on and adoptions to climate change, in current and future scenarios.

The PhD study will be co-supervised by Dr. Mohammad Mahfujul Haque, Dr. M. A. Salam, from BAU; Dr. Nanna Roos from University Copenhagen, Denmark; Dr. Richard Newton, Dr. David Little from the University of Stirling, UK; Dr. Baukje de Roos from University of Aberdeen, UK.
The PhD will cover up to two travels for a total stay of Minimum 6 months study stay with the European project partner universities for supervision and collaborative research activity.

Essential qualifications:
Applicant must have a master degree with good CGPA in any department of fisheries discipline to be eligible for application. The candidate is expected to be flexible in collaborating with the project team and other PhD students in the AQUAFOOD project, and adapt research approaches for mutual benefits and project coherence. Experience with field or experimental research work; strong data analysis skills.

Desirable experience and skills:
Experience with field or experimental research work; strong data analysis skills; authorships of scientific publications; experienced in working in teams of the field context.
All PhD students (from other work packages) in the AQUAFOOD project will be involved in collaboratively designing the studies, collecting field data and in gathering and sharing the data.

PhD scholarship # 2

Spatial analysis using Geographic Information System GIS of livelihoods and domestic aquatic food supply in export-oriented aquaculture systems in Bangladesh in context of climate change

Background: Aquatic foods play a vital role in both the diets and economy of Bangladesh. Aquaculture production systems targeted for export markets are also crucial to supply for domestic consumption and local markets. The high complexity of the coastal zone and the prevailing production systems located there are based on relative positions to tidal rivers and coastal ecosystems. However, Bangladesh faces significant challenges due to climate change, particularly impacting coastal aquaculture farming communities. This vulnerability leads to food insecurity and risk of malnutrition, particularly in vulnerable groups such as young women and girls. In response to these challenges, the AQUAFOOD project is aiming to generate new knowledge about the connections between export-driven aquatic food systems and human health across Bangladesh's coast-to-inland ecosystems, particularly in the context of climate change.

This PhD research project aims to enhance our understanding on the impacts of climate change and climate resilience of coastal export-oriented aquaculture systems through novel approaches to high-resolution monitoring of the dynamics of aquaculture food system.

The main research activities for the PhD project include the following areas:

- This research will take into account the impact of seasonality and climate resilience issues in term of food production and consumption.
- Together with the project team, design and implement a 12-month high-resolution survey with a sampling scheme designed to evaluate the associations between aquatic environment and supply chains on socio-economic aspects of the dependent households, including aquatic food consumption and health and nutrition with focus on young women and girls, and the perception to climate change and climate-mitigating practices.
- Geographic Information System (GIS software ArcGIS) will be used for building interactive maps of the spatial distribution of aquaculture farms and livelihoods of co-located households, including information on fish consumption health, and environmental impact sourced from other sub-studies of the AQUAFOOD project.
- The survey sampling will tentatively cover a total of 800-1000 household, using a combination of enumerator and self-reported data collection.
- Contribution to farm level surveys to understand the resilience of aquaculture systems to climate change across the sample area, including factors like salinity, water availability, temperature, storm events and others.
- Data of interest is aquatic production; management practices; sourcing to export and domestic markets; financial flows; sources for domestic aquatic food consumption (species level, wild and cultured); environmental factors such as water level, salinity, and temperature; farming activities of household members, with a focus on women and girls.

The PhD study will be co-supervised by Dr. M. A. Salam, Dr. and Mohammad Mahfujul Haque from BAU; Dr. Nanna Roos from University Copenhagen, Denmark; Dr. David Little and Dr. Richard Newton from the University of Stirling, UK; and Dr. Baukje de Roos from University of Aberdeen, UK.
The PhD will cover up to two travels for a total stay of Minimum 6 months study stay with the European project partner universities for supervision and collaborative research activity.

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Desirable experience and skills:
Experience with field or experimental research work; strong data analysis skills; authorships of scientific publications; experienced in working in teams of the field context.
All PhD students (from other work packages) in the AQUAFOOD project will be involved in collaboratively designing the studies, collecting field data and in gathering and sharing the data.

PhD Application Form

Applications must be received no later than **23 May 2024**

Please read the instructions carefully before completing this application form. Only complete and signed application forms will be processed. The application must be sent per email to mmhaque.aq@bau.edu.bd (Prof. Dr. Mohammad Mahfujul Haque, BAU). The application email should have two pdf-format attachments; (1) the completed and signed application form in pdf-format and (2) all other supporting documents (see checklist under "Part F") compiled into one pdf-file.

Introduction
This application form is for use for applications for PhD scholarships that are part of the research project "Climate-resilient aquatic food systems for healthy lives of young women and girls in Bangladesh (AQUAFOOD)" funded by DANIDA. Each scholarship is three and half years full time with start around 1st July 2024. Enrolment will be at Bangladesh Agricultural University, the Faculty of Fisheries.

Who can apply?
Only nationals of Bangladesh can apply. An MS (Masters) degree in the field of fisheries science must have been completed at the time of application in Bangladesh or abroad.

This application form consists of the following nine parts

- Part A Personal Details
- Part B Doctoral Study Synopsis
- Part C Academic Qualifications & experiences
- Part D Brief Curriculum Vitae that includes the list of publications
- Part E References
- Part F Checklist
- Part G Other Information
- Part H Declaration and Signature

How to complete this application form?

- Please write in the indicated boxes. Respect all word limits
- All personal information should correspond with your certificates/passport, e.g. spelling of names
- All documents must either be originals or be certified copies
- Ensure that you complete the checklist, print out the form and sign the declaration on the last page
- All documents should be submitted in the same e-mail
- We recommend keeping photocopies of your application
- Do not include this front page when you submit your application
- Read the "Guidelines to completing the application form"
- Applications can only be submitted electronically

Please return this form and enclosures to this email address:

mmhaque.aq@bau.edu.bd (Prof. Dr. Mohammad Mahfujul Haque, BAU).

APPLICATION FORM

Part A Personal Details
Note – according to passport/official documents. Always supply two email addresses that you use.

First name(s)	
Family name	
Date of birth (dd/mm/yy)	
Nationality	
Sex (M, F)	
Residence address	
E-mail address	
Alternative E-mail address	

Part B Doctoral Study Synopsis (Max 1500 words excl. references, see Guidelines)

The number and working title below must correspond to those found in the call for applications. Attach the doctoral study synopsis as a separate document and name it "yourfirstname_yoursurname_synopsis.pdf", e.g. "Godwill_Segesela_synopsis.pdf"

Related to the announced research topic (number and title):

Part C Academic Qualifications & Experience

i. Academic Qualifications

Name of degree	**University/ Broad**	**Field**	**Class/division/ position**	**Year**
B.Sc. (Honors)				
M.S./MSc				

ii. Research/Job Experience:

Position	**Type of activities**	**Name of Institute/Organization**	**Duration of experience**

All applicants must include **certified copies of official transcripts**. Documents not in English should be accompanied by an official certified translation. Do NOT enclose high school or BSc/BA level transcripts. You must also **enclose an official explanation of the grading system**.

Part D Brief Curriculum Vitae (Education; study relevant employment only; list all your publications)

Part E References

Please list the two academics you have asked to write a letter of recommendation for you. The letters are to be printed on letterhead and signed. We welcome references providing relevant information that cannot be found elsewhere in the application materials, and that contribute to understanding the applicant's abilities and suitability for doctoral studies.

Referees should directly email their recommendation in pdf version to mmhaque.aq@bau.edu.bd (Prof. Dr. Mohammad Mahfujul Haque, BAU) **indicating name of the applicant.**

First referee

Name	
Title	
Organization	
Telephone	
E-mail address	

Second referee

Name	
Title	
Organization	
Telephone	
E-mail address	

Part F Checklist
I have included the following documents in one pdf file with my application:

☐	Certified copy of second university degree (MSc)
☐	Certified English translation of transcripts, if necessary
☐	Official explanation of grading system
☐	Doctoral study synopsis
☐	Clear copy of passport

Please explain if you did not provide the required information with this application.

Part G Other information

Equal opportunities
The project applies a policy of equal opportunities for people with special needs. Do you have any physical disability?

Yes:	No:	If yes, please specify
☐	☐	

Criminal record
Are you currently under any criminal charges? Yes:

No:		
☐	☐	If yes, please specify

Part H Declaration & Signature

I declare that the information provided by me is correct and complete. I understand that incomplete information will delay the application process and I accept that incorrect information will render the application invalid.

I declare that I have not previously received a PhD fellowship for doctoral education.

Date (dd/mm/yy)	
City, Country	
Name of applicant	
Signature	

NOTE: This application, inclusive of attachments, will only be used for assessment purposes. Personal data is collected and used in accordance with Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on "the protection of individuals with regard to the processing of personal data and on the free movement of such data".

Submitted material will not be returned.

Guidelines to complete the PhD Application Form

These guidelines provide directions on how to complete the PhD Application Form. They do not provide detailed comments on each part of the application form; these are seen as self- explanatory. Instead the guidelines explain how applications are assessed and thus what you should pay particular attention to when completing your application.

How are applications assessed?
First, applications are screened for eligibility. You should make sure that your application is complete – pay particular attention to the items mentioned in Part F (Checklist) of the application form.

Eligible applications are then evaluated by the Assessment Committee consisting of a number of senior scholars. The evaluation categories are:

- Academic performance as indicated by (i) Honors and Masters degree with good CGPA; and (ii) documented research achievements, e.g. publications in journals with peer review or other indicators of intellectual potential (Scopus indexed articles), e.g. relevant working experience in (international) organizations with very competitive selection processes (iii) Laboratory/field research experience (40%).

- Research synopsis that closely relates to one of the research topics announced by the "Climate-resilient aquatic food systems for healthy lives of young women and girls in Bangladesh (AQUAFOOD)" project and demonstrates insight and interest in the subject (40%).

- Recommendations from the two academic references (20%).

Each of the three categories is given a score from 1 (poor) to 5 (excellent); eligible applicants must not score 3 or lower in any category. All short-listed applicants must score at least 4 (very good) for their submitted research synopsis. The three categories are weighted 40%,
40% and 20%. Overall average score is used to rank all applicants.

Full applications are due on **23 May 2024**. The best applicants will be short-listed around **30 May 2024.** The short-listed applicants with full research proposal will be invited for presentation on 14-15 June **2024**. We expect to offer contracts to around one-third of the short-listed applicants. The scholarships will commence on **1st July 2024** or soon after.

What should I pay particular attention to when preparing my application?
The evaluation criteria focus on your academic potential. Here is what we are looking for:

- *Convincing research synopsis*

Your doctoral study synopsis should be closely aligned with one of the announced research topics, is mandatory. Even though you have limited space, only 1500 words (excluding references), your synopsis should (i) be complete, i.e. include sufficient information to allow an evaluation, (ii) show that you have a good overview and understanding of the relevant literature and the key issues in the research topic field, (iii) contain research questions that you plan to answer, (iv) convince the Assessors that your choice of methods is sound, and (v) that you will be able to undertake the study, i.e. that you have the competences and a realistic work plan. End the synopsis by providing the word count (excluding references).

- *Convincing written work*

Make sure that any published work is clearly presented in your CV, in particular any peer- reviewed international journal article (Scopus indexed). Also make sure that you list any theses, book chapters, etc.

- *Two strong recommendation letters*

Letters of recommendation are assessed for additional evidence of your academic achievements, interests, and personal motivation. The Assessment Committee will take into account the academic experience of the referee, as a scholar and as a supervisor of successful doctoral candidates. You should therefore strive to get letters of recommendations from strong academics.

- *Brief Curriculum Vitae*

This should show your high level of academic achievement and/or relevant non-academic experiences. Include a complete list of your publications.

- *Feed-back*

Make your peers and, if at all possible, other experienced people read and comment on your research synopsis before you submit it. Use feed-back to revise and improve the synopsis.

- *Consult research proposal writing guidelines*

There are many good guides to how to write a convincing research proposal. Read some of these to get additional tips and inspiration on how to improve your proposal.

- *Format requirements*

Remember that you are only allowed to submit your application as one email with two attached PhD-documents; (1) the completed and signed application form in pdf-format and (2) all other supporting documents (see checklist under 'Part F' in the "PhD Application Form") compiled into one pdf-file.

Guidelines for short-listed candidates

Short-listed applicants must develop a full research project description. This note describes how this should be done and when. There are some steps that may overlap in time: (i) development of the full research project description, (ii) submission of the final full project description, and (iii) discussion of the submitted description at personal interview.

Step 1: Development of the full research project description

You are responsible for the development of a draft project description, i.e. the next version of the research synopsis you submitted with your original application. The draft project description must contain information on:

1. Working title
2. Project background and justification
3. Objectives
4. Research questions
5. Methods
6. Risks and ethics of proposed research
7. Expected outcomes and time schedule (use Gantt chart)
8. List of references

You may find it useful to re-read the "Guidelines for completing the application form". Note that the final project description must contain no more than 3,000 words (exclusive of item 8). Specify the number of words used at the end of the project description. Do not exceed the word limit.

The applicant is responsible for submitting the full project description via email attachments to mmhaque.aq@bau.edu.bd (Prof. Dr. Mohammad Mahfujul Haque, BAU) must not be larger than 12MB in total.

Step 2: Discussion of draft research project description at personal interview

All short-listed applicants, whose full applications are submitted by the deadline, will present their full research project proposal before an assessment committee, consisting of senior university faculty both from the Bangladesh Agricultural University and University of Copenhagen. Each applicant must prepare an oral project presentation lasting no more than 15 minutes. It should start by giving a brief introduction to the interviewee.

Interviews will take place in person or virtually, exact time and place will be announced in due time before the interview.