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Deliverable D7.11

Report on the success of in-country workshop

29/11/2021



Executive Summary

The FarFish in-country short course (Task 7.6) was delivered as a hybrid online/in person workshop September 29th-October 1st 2021. The course was broken into two sections, commencing with an open seminar on Data Limited Methods, and followed by a closed workshop on the use of the FarFish DLM Tool. A total of 50 participants attended the open seminar, and nine (9) attendees took part in the closed workshop that followed. The timing of the course, delivery methods, and target audience were modified in response to the COVID-19 pandemic.

The scope and topic for the course were selected based upon the Training Needs Assessments (TNAs) carried out the first year of the project, in combination with other meetings and discussions with project partners. It was determined through those dialogues that the course would be most beneficial and useful to a wider variety of stakeholders and partners if it were offered as a regional course, rather than an in-country course targeting only one country. It was determined through the TNAs and subsequent conversations with case study partners that the concept of data limited methods for stock assessment, and more specifically, the Data Limited Methods (DLM) Tool developed through the FarFish project would be the most useful topic for the course.

The course was originally intended to be held in Mindelo, Cabo Verde in April 2020, and was to be regional in focus, with participants nominated by their institutions. The FarFish case study partners were the original intended audience for this course, with participants hailing from the FarFish case study partner institutions, namely INDAP/IMar in Cabo Verde, ISRA/CRODT in Senegal, IMROP in Mauritania, and SFA in Seychelles.

When it became clear that travel limitations due to the COVID-19 pandemic would make an in-person regional course impossible, a new solution was developed in which a hybrid online/in-person model could be used. As it is very difficult to remotely deliver the one-on-one attention required to support learning in the workshop to practice the DLM tool, the course was broken into two sections; one open to the public providing a general overview of Data Limited Methods, and how they can be useful in stock assessment, and the second a closed, intensive workshop for fellows of the GRÓ-FTP studying stock assessment as well as scientists from the case study countries who were interested to attend, albeit remotely. The course was delivered from GRÓ-FTP's home institution, the Marine and Freshwater Research Institute in Iceland.

The seminar part of the DLM course was held on the morning of September 29, 2021, and was open to participants who registered online beforehand, as well as those attending in person through the GRÓ-FTP six-month programme. In total, 30 people were onsite for the seminar, and 20 joined via teams. The seminar began with an introduction to another EU Horizon 2020-funded research project, EuroSea, in which the use of remote sensing via the Copernicus system was described. The seminar then included a combination of lectures and activities related to the theoretical development of data limited methods, and how they have evolved over time.

The closed part of the workshop was attended by nine (9) individuals, from eight (8) countries. Notably, these include representatives from all the original target audience of FarFish case study institutions, including Senegal, Mauritania, Cabo Verde, and Seychelles, with the addition of GRÓ-FTP stock assessment fellows, hailing from Indonesia, Papua New Guinea, Sierra Leone, and El Salvador as well. Participants from Seychelles and Cabo Verde joined the workshop online, and the others were onsite. The course was taught by Margarita Rincon (IEO, Spain) and Kamarel Ba (ISRA/CRODT, Senegal).



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1 Introduction

Within the FarFish project, the GRÓ-FTP leads the work package (WP7) on Capacity Building and Dissemination of the wider project. In this function, there are several training activities for which the responsibility for implementation falls directly to GRÓ-FTP, with support from other partners. GRÓ-FTP is committed to funding 5 fellows in its 6-month course in Iceland connected with FarFish, as well as conducting one in-country short course during the project. All training activities are based upon a Training Needs Assessment (TNAs), conducted by GRÓ-FTP in the first year of the project.

TNAs were carried out in four case study partner institutions, namely SFA in Seychelles, INDP in Cabo Verde, ISRA/CRODT in Senegal, and IMROP in Mauritania. The primary aim of these assessments was to establish the mandate of the partner institution, analyse the capacity for fulfilling that mandate, and determine mutually agreed upon priority areas for training of staff that may be suitable for the FarFish capacity building work. Results from these assessments are published in the TNA deliverable, which has been accepted.

In the FarFish project, the overall objective of Work Package 7 relates to Specific Objective 7, which is to provide education, training and dissemination to stakeholders within the value chains of EU fisheries in international and SFPA waters, and to improve their professional skills and regional networks.

The task outlined in this concept note is specifically outlined in the Description of Action as follows:

Task 7.6 In-country workshop: Building on mutual agreement on which areas to be of focus, through training needs assessments and the CS work produced by those who participate in the six-month FTP training programme in Iceland, a workshop will be developed and held in a selected partner country. The target audience and topics of this course will depend on the specific needs identified through preliminary work. The workshop will be approximately 5-10 days and will involve participants and contributions from local fisheries education and training institutions to ensure sustained positive impact of country-specific educational material creation.

As highlighted in the wording of Task 7.6, the in-country short course was developed based upon the needs identified in the Training Needs Assessment, while building upon the work developed by other partners in the FarFish project. In this way, the in-country short course became both a tool for capacity building in the FarFish case study countries, a reinforcement of the project's ongoing capacity building initiatives, and as a tool for systematic dissemination of results of the FarFish project for stakeholders in case study countries.

2 Topic Selection

Early on, it was determined that the in-country short course should be regional rather than focusing on only one case study or area. The intention in taking a regional approach was to spread the benefit to multiple case study countries, as opposed to selecting just one. It is often the case that educational materials targeting one partner would be useful and applicable to others as well. As such, the original intention to develop “country-specific” educational materials, as was worded in the task description in the DOA, was abandoned in favour of developing materials that could benefit all case study partner organisations. In this way, the in-country short course is both a tool for capacity building in FarFish case study countries, as a reinforcement of our ongoing capacity building initiatives, and as a tool for systematic dissemination of results of the FarFish project for stakeholders in case study countries.

Based on the TNAs, and subsequent meetings with Case Study leaders and other FarFish partners, it was determined during the second year of the project that the most useful topic for all involved would be to focus on training scientists working the case study institutions on the use of a Data Limited Methods Tool developed by the FarFish project. In all case studies, the TNAs identified competencies in stock assessment methodologies as an area for capacity building interventions to play a role. Moreover, all case studies struggle with limited data on the status of stocks in their territorial waters. In many instances, data is available, but is not in a time series long enough to apply sophisticated stock assessment models, or pieces of data critical to use these methods is missing. That being the case, there are still some methods which can be applied to gain valuable insights into the dynamics and status of some stocks. This is why the DLM Tool was developed, and why it was considered useful and applicable to all the case studies in FarFish.

The DLM Tool was built from existing methodologies for stock assessment where data availability is limited. Underlying this is the theory that even with limited data, some crude stock assessment methodologies can still be applied, and can still be useful. These methodologies all have trade-offs. The DLM Tool created by FarFish is a system which allows the user to input any data that exists and see which data limited methods may be used to analyse that data, what the limitations of the methods are, and what data might be useful to collect in the future for more robust analysis.

3 Original course plan

This task was significantly impacted by the COVID-19 pandemic. In the original plan, 5 participants were nominated each from ISRA/CRODT, IMROP, IMar, and 2 from SFA to participate in the in-country DLM course. It was intended that the course participants would bring datasets from their home institutions to use when learning about the DLM tool, in this way, the course could be useful to not only build the capacity of the individual participants, but would benefit their organisations as well, with new knowledge and insights through the DLM analysis that could be useful in an applied manner.

The DLM course was originally planned to take place in April 2020 in Mindelo, Cabo Verde, hosted by the INDP/IMar. It was intended to have a regional in focus, with participants from CRODT in Senegal and IMROP in Mauritania, and SFA in Seychelles. A preparatory workshop was held in Iceland in February 2020 hosted by the GRÓ-FTP. The course materials were prepared during this workshop, through collaboration between a FarFish representative from the Spanish CSIC Margarita Rincon, who developed the DLM tool, and a GRÓ-FTP fellow from CRODT in Senegal, Kamarel Ba, who participated in the 6-month course in Iceland through the FarFish cooperation. These two experts created the course materials and were selected to be the primary instructors.

In the spring of 2020, when it became clear that a delay in the course was unavoidable, alternative modalities of delivery were explored amongst the team, including the GRÓ-FTP, course teachers, and case study participants. The first option discussed was the scenario in which the course could be held virtually. Given the difficulties with internet connectivity in the case study countries, it was decided that this avenue should be used only as a last resort, if no other solutions were available. Some of the participant who had planned to attend the course indicated that it would not be possible for them to attend an online workshop. For this reason, the course was delayed until 2021, in hopes that an in-country, face-to-face course would be possible by that time.

4 Modification to deliver results

When it became clear that travel limitations due to the COVID-19 pandemic would make an in-person regional course impossible, a new solution was developed in which a hybrid online/in-person model could be used. As it is very difficult to remotely deliver the one-on-one attention required to support learning in the workshop to practice the DLM tool, the course was broken into two sections; one open to the public providing a general overview of Data Limited Methods, and how they can be useful in stock assessment, and the second a closed, intensive workshop for fellows of the GRÓ-FTP studying stock assessment as well as scientists from the case study countries who were interested to attend, albeit remotely. The course was delivered from GRÓ-FTP's home institution, the Marine and Freshwater Research Institute in Iceland.

The FarFish Data Limited Methods Course took place on Sept 29th – Oct 1st 2021. The aim of the DLM course was to explore some methods used for stock assessment when data available is very limited. The theory behind and their implementation was explained, as well as their advantages and caveats. An emphasis on data input and results expected regarding establishing some reference points for sustainable exploitation was also provided. The skills learned from this course will be directly applicable for exploratory stock assessments for fisheries of the countries of the participants.

The seminar part of the DLM course was held on the morning of September 29, 2021, and was open to participants who registered online beforehand, as well as those attending in person through the GRÓ-FTP six-month programme. In total, 30 people were onsite for the seminar, and 20 joined via teams. The seminar began with an introduction to another EU Horizon 2020-funded research project, EuroSea, in which the use of remote sensing via the Copernicus system was described. The seminar then included a combination of lectures and activities related to the theoretical development of data limited methods, and how they have evolved over time.

The closed part of the workshop was attended by nine (9) individuals, from eight (8) countries. Notably, these include representatives from all the original target audience of FarFish case study institutions, including Senegal, Mauritania, Cabo Verde, and Seychelles, with the addition of GRÓ-FTP stock assessment fellows, hailing from Indonesia, Papua New Guinea, Sierra Leone, and El Salvador as well. Participants from Seychelles and Cabo Verde joined the workshop online, and the others were onsite. The course was taught by Margarita Rincon (IEO, Spain) and Kamarel Ba (ISRA/CRODT, Senegal).

5 Instructors

CSIC/IEO: Margarita Rincon, lead instructor

Margarita Rincon is a senior scientist at the Spanish Oceanography Institute. She is a mathematician researching the sustainability of fisheries resources: Modelling the dynamics of fish populations incorporating the effect of fishing and the environment, stock assessment, development of tools for decision making and analysis of management strategies from an ecological and socio-economic point of view. Dr. Rincon is an official national member of the ICES group of evaluation WGHANSA (Working Group on Southern Horse Mackerel, Anchovy, and Sardine). She has conducted scientific advisory tasks collaborating with the Spanish Oceanographic Institute, and developed the integrated mathematical-statistical model that is being used as a reference (in June 2018) for the scientific advice of the anchovy stock in the Gulf of Cádiz. Margarita has a degree in mathematics from the National University of Colombia (Bogotá, Colombia, 2006), a PhD in Physics and Mathematics from the University of Granada (2015) and worked as a Postdoctoral Researcher at the National Spanish Research Center (CSIC).

ISRA/CRODT: Kamarel Ba, instructor

Kamarel Ba is a post-doctoral researcher at ISRA/CRODT in Senegal. Kamarel is currently working with two international projects: the tropical tunas' tagging programme in the Atlantic Ocean in collaboration with ICCAT organization and the a project investigating the main demersal resources shared with Senegal's neighboring countries. Using the tropical tunas' tagging database, Kamarel analyzed the movements of the species, estimated the distances covered and the number of days at liberty of tagged fish. For the demersal resources, a sampling protocol were implemented to collect measurements of fish (total length, body weight, gonad weight), tissues samples (for genetic analyses) and otoliths samples. Kamarel is currently a fellow of the GRÓ Fisheries Training Programme in Iceland, where his research work focuses on data-limited methods and their application to black hakes stock shared by several countries (from Morocco to Senegal).

CSIC: Diego Macias Moy, EuroSea representative

Diego Macias Moy is a marine scientist specialized in the development and application of numerical approaches to building 'digital twins' of marine ecosystems. He worked at the European Commission's Joint Research Centre for 7 years before moving back to his home country, Spain, as senior researcher for the Spanish National Research Council (CSIC), Institute of Marine Sciences of Andalusia (ICMAN). Diego has published over 80 papers in international scientific journals and has assisted EU policymakers in making science-based decisions in the context of legislation, such as the Marine Strategy Framework Directive (MSFD), the Common Fisheries Policy or the Plastics Directive. He has tested different policy options in the digital twins to assess their derived impacts on marine ecosystems. Quantitative analyses of those impacts have been used to select the best options to be applied in the real world.

6 Course Schedule and implementation

Data Limited methods course Schedule 2021		
WED Sep 29	THU Sep 30	FRI Oct 01
<p>9:00 - 11:00 AM AM</p> <p>Introduction to the use of the Copernicus system and the EuroSea project (open to the public)</p>	<p>9:00 - 10:00 AM AM</p> <p>FarFish Tutor Web working session (closed/limited space available)</p>	<p>9:00 - 13:00 AM PM</p> <p>Presentation of findings from the DLM workshop (closed/limited space available)</p>
<p>11:00 - 13:00 AM PM</p> <p>FarFish and Data limited Methods. Explores the theory and use of data limited methods in fisheries stock assessment (open to the public)</p>	<p>10:00 - 13:00 AM PM</p> <p>Practical Session on use of the FarFish DLM tool (closed/limited space available)</p>	
<p>14:00 - 16:30 PM PM</p> <p>Practical Session on use of the FarFish DLM tool (closed/limited space available)</p>	<p>14:00 - 16:30 PM PM</p> <p>Practical Session on use of the FarFish DLM tool (closed/limited space available)</p>	

During the first day of the workshop, the participants' needs were identified according to their data availability. They were divided into two groups: the first group dealt with SPiCT model because they had catch and effort data while the other group (who had length distribution data) were designated to run the LBSPR model. After that, the DLM tool (hosted in the Farfish website) was presented, as well as the usefulness and the application of SPiCT model based on the results achieved with Moroccan Horse Mackerel stock.

In the second day, all participants practiced with their own data using the Rmarkdown SPiCT model provided by Margarita. When running the model, some obstacles were faced by the participants, depending on the level of each participant and the characteristics of their data, but were successfully overcome. In the third day, participants' results were evaluated, and conclusions were drawn as some participants (especially GRÓ-FTP fellows) had interesting results that can be used in their final project. The presentation and application of SPiCT model were followed by the presentation of the LBSPR model and its application using a Rmarkdown script. All participants were also invited to practice it using the Black hake data provided by Kamarel along with the R code first before trying their own data. The second group who had length distribution data ran the model with their own data and good results were obtained, inspiring some of them to use this model in their GRÓ-FTP final project.