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## DOCKSIDE Mobility Report

International Mobility at the University of Southern Denmark, Denmark

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**Theme of research:** Fish consumption patterns in the rice field around  
the Tonle Sap region, Cambodia

**Period:** 01<sup>st</sup> March-30<sup>th</sup> May 2019

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## **Acknowledgement**

The three-months mobility was financially supported by the DOctoral program in Khmer universities Strengthening the International Development of Environmental and maritime research (DOCKSIDE), is a capacity-building project co-funded by the Erasmus + Program of the European Union in order to develop the educational quality on researching capacity in Cambodian Higher Education Institutions.

Website: <http://www.dockside-kh.eu/>

I have been provided with the three-months mobility to conduct a scientific research entitled “Fish consumption patterns in the rice field around the Tonle Sap region, Cambodia” at the University of Southern Denmark, Denmark, with guidance from Dr Ratha Seng (UBB), Dr Bunyeth Chan (UBB), Prof. Dewan Ahsan (SDU) and Dr Sarah Freed (WorldFish Center).

In this occasion, I would like to express my sincere thanks to the DOCKSIDE Project and the Erasmus+ programme of the European Union for providing me with the three-months mobility. In addition, I would also like to thank Prof. Thomas Vallée, coordinator of the DOCKSIDE Project, for this gorgeous opportunity in Denmark to develop my research proposal and applies it to my research for MSc. thesis and develop myself to be a professional and reinforce my capacity on the educational program. Moreover, I am grateful to Dr Ratha Seng, Dr Bunyeth Chan, Prof. Dewan Ahsan, Dr Sarah Freed, Prof. Niels Vestergaard, Prof. Lars Ravn-Jensen and the MERE team for their scientific guidance, helpfulness, encouragement and advice on my research thesis. Additionally, Thanks to Ms Ria Deniska, the DOCKSIDE project manager and Mr Sovanna Seav, a project coordinator for the University of Battambang for their assistance in the financial proceeding, administration and documents.

### **I. Proposed Purpose and Activities**

The three-months staff mobility at University of Southern Denmark, Denmark from 01 March to 30 May 2019. The research was expected to work with Dr Ratha Seng, Dr Bunyeth Chan, Prof. Dewan Ahsan, Dr Sarah Freed. The research project focuses on Fish consumption patterns in the rice field around the Tonle Sap region, Cambodia. This study aims to investigate sustainable consumption pattern in the RFF around Tonle Sap region. Here, we determine the typologies, socioeconomic characteristics, and environmental benefits and investigate the consumption pattern and the regional difference around the Tonle Sap region. Furthermore, we investigate the factors determining the fish consumption patterns of households in the rice field around the Tonle Sap region. So that in the study contribute to improve the effectiveness of sustainable development intervention through the better understanding

of fish consumption behaviour and rates and support the decision making as well as initiate the policies for development.

During the mobility, multivariate, i.e., principal component analysis (PCA), analysis of similarity (ANOSIM) and similarity percentage (SIMPER) analysis will be explored to compare results. Then predictive model, i.e., regression trees (CART), Generalized Linear Models (GLM), in R would be explored to have comparable results.

## **II. Activities During the Mobility Period**

The first meeting on 28 March 2019 was conducted with the presence of Prof. Dewan Ahsan at meeting room E4 of the Department of Sociology, Environmental and Business Economics, Denmark. The aim of the first meeting was to discuss and finalize research objectives, data analysis and work plan.

Agreed research objectives are:

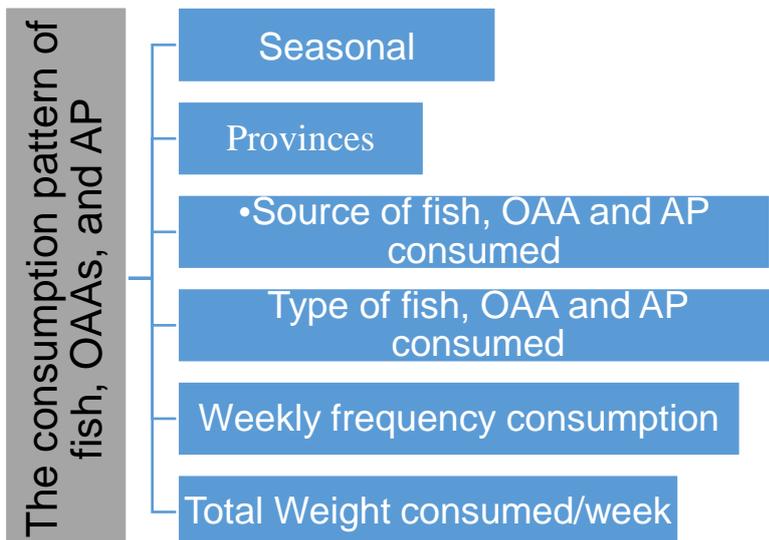
- To determine the typologies and resources from the environmental
- To investigate the consumption pattern of fish, other aquatic animals (OAAs), and aquatic plants
- To investigate the factors determining the fish consumption patterns of households in the rice the field around the Tonle Sap region.

➤ Selection of variables for the specific objectives:

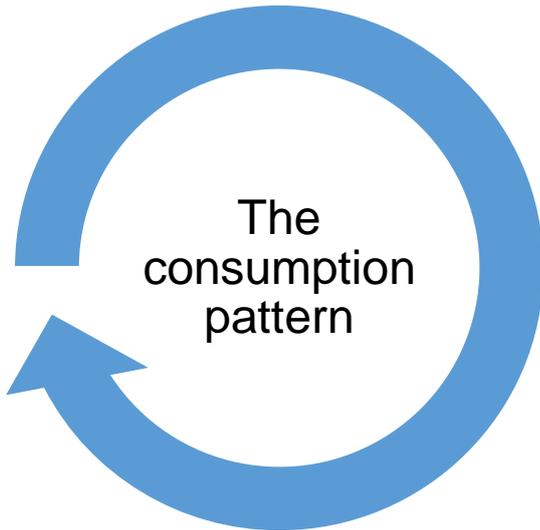
- Table 1 of the variables objective 1

Characteristics of RFF	Variables
	Gender
	Age
	Households occupations
	Household member
	Resources from RFF
	Classification Zone
	Name of species
	Zone (habitats) of fishing
	Days of fishing
	Time of fishing
	Gears of fishing
	Fish Prices

- Table 2 of the variables objective 2

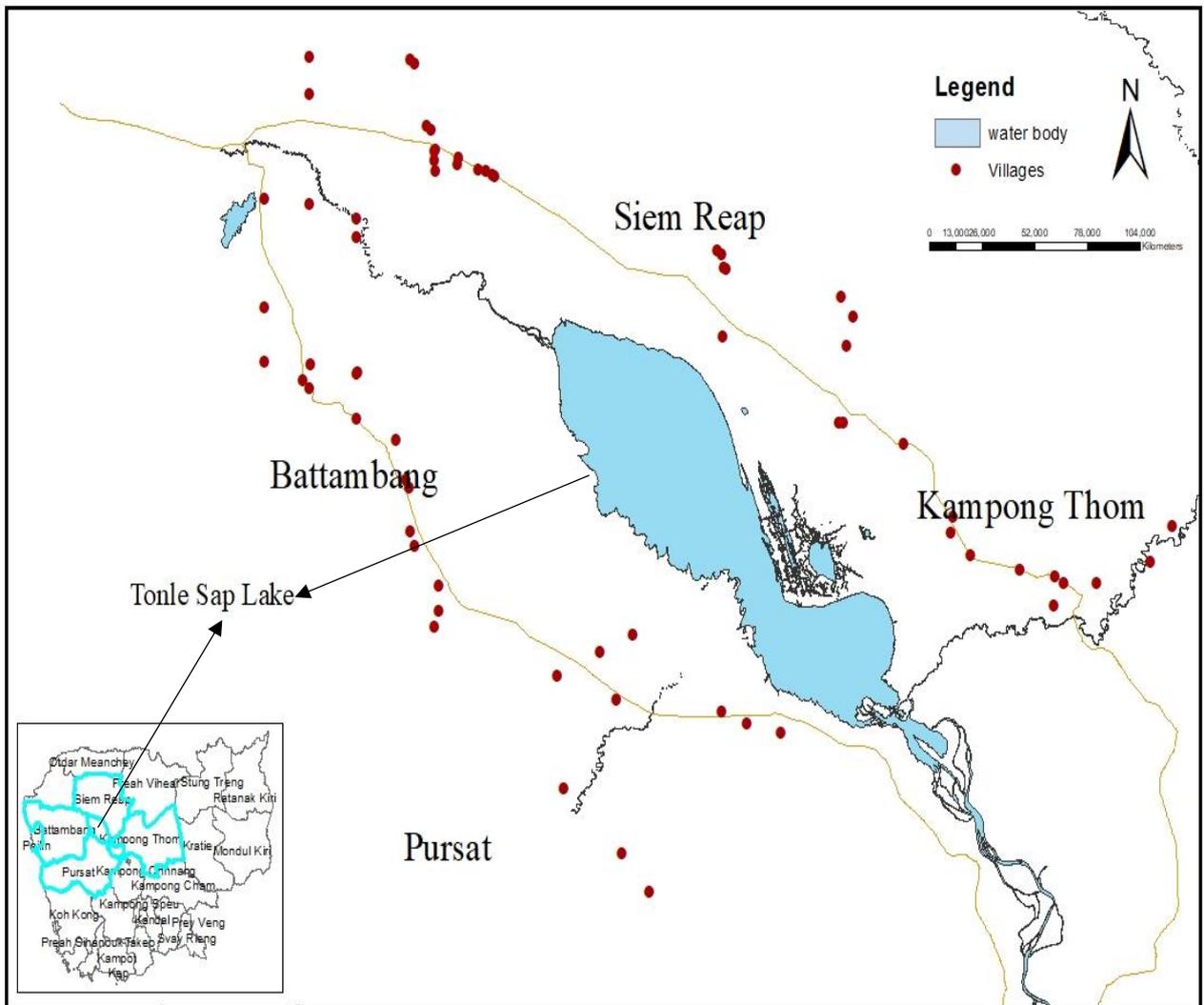


- Table 3 of the variables objective 3



- Occupations
- Age
- Gender
- Education
- Head HH
- HH member
- Income
- Price of fish (Riel/Kg)
- Distance from HH to TLS, Market, village and the provincial capital

➤ Study areas were also discussed (Fig 1)



**Fig 1** Map showing the sampling sites in the rice field communities around the Tonle

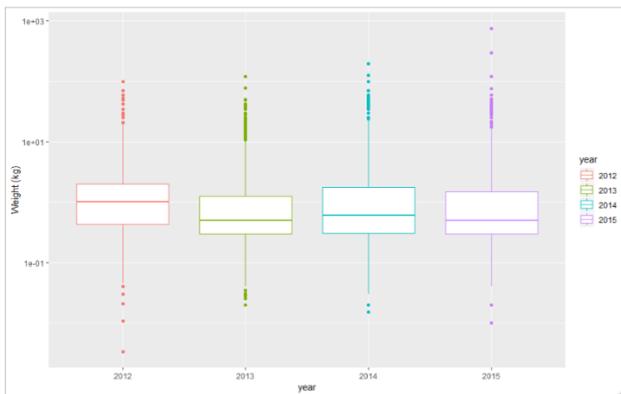
The second meeting on 26th April 2019, I was given one more time to present to the MERE group in the SDU to develop my objectives and methodologies. They have given me valuable advice, consultation and constructive comments which enabled me to broaden my understanding of the subject, and the problem in gathering ideas toward the complete organization of the research. Furthermore, After I discussed with Dr Seng Ratha, Dr Bunyeth Chan and Prof. Lars. Ravn-Jonsen who is an expertise in the R program analyze, I have been given the R-package and R-scripts to treat the data. The MERE group claimed that my research methodology and statistical analysis proposed is clear primarily and is known how to get better scientifically results in the thesis.

Besides the academic, the Danes is the very kind, helpful and warm heart and I set up the academic network in the SDU especially the MERE group.

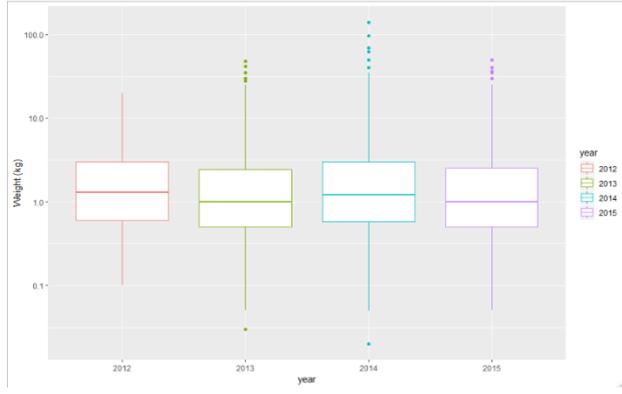


➤ Preliminary results were produced as shown in Figs at below:

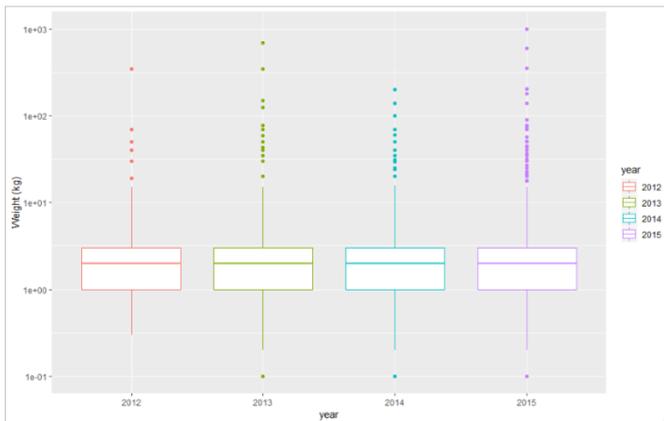
(a) Fish



(b) Others Aquatic Animal

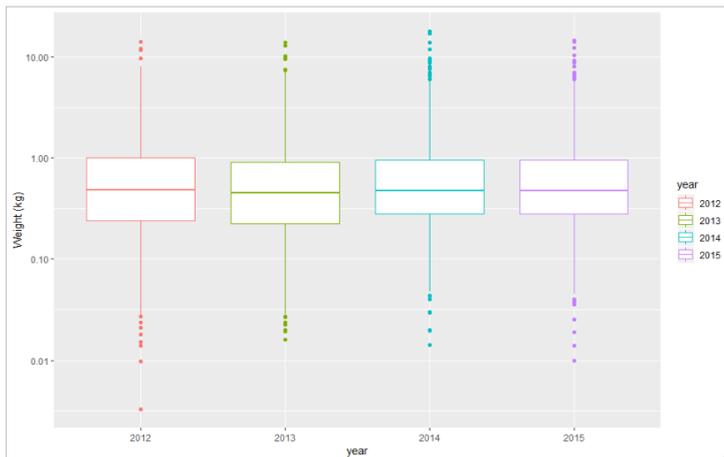


(b) Aquatic Plant

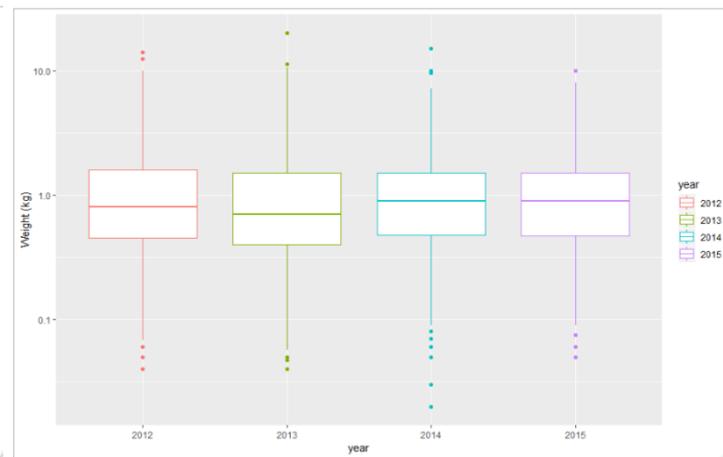


**Fig 2** Boxplot of the weight of Fish, Others Aquatic Animal and Aquatic Plant catches from 2012 to 2015.

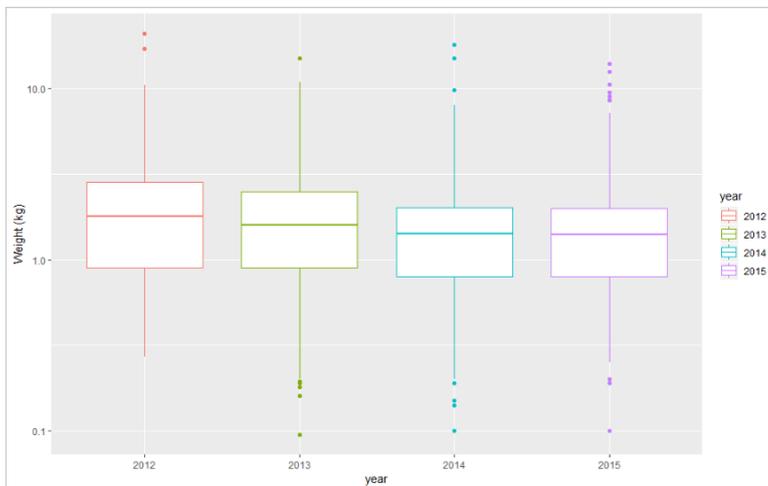
(a) Fish



(b) Others Aquatic Animal



(c) Aquatic Plant



**Fig 3** Boxplot of the weight of Fish, Others Aquatic Animal and Aquatic Plant consumed from 2012 to 2015.

### III. Challenges and Opportunities

Denmark is one of the world most happiness and highest income as well as the highest consumption expenditure in Scandinavian countries. Some places are really quiet and peaceful and environmental. The people are really independent and highest education Everything should be well-prepared including accommodation, cultural adaptation, language, food weather, budget and so on.

I have also met some challenges and difficulties as shown below:

- The budget received from Dockside was very limited, so I was willing to allocate some of my personal budgets to support the consumption and another basis of expense during the stay because Denmark was the best countries to have highest CPI and living standard.
- The transportation cost was also high price, walking was the better way to save up.
- Exchange rate fee also charged so much.

Furthermore, I have taken over and managed over, the benefit and opportunity I have obtained from my international mobility were much precious and priceless than expectation ever.

- Visited the interesting place in Denmark
- Understood the culture and lifestyle
- Networked with the other professors
- Enjoyed good living and delicious food
- Received special advice and idea and comment from my co-supervisors and professors
- Learned new things from SDU to improve the background of study and research

#### **IV. Further actions**

I am working on data analyses and I will be finishing the first result in July 2019. Later, I will be sending the first draft of the manuscript to Prof. Ahsan. Then, I will be giving a presentation about the scientific results in the International Symposium for Biodiversity Conservation and Sustainable use of Biodiversity and Ecosystems (ISBC-SBE) in Siem Reap Province on 12-14 September 2019.

**Lita MOM, BSc.**

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