Traceability and Quality Monitoring throughout the Fish Value Chain

D7.3 & D7.5 Final Dissemination and Communication and Human Capacity Building Activities Report

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EXECUTIVE SUMMARY

Effective dissemination and communication are important to assure that the TraceMyFish project results reach the appropriate stakeholders both during and at the end of the project duration. Work Package 7 is specially devoted to the dissemination and communication activities, as well as tackling responsible research and innovation (RRI) aspects of the project.

This communications and dissemination report (D7.3) gives a description of the main communications and dissemination activities which the TraceMyFish consortium during the whole project duration. Furthermore, the report summarizes the dissemination and communication progress based on the key performance indicators (KPIs) defined in the Communications and dissemination plan (D7.1) to monitor the progress within Work package 7.

The monitoring of the KPIs were used to assess the effectiveness of the communication and dissemination activities, which were summarized and reported on an annual basis throughout the project duration. The mid-project evaluation (M12) was, furthermore, be used to identify stakeholder groups that might require further attention in the dissemination activities, and these groups were targeted specifically in the second year of the project.

This report gives a summary of all communications and dissemination activities (deliverable 7.3, due in M24), as well as all human capacity building (HCB) activities facilitated by the TraceMyFish project (deliverables 7.4-7.5 in M12 and M24, respectively).

1   INTRODUCTION

Effective dissemination and communication are important to assure that the TraceMyFish project results reach the appropriate stakeholders both during and at the end of the project duration. Work Package 7 is specially devoted to the dissemination and communication activities, as well as tackling responsible research and innovation (RRI) aspects of the project.

The following sections describe the original dissemination and communication plan (Task 7.1) and its continuous updates during the project duration (Task 7.3), including descriptions of the planned and executed engagement with stakeholders (Task 7.2), and mobility and human capacity building (HCB) activities within the project (Task 7.4).

An overview of the communication and dissemination activities were included in the accepted proposal, and they are summarized in the following section 2. Updates on planned, and finished activities are then provided in section 3 of this report.

2 WORK PACKAGE DESCRIPTION ACCORDING TO PROPOSAL

Objectives:

A well-structured Communication and Dissemination plan is crucial to make sure that the outputs of TraceMyFish contribute to the expected impacts on economical, societal (including ethical, legal and social aspects, ELSA), and effective knowledge generation and transfer to a wide audience of stakeholders.

The WP is divided into the following tasks:
- *T7.1 Dissemination and communication plan (M1-M3)*
- *T7.2 Stakeholder engagement and open dialogue activities (M4-M24)*
- *T7.3 Dissemination and communication activities (M1-M24)*
- *T 7.4 Mobility, skills, and capacity building for Blue Bioeconomy professionals (M12-M24)*

Description:

The objective of WP7 is to effectively summarize all knowledge generation obtained in the TraceMyFish project and transfer it to the appropriate audience in an effective way according to the TraceMyFish Communication and Dissemination plan presented here.

The planned communication and dissemination of the TraceMyFish outputs and results. A wide range of communication and dissemination channels are included in the plan as set up in Task 7.1. The plan will be put into action and updated continuously throughout the project as described in Task 7.2-4.

The list of deliverables in WP7 show an overview of the main communication and dissemination activities that are planned in the TraceMyFish project. A detailed communications and dissemination plan will be set up and delivered in M3 (Task 7.1), which will be followed through and executed in Tasks 7.2-7.4, as seen in the task descriptions.

All TraceMyFish partners contribute to the Work Package since this ensures active knowledge generation and transfer to both academia and industry, as well as their consumers and collaborators.

2.1 TASK 7.1 DISSEMINATION AND COMMUNICATION PLAN (M1-M3)

The objective of Task 7.1 is to set up a dissemination and communication plan for the project, including the following activities:
- *TraceMyFish official homepage and social media pages*
- *active communication of TraceMyFish results and outputs through participants' homepages and social media*
- *scientific peer-reviewed articles in high impact, open access journals*
- *project workshops, courses, and conferences*
- *stakeholder engagement at workshops, conferences, and meetings (Task 7.2)*
- *mobility and capacity building activities of students and BlueBioeconomy professionals (Task 7.4).*
- *MSc. and Ph.D. student theses and defenses, and associated peer-reviewed scientific publications*
- *Videos, brochures, popular news etc. for consumers and general public.*

A detailed dissemination and communication plan will be set up in the first 3 months of the project (Deliverable 7.1). The plan will then be revised and updated and reported on continuously throughout the project duration in Tasks 7.2-7.4 as needed.

2.2   TASK 7.2 STAKEHOLDER ENGAGEMENT AND OPEN DIALOGUE (M4-M24)

Stakeholder engagement and open dialogue activities in the TraceMyFish project include holding two workshops for the project participants as well as other relevant industrial, research, research funding bodies, policy making and consumer stakeholders on the project progress and outcomes. Two events are planned, one at the middle (M12) and one at the end of the project (M24).

2.3   TASK 7.3 DISSEMINATION AND COMMUNICATION ACTIVITIES (M1-M24)

The dissemination and communication activities plan set up in Task 7.1 will be updated continuously throughout the project duration and set into action within Task 7.3.

The progress on the project dissemination and communication will be summarized in two reports at M12 and M24, respectively (Deliverable 7.2).

2.4   TASK 7.4 MOBILITY, SKILLS, AND CAPACITY BUILDING (M13-M24).

A structured plan for mobility and capacity building activities of students and professionals will be established to ensure interdisciplinary collaboration and exchange of knowledge and skills among the partners. Mobility of young researchers as well as joint supervision of master diploma thesis and internships will be of high priority. VIDEOM is a leading company in spectral imaging technology for applications in food. They will provide training action and provide a handheld instrument to all involved partners. VIDEOM will also provide a demonstration of the VideometerLite instrument for stakeholders at the Food Technology conference in 2022.

2.5   LIST OF ASSOCIATED MILESTONES AND DELIVERABLES:

M7.1 Targets and venues collected (M2)

M7.2 HCB activities designed (M15)

D7.1 Dissemination and communication plan (M3)

D7.2 1st dissemination and communication report (M12)

D7.3 2nd dissemination and communication report (M24)

D7.4 1st HCB activities report (M12)

D7.5 2nd HCB activities report (M24)

3 DISSEMINATION AND COMMUNICATION STRATEGY

TraceMyFish, from its inception stage, has foreseen and dedicated a work package (WP7) for the planning and execution of broad communication and dissemination activities so as to maximize the outreach and impact of the project. In particular, Task 7.1 had the specific target of formulating a concrete dissemination and communication strategy. According to the defined strategy, the main goals of the TraceMyFish dissemination and communication activities cover three key strategic directions: (a) Raising public awareness and ensuring maximum visibility of the project key facts, outputs and findings amongst the public; (b) Supporting the transfer of project results and engagement from key stakeholders in academia and industry (c) Enhancing the commercial potential of the results and users' reception. Taking into account the innovativeness of the proposed solution and, thus, its probable need to mature beyond the scope of the project, a hierarchical model emphasizing the initial steps of user engagement, such as AIDA (Rawal, 2013) and its variations, is particularly suitable for TraceMyFish. The model identifies four hierarchical, sequential stages that culminate to stakeholder engagement:

1. **Awareness**: refers to the creation and promotion of the TraceMyFish identity that will be able to establish itself as a standard imagery evoking the project's concept and scope;
2. **Interest**: refers to the means used to communicate and highlight the added value of the TraceMyFish solutions in a way that raises the interest of targeted audiences;
3. **Desire**: deals with the modalities through which audiences will be motivated to test the TraceMyFish solutions and actively participate in its ecosystem;
4. **Action**: incorporates the strategic steps for transforming knowledge, interest, and motivation into active engagement, either as part of a growing TraceMyFish community or as part of a client base.

As such the project's approach included as early on as M6 the present D7.1 deliverable that compiles a concrete communication and dissemination plan spanning across all four AIDA axes. The plan was construed in order to effectively spread the TraceMyFish message to the relevant communities. For each measure included in the plan specific KPIs and targets have been identified (Table 1).

Table 2: Channels of Communication and Dissemination and their relative KPIs and Targeted Values in the proposal.

Channel #	Channel Name	KPI Code	KPI Description	Targeted Value (Year 1)	Targeted Value (Year 2)[1]
1	TraceMyFish website	KPI1.1	Visits	≥1,000	≥2,000
		KPI1.2	Downloads	50	≥250
		KPI1.3	Newsletter subscribers	≥100	≥200
2	TraceMyFish social media	KPI2.1	Social media posts (Tweets, LinkedIn, Facebook)	50	≥100
		KPI2.2	Twitter Followers	100	≥300
		KPI2.3	LinkedIn Page Members	100	≥200
		KPI2.4	Facebook Page Followers	100	≥200

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[1] Accumulated value.

3	Scientific publications	KPI3.1	Journal Publications	1	≥4
		KPI3.2	Conference Proceedings	2	≥6
4	Press relations	KPI4.1	Newspaper/Magazine Articles	1	≥4
		KPI4.2	Interviews and Presentations	1	≥2
5	Event participation	KPI5.1	Scientific Conferences/Workshops	4	>12
		KPI5.2	Industry Events	1	>4

For the fruition and realization of this strategy the following components have been selected and already activated as will be explained in the following chapters.

a. **Visual identity**: It entails the project's logo, imagery, typography, colours, and creative design. These will be consistently used in communication materials and project outcomes. Templates and guidelines for building different content types have already been produced and will be used throughout its duration.

b. **Project website**: The consortium has already set the project's website and will maintain it for at least two years after the project's completion. The website includes a public area through which public information will be disseminated, as well as a private area for the distribution of information restricted to the consortium.

c. **Social media**: the project will also engage in the effective usage of social media for disseminating information to the general public (e.g., Twitter, LinkedIn) and the research community (e.g., ResearchGate). We will consider using YouTube for distributing video material, such as tutorials and infomercials. All social media accounts have been created.

d. **Communication and dissemination materials**: For this channel, the partners distinctly divide the outcomes into two distinct channels, one for more specialized scientific audiences and one addressed to more general audiences in order to raise awareness. Therefore, the former includes scientific publications, posters, and articles mainly addressed to scientific experts and professionals. Exemplary high-impact journals that will be targeted are: Food Chemistry, LWT-Food Science and Technology, Journal of Food Engineering, Food Research International, MDPI-Foods, Scientific reports etc.

Regarding software assets and source code, they will be made available through public repositories like GitHub. General interest material includes leaflets, brochures, fact sheets and multimedia assets, to be distributed either online or physically.

e. **Events and networks**: TraceMyFish outcomes will be presented to academic and non-academic audiences, including conferences and relevant workshops. Prospective academic conferences which could be targeted for research presentations include:

1. Anuga FoodTech
2. Nordic FoodTech
3. IASIM
4. EFFoST
5. WEFTA
6. AquaNor

Furthermore, industry partners will demonstrate the project results at industrial, international large expositions and trade fairs. A workshop or a topical session integrated within suitable conferences will

be held at appropriate stages in the work (concepts, results progress, and final dissemination). Finally, each partner, in collaboration with local communities, will set up one demonstration unit to spread the message and create awareness on food safety and fish chain monitoring. Project flyers, technical brochures and best practice abstracts will be prepared and made available to disseminate the project outputs.

f. **Press relations**: Regarding media targeted to a broader audience, TraceMyFish will design and prepare articles, talks, presentations, and demonstrations to be used in mainstream channels like newspapers, magazines, radio and TV.

g. Impact monitoring: In order to measure and evaluate the impact of the TraceMyFish communication and dissemination strategy, a set of quantifiable success indicators are established (Table 1), setting the basis for assessing the fulfilment of the objectives. For online channels, we will use relevant analytics tools where available (e.g., Google Analytics, Twitter Analytics).

4 ONLINE DISSEMINATION ACTIVITIES

The updates on the tasks in WP7 will be discussed in unison in this report due to their close relations and to avoid repetitions. All activities are marked according to the dates that they are finished.

4.1 VISUAL IDENTITY OF TRACEMYFISH

Logos and templates for all deliverables and presentations are available to project partners on the google docs workspace shared with the project participants. These include the following:

Template for deliverables
Template for PPT presentations
Logos for each participant is available on page 3 of this deliverable.

Moreover, the project logo is presented below.

Figure 1: TraceMyFish Project Logo

4.2 TRACEMYFISH OFFICIAL HOMEPAGE

4.2.1 Objective

Active communication of TraceMyFish results and outputs through participants' homepages and newsletter.

4.2.2 Description

An official homepage of the project and associated social media pages have been launched to give the project an official face towards stakeholders, including the funding bodies, industry, academia, and consumers. Links to these pages are provided here:

Homepage: tracemyfish.hi.is (final polishing of connections, will be launched before May 15th).

The target KPI include obtaining more than 1000 visits to the homepage within the first project year, and more than 2000 visits at the end of year 2 (KPI 1.1).

The project also aims at sending out project updates in a Newsletter, reaching an audience of >100 stakeholders by the first project year, and >200 at the end of the project duration.

Access to open access articles, newsletters, and other communication and dissemination material will be provided on the TraceMyFish homepage. The consortium aims at achieving at least 50 downloads of the project material by year 1, and over 250 downloads by year 2.

4.2.3   Status at the end of the project (M24)

The official TraceMyFish project homepage was launched during spring 2022. The homepage summarizes the main project objectives, presents the project partners and scientists, information on the project funding from the BlueBio Cofund, news and events and links to social media platforms. More detailed information on the pilot cases, and information on project progress related and scientific publications are added as they are published.

The project progress reports, including deliverable reports from TraceMyFish can also be seen on the following Zenodo page: https://zenodo.org/communities/tracemyfish/?page=1&size=20

Further updates on the TraceMyFish activities during the second project year were primarily posted on the project Zenodo page mentioned above. The page summarizes the deliverable reports and other documents that are open to the public. Emphasis was placed on making all documents public, although some allowing a short embargo period (max. 2 years) to ensure that the obtained data can be published in peer-reviewed scientific journals. All data will be made publicly available at the end of the embargo period, through appropriate communication channels.

4.3   SOCIAL MEDIA PRESENCE

4.3.1   Objective

Active communication of TraceMyFish results and outputs through the project social media channels.

4.3.2   Description

The following social media channels have been established for the TraceMyFish project on Twitter, LinkedIn, and Facebook:

Twitter page: TraceMyFish @Trace_My_Fish
LinkedIn: TraceMyFish https://www.linkedin.com/groups/12641322/
Facebook: https://www.facebook.com/TraceMyFish

The project activities will be communicated and active means will be taken to promote the project activities and the project participants' activities in related projects, conferences, publications and interactions with stakeholders.

The KPIs that will be monitored throughout the project include the number of tweets and posts on the social media platforms, number of followers and likes. The target values are given in Table 1 on page 13.

4.3.3   Status at end of the project (M24)

The TraceMyFish social media platforms were set up during the spring of 2022, including a Twitter page, a LinkedIn page, and a Facebook page. Since the launch a total of 48 posts have been made to the social media platforms. The aim was set to 50 posts during the first year (KPI2.1) and to over a hundred posts at the end of the project duration. More posts will be shared on the social media platforms as more detailed publications and dissemination and communication activities will be produced within the project. The aims of KPI 2.2 will thus likely be reached within the project duration.

The total number of followers on Twitter are currently at 91, which is close to the goal number of Twitter followers (KPI 2.2) of 100 for the first year. Likewise, the LinkedIn followers currently add up to 89, which also measures close to the goal number of 100 LinkedIn followers (KPI 2.3). Further promotion of the sites will continue, so that the total follower goals of over 300 Twitter followers, and 200 LinkedIn followers within the project duration may be achieved. Promotions of the Facebook site was slower, and the Facebook project fan base not close to the target number of followers (KPI 2.4 of 100 followers). However, the different social media platforms include different stakeholder compositions, and is also varying between countries. Facebook is regarded as a B2C social media platform, while Twitter and LinkedIn are more directed towards scientists and industrial professionals. All three social media platforms may thus be useful for overall project dissemination and communication purposes at the end of the project.

4.4 PRESS RELATIONS

4.4.1 Objective

To communicate the TraceMyFish results and outcomes to a wide audience through press relations.

4.4.2 Description

The TraceMyFish project has already gained some attention from the press and the objective of the consortium is to withhold active communications to various press relations to obtain active media presence of the project.

The KPIs monitored for this include the number of newspaper and magazine articles (KPI 4.1) and number of interviews and presentations (KPI 4.2)

4.4.3 Status at the end of the project (M24)

The TraceMyFish consortium has taken part in the following press and news relations:
1. Interview of Dr. Panagiotis Zervas, SCiO (Coordinator of the project) about the aim of the project at powergame.gr a Greek information portal: https://tinyurl.com/2p92cb6b
2. Interview of Dr. Pythagoras Karampiperis (CEO of SCiO) about the aim of the project to EPT3 Greek national TV channel
3. Videometer has agreed to an article on the Danish magazine PlusProces, which will focus on the use of the VideometerLite in the TraceMyFish project. This article is expected to be published in spring 2023.
4. Presentation of the VideometerLite sensor and its capabilities in a Greek TV program in October 2023 (see image below).
5. SCiO interview in Greek newspaper Ypaithros Choara on the TraceMyFish project: https://www.ypaithros.gr/tracemyfish-anixneysi-allioseon-labraki-solomo-bakalao-ellada-norbigia-islandia/

Figure 1. Screenshots from Greek television during AUA interview in October 2023.

5   OFFLINE DISSEMINATION ACTIVITIES

5.1   SCIENTIFIC PUBLICATIONS

5.1.1   Objective

The project results are expected to be published in several scientific peer-reviewed manuscripts in high-impact, open access journals. These publications are expected to include collaborative efforts between the TraceMyFish partners, and include MSc and PhD student research work, facilitating HCB within the project.

5.1.2   Descriptions

Below is a list of planned activities in this category:

- Scientific articles on the application of VideometerLite/VideometerLab in the studied pilot value chains.
  - Norway: Atlantic salmon value chain
  - Iceland: Atlantic whitefish value chain
  - Greece: Mediterranean seabream/seabass
- Scientific articles on the design/performance of the TraceMyFish iFMS

More opportunities for scientific publications may arise during the project duration. The number of scientific publications coming from the project may thus be reassessed in the midterm (M12) and final reports (M24).

5.1.3   Status at the end of the project (M24)

The aim was set to achieve the publication of at least one scientific publication by the end of year 1. Due to delays in performing trials within the pilot value chains this publication was delayed into the second project year. However, the TraceMyFish consortium is currently finalizing 6 scientific publications for peer-review in high impact scientific journals. These are on the following topics:

Atlantic salmon value chain:

- "The potential of multispectral imaging for quality monitoring of head-on-gutted Atlantic salmon (*Salmo salar L.*)". (under preparation)
- "Multispectral imaging as a tool for quality assessment in salmon (*Salmo salar L.*) fillet". (preliminary title)

Atlantic white-fish value chain:
- Automatic nematode detection in Atlantic cod with VideometerLab
- Prediction of Quality Index Method (QIM) sensory scores with multispectral imaging
- Prediction of texture and storage stability of Atlantic cod during cold storage with multispectral imaging

Mediterranean seabass value chain:
- *"A machine learning approach for the estimation of freshness in Mediterranean seabream using a portable Multispectral Imaging (MSI) device".* In collaboration with Scio and VIDEOMETER (under preparation)

The overall objectives of reaching the set KPI 5.1 of at least 4, will therefore be achieved within the project duration.

5.2 EVENTS PARTICIPATION

5.2.1 Objective

TraceMyFish participation and planning of workshops, courses and conferences are expected to increase the visibility of the project and its results. The list of potential activities will be updated continuously for the project meeting. These also include networking events on behalf of the BlueBio Cofund Secretariat.

5.2.2 Description

The following meetings, workshops, courses, and conference participations have been planned and/or have already taken place:

BlueBio Cofund joint kick-off meeting March 10th, 2022. TraceMyFish presentation.
BlueBio Cofund Human Capacity Building event, April 6th, 2022. TraceMyFish representation and participation. Webinars by Videometer

Videometer participation at **ANUGA FoodTEch in Cologna** (T8.1 and T7.3) in 2022

Similar activities will continue to take place throughout the project duration.

5.2.3 Status at the end of the project (M24)

The following events participation have taken place in association with the TraceMyFish project during the first project year:

BlueBio Cofund events:
BlueBio Cofund joint kick-off meeting March 10th, 2022. TraceMyFish presentation.
BlueBio Cofund Human Capacity Building event, April 6th, 2022. TraceMyFish representation and participation. Webinars by Videometer
BlueBio Cofund Commercializaton support e-coffee meeting, October 28th, 2022. TraceMyFish project pitch presentation.
BlueBio Cofund joint midterm and final evaluation meeting in Lisbon, Portugal, June 6th-7th, 2023.

Scientific conferences and workshops participation (KPI 5.1 of 4 within first year, >12 for total project duration)
The project partners participated in the following scientific conferences, workshops, and industrial events where the TraceMyFish project was presented:

Scientific conferences and workshops:
- International scientists' night, October 1st, 2022 – poster presentations from AUA in Greece
- The Icelandic food and nutrition society's general assembly, October 20th, 2022. – Oral presentation of TraceMyFish by UoI.
- Sustainable Healthy Diets general assembly meeting, November 1st, 2022. – Oral presentation of TraceMyFish by UoI.

- Lytou, A., Fengou, L, Mastrodima, V., Michaliodi, I, Nychas G-J. (2023), Investigation of the variability originated from different fish in the microbiological quality assessment of seabream fillets, 12th International Conference on. Predictive Modelling in Food, Saporo, Japan (June 2023) - poster
- Lytou, A., Tsakanikas, P., Fengou, L-C., Nychas, G-J (2022). Multispectral imaging (MSI) coupled with machine learning for the evaluation of authenticity in several seafood. Proceedings of the 10th International Symposium on Recent Advances in Food Analysis (RAFA), 6-9 September, Prague, Czech Republic (poster presentation).

- Lemonia-Christina Fengou, Lytou Anastasia, George-John E. Nychas (2023). Survey: Microbiological quality of fish from retail, 10th International conference ''Mikrobiokosmos'', 30 November-2 December, Larissa, Greece

- Sigurðardóttir et al. (2023). "Exploring multispectral imaging for nematode identification in fish fillets: towards automated detection". Oral presentation by UoI/Matís/Videometer, at the 59th West European Fisheries Technologists Association (WEFTA) conference in Copenhagen, Denmark, October 16th-20th, 2023. Presenting author: Andrea Rakel Sigurðardóttir, UoI.

- Anita Nordeng Jakobsen, Sine Marie Moen Kobbenes, Marcus Hoff Hansen, Aske Schultz Carstensen, Jørn-Owe Johansen, Jørgen Lerfall. (2023) "Application of a portable multispectral imaging prototype for detection of spoilage in Atlantic salmon (Salmo salar L.) stored on ice". 59th West European Fisheries Technologists Association (**WEFTA**) conference in Copenhagen, Denmark, October 16th-20th, 2023. Oral presentation by NTNU/Videometer. Presenting author: Anita Nordeng Jakobsen, NTNU.

- Anastasia Lytou, George-John Nychas, Lemonia-Christina Fengou, Aske Schultz Carstensen, **Jørgen Lerfall**, Anita Nordeng Jakobsen, Pythagoras Karampiperis, Antonis Koukourikos (2023). „A machine learning approach for the estimation of freshness in Mediterranean seabream using a portable Multispectral Imaging (MSI) device" Oral presentation by NTNU/AUA/SCiO at the 59th Conference on Western European Fish Technologists Association (**WEFTA**), 16-20 October 2023. Presenting author: Jørgen Lerfall, NTNU.

The **Book of Abstracts** for the WEFTA conference is available here: https://wefta2023.com/download/file/7c5414aaf3be506ff4b45f72d8b901f4db21a8cf.pdf

- EFFoST 2023, Valencia, Spain.
- The Icelandic Marine conference – Sjávarútvegsráðstefnan, Reykjavík, Iceland, November 2nd-3rd, 2023 – Oral presentation by UoI/Matís

The three last events listed also include industrial participation, and thus interaction between industry and academia.

Industrial events (KPI 5.2 of 1 event participation in year 1, 4 within the project duration)
- Videometer participation at **ANUGA FoodTEch in Cologne, Germany** (T8.1 and T7.3)
- Videometer participation **at IASIM, Conference on spectral imaging** in Esbjerg, Denmark, July 3rd-6th, 2022 (T7.3 and T8.1) in 2022.
- Participation in the 87th Thessaloniki International Fair (https://thessalonikifair.gr/en), 9-11 September 2023
- AUA participation at the 2nd Agri Innovation Expo, September 21st-23rd, 2023, Athens, Greece.
- UoI/Matís participation at The Icelandic Marine conference – Sjávarútvegsráðstefnan, Reykjavík, Iceland, November 2nd-3rd, 2023

- 59th West European Fisheries Technology Association (WEFTA) conference in Copenhagen, Denmark, October 16th-20th, 2023.

5.3 STAKEHOLDER ENGEGEMENT AT WORKSHOPS, CONFERENCES, AND MEETINGS

5.3.1 Objective

This activity is connected to Task 7.2 and WP2. The objective is to set up a combination of workshops and/or focus group interviews of stakeholders representing the three value chains with the aim of identifying gaps between stakeholders' needs for tracing hazards with non-destructive measures along the value chains and the current practice, and to give input into hazard identification within each value chain, as well as gain quality and safety data from each value chain. Secondly, conference and meeting activities are planned with the aim of the TraceMyFish results can reach a wide range of stakeholders' attention.

5.3.2 Description

The following stakeholder engagement activities have taken place:

- Stakeholders' meetings in Iceland performed in March 2022 with BRIM and Lýsi. Summary of results in meeting minutes from Jørgen Lerfall, Anita Alessia del Genio and María Guðjónsdóttir.

- VideometerLite set-up and training in Iceland finished in March 2022. Further feedback in relation to T3.2 in coming month.

- BRIM has agreed to allowing us to test the technique in their production. Follow-up planning meetings with BRIM before Easter, 2022.

- Meeting with ÚR on freezing processes of red fish April 4th, 2022. ÚR interested in adding quality check with VideometerLite and the VideometerLab during their onboard freezing processes. Activities planned in unison with Icelandic domestically funded research project "Bætt nýting vinnsluferla við sjófrystingu karfa – Matvælasjóður / Improved processes of onboard freezing of redfish").

Below is a list of planned activities in this category:
- Stakeholder meetings in Greece and Norway under preparation.

Further stakeholder engagement activities will be updated during the project duration.

5.3.3 Status at the end of the project (M24)

The following stakeholder meetings have been added since Deliverable 7.1 was handed in:
Stakeholder meetings with BRIM in Iceland on September 21st and October 12th, 2022, for planning of whitefish value chain activities.

Stakeholder meetings with Vísir hf in Iceland, followed up by e-mail correspondence in October 2022 on Anisakis nematodes detection trials and planning of PhD student Andrea Rakel Sigurðardóttir doctoral project.

Active interaction between the project consortium and industry has furthermore taken place at the industrial conferences events listed in section 4.2.3.

The AUA team then participated in the **2ⁿᵈ Agri Innovation Expo** held on September 21st-23rd, 2023 in Athens Greece. During the event, the concept of the TMF project as well as the main ideas and findings were presented. The expo gave the opportunity to showcase TMF's innovative solutions and promote networking with the stakeholders. TMF's representation at the expo could lead to new opportunities and increased recognition as first steps for its implementation in the Aquaculture industry.

Figure 2. Participants at the 2ⁿᵈ Agri Innovation Expo September 2023

DiTECT, SAFFI, TMF Workshop in Athens October 2ⁿᵈ, 2023
A **a joint workshop** between the EC projects **SAFFI, DITECT**, and **TraceMyFish** was held in Athens, Greece on October 20th on behalf of AUA and SCiO.
The workshop consisted of several interesting presentations, including "The Application of Spectral Imaging in the Field of Food Science", held by Jens Michael Carstensen, Videometer.

The detailed agenda of the workshop can be seen in the appendix to this report.

6 HUMAN CAPACITY BUILDING (HCB) ACTIVITIES

6.1   STUDENT FELLOWSHIPS

6.1.1   Objective

The TraceMyFish consortium plans to provide the following fellowships to post-docs, PhD, and MSc. Students.

6.1.2   Description

Providing fellowship to post-docs, PhD and MSc students lays the basis for the human capacity building activities within the TraceMyFish consortium. Postgraduate students and post-docs will be invited to join short or medium term mobilities activities, as well as workshops, seminars and other in-person and online activities as described in sections 6.2-6.4.

KPIs associated with this task, is the number of fellowships provided, and their funding amounts.

6.1.3   Status at the end of the project (M24)

The project has involves the participation of at least two post-docs from AUA, one PhD student from NTNU, and one PhD student from the University of Iceland. Several MSc students and B.Sc. students doing short-term project were also associated with the TraceMyFish project.

The following students were associated with the project:
- PhD student Andrea Rakel Sigurðardóttir (UoI/Matís/Videometer)
- PhD student Sophie Keller (NTNU)
- Post doc Lemonia-Christina Fengou (AUA)
- Summer innovation project student 2023– Quality assessment of whitefish with multispectral imaging. (Matís/UoI). Cofunded by the Icelandic Rannís Student innivation fund (Nýsköpunarsjóður námsmanna)

To ensure excellent human capacity building for young researchers, they were partially or fully supervised by multiple TraceMyFish project participants, as seen in the summary above.

Short- or medium-term mobility within the different partners were also encouraged, as summarized in section 6.2.

At the end of the project **a joint workshop** between the EC projects **SAFFI, DITECT,** and **TraceMyFish** was also held in Athens, Greece on October 20th on behalf of AUA and SCiO. The agenda of the workshop can be seen in the appendix to this report.

6.2   SHORT-MEDIUM TERM MOBILITY WITHIN THE PARTNERSHIP

6.2.1   Objective

Facilitate human capacity building through active communications between partners, experience exchange and communication of results both between TraceMyFish partners and to other stakeholders.

6.2.2   Description

The consortium encourages both short- and medium-term mobility of staff, especially younger researchers, and students to engage in mobility activities within the partnership. This includes visits to the partnering institutions, contributions to joint tasks and activities, and participation in joint webinars, seminars, workshops provided by the project partners.

Discussions on HCB activities within the TraceMyFish project as well as expanded activities have already started by project partner participation in the BlueBio Cofund joint events, such as the BlueBio HCB e-coffee meeting on April 6th, 2022.

KPIs associated with this are number and length of exchange activities between partners.

6.2.3   Status at the end of the project (M24)

The following exchange activities and their durations have already been planned within the consortium:
- **Anastasia Lytou (AUA)** visited **Videometer** in Denmark in April 2022, working closely with the Videometer team and trained on the VideometerLite, VideometerLab software and image processing. Duration of stay 2 weeks.
- **Anastasia Lytou (AUA)** visited the **University of Iceland and Matís** in Reykjavík, in April 2023. Duration of stay: 2 weeks. During this visit, she trained on the Texture Analyzer, performing at the same time microbiological, and Multispectral Imaging analysis (VideometerLite1, VideometerLite2, VideometerLab4).
- **Sophie Keller**, PhD student at NTNU, Norway visited UoI and Matís in Iceland in January 2023 to take part in the planned whitefish value chain activities performed there. Duration of stay: 1 month.
- **Andrea Rakel Sigurðardóttir**, PhD student at UoI, Iceland visited **Videometer** in Denmark in May-June 2023. The PhD student is supervised by partners from UoI, Matís and Videometer. Duration of stay: 3 weeks.
- **Lemonia C. Fendou (AUA)** also visited the **Videometer** premises in Copenhagen in May 2023. Duration of stay: 2 weeks.
- **Andrea Rakel Sigurðardóttir**, PhD student at UoI visited Videometer again in September 2023. Duration of stay: 1 week.

The exchange activities can thus be summarized into 6 events, spanning approximately 14 weeks.

6.3 ORGANIZATION OF TRAINING COURSES AND/OR WEBINARS

6.3.1 Objective

Training courses and webinars will be developed and organized to showcase the TraceMyFish techniques to a wide audience.

6.3.2 Description

The TraceMyFish partners will develop and organize several training courses and/or webinars. These include for example the webinars provided by Videometer, which are available for both project participants as well as other interested parties, such as the following event:

- Free Webinar on March 31st, 2022, by Videometer, for both project participants and other interested stakeholders. https://videometer.com /videometer-webinar-series-2022/

Several training opportunities for industry, academia and consumers will be developed.

The KPIs involved with this part include the number of training courses provided within the consortium and number of participants.

6.3.3 Status at the end of the project (M24)

Videometer have been effective in developing and providing a series of training webinars available both to specialists within and outside the TraceMyFish community. A summary of the available webinars for 2022 can be seen by following the link https://videometer.com /videometer-webinar-series-2022/

The following webinars have been held and have attracted a wide audience of specialists.

Free Videometer webinar – March 31st, 2022
Spectral image acquisition and basic analysis – September 22nd, 2022
Machine learning or Spectral images – October 6th, 2022
Applications of spectral imaging for FoodAg integrity – October 20th, 2022
In depth nCDA, nMahalanobis, MNF/PCA – October 27th, 2022.
Segmenation building – November 3rd, 2022.
Session Recipe building – November 17th, 2022
Multispectral Fluorescence imaging with filter changer – December 1st, 2022
Introduction to CDT – December 15th, 2022.
Spectral Image Acquisition and Basic Analysis   September 26th, 2023
Machine Learning for Spectral Images October 10th, 2023
Applications of Spectral Imaging for FoodAg Integrity October 24th, 2023

The following events are then scheduled during the upcoming months:
Advanced MSI - In depth nCDA, Mahalanobis, MNF/PCA - November 7th, 2023
Segmentation Building - November 21st, 2023.
Session Recipe Building - November 28th, 2023
Multi-Spectral Fluorescence Imaging - December 5th, 2023
Introduction to CDT - December 12th, 2023

6.4 ORGANIZATION OF UNIVERSITY COURSES

6.4.1 Objective

To effectively introduce the Videometer techniques to university students both by lectures and practical laboratory exercises.

6.4.2 Description

The TraceMyFish results and development of the Videometer techniques will be introduced in several university courses arranged by the participating universities (UoI, NTNU, AUA) at both undergraduate and graduate level.

6.4.3 Status at the end of the project (M24)

During the first project year the Videometer techniques have already been introduced and incorporated into the following university courses:

University of Iceland – Faculty of Food Science and Nutrition MAT305G **Food physics** (lectures + laboratory exercise)
NTNU – **Aquatic Food Production (AQFood)** Joint MSc. Program – Aquatic food processing and technology (lecture)

AUA, Laborory of Microbiology and Biotechnology of Foods held a **MSc. Training course on the use of the VideometerLite**. The training for M.Sc. students on the new VideometerLite instrument was an enriching and pleasant experience. The training was held to the Laboratory of Microbiology and Biotechnology of Food, while, during this session, students improved their technical skills and learned a lot about multispectral imaging technology.
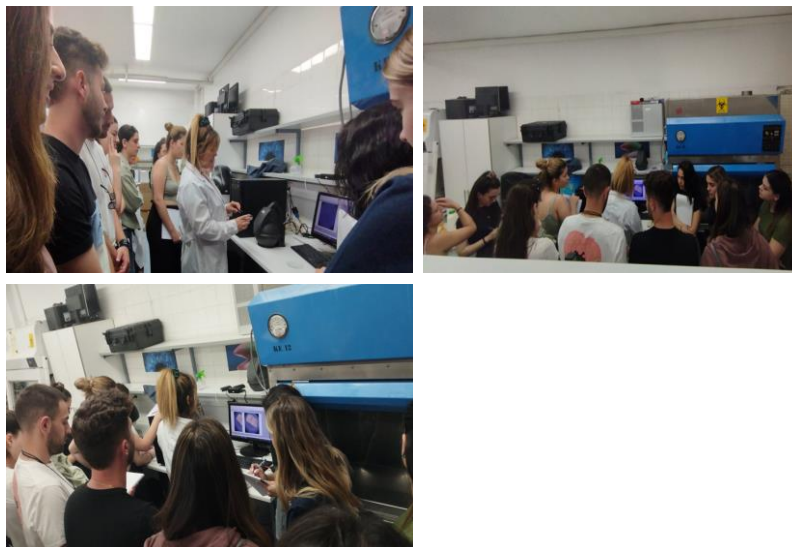

Figure 3. Photos from MSc VideometerLite training course at AUA

6.5   JOINT SUPERVISION OF MSC AND PHD STUDENTS

6.5.1   Objective

The TraceMyFish partners aim towards hosting joint MSc and PhD projects, and/or joint supervision of students.

6.5.2   Description

The TraceMyFish consortium will provide opportunities for MSc. and Ph.D. project that are either providing joint degrees or joint supervision between institutes. This also facilitates mobility opportunities for young researchers as described in section 6.2.

The KPIs associated with joint supervision of MSc and PhD students include the number of theses and defences, and associated peer-reviewed scientific publications and oral/poster student presentations at conferences and meetings.

6.5.3   Status at the end of the project (M24)

As mentioned under section 6.2 the TraceMyFish project provides several student project opportunities, where they have joint supervision by the TraceMyFish partners. These include:

- **Andrea Rakel Sigurðardóttir, UoI,** whose PhD committee is composed by María Guðjónsdóttir (UoI/Matís), Hafsteinn Einarsson (UoI, Faculty of computer science), Hildur Inga Sveinsdóttir (Matís/UoI), and Nette Schultz (Videometer).

- **Sophie Kendler, NTNU**. Supervised by Jørgen Lerfall and Anita Nordeng Jakobsen. Performed an HCB exchange with UoI and Matís in January 2023.

6.6   OTHER MEANS OF COMMUNICATION AND DISSEMINATION

6.6.1   Objective

The TraceMyFish project will also include a newsletter, making of videos, brochures etc. Intended for consumers, the industry, as well as the general public.

6.6.2   Description

Any communication and dissemination material that is not directly classified to the earlier mentioned activities are included in this section.

This contains the making of videos, brochures, one-pagers, etc. This material will be promoted through the TraceMyFish homepage and social media, as well as included in oral/poster presentations, as teaching material in university and training courses, webinars etc.

6.6.3 Status at the end of the project (M24)

The main communication activities for the project results were through traditional channels as described above.

7   UPDATES ON DC AND HCB ACTIVITES PER PARTNER

In the original dissemination and communication report (D7.1) each partner defined the dissemination, communication and human capacity building activities that they aimed at fulfilling during the project duration as summarized below. This section provides the status of these activities at the end of the project.

All updates on Dissemination and communication activities of the individual partners during the project duration are marked in blue text.

7.1   SCIO

Partner Number: 1	Partner Acronym: SCiO	Person(s) in Charge: Panagiotis Zervas

Target Groups	▪ Actors across the fish value chain for whom data analysis and monitoring is valuable, namely:
	  o Fishing boat owners/managers
	  o Apothecary/inventory managers
	  o Transportation companies
	  o Retailers	

Dissemination & Communication Activities	*Conferences/Events* ▪ Data Innovation Summit (https://datainnovationsummit.com/) ▪ AI & Big Data Expo (https://www.ai-expo.net/europe/) ▪ World Summit AI (https://worldsummit.ai/) ▪ European Big Data Value Forum 2023 (https://www.european-big-data-value-forum.eu/) **Status at end of project:** - BlueBio final evaluation of co-funded RD projects and mid-term evaluation of funded projects of the BlueBio 1st additional call, 6-7 June 2023 - 51st Conference on Western European Fish Technologists Association, 16-20 October 2023 with the session: A machine learning approach for the estimation of freshness in Mediterranean seabream using a portable Multispectral Imaging (MSI) device -	
	Scientific Journals ● N/A **Status at end of project:** - Joint publication with AUA in preparation	
	Public reach magazines ▪ Startupper (https://startupper.gr/) ▪ Ypaithros Chora (https://www.ypaithros.gr/) ▪ Agro24 (https://www.agro24.gr/) **Status at end of project:**	

	1. **Interview of Dr. Panagiotis Zervas (Coordinator of the project) about the aim of the project at powergame.gr a Greek information portal: https://tinyurl.com/2p92cb6b** 2. **Interview of Dr. Pythagoras Karampiperis (CEO of SCiO) about the aim of the project to EPT3 Greek national TV channel** 3. **SCiO interview in Greek newspaper Ypaithros Chora on the TraceMyFish project:** https://www.ypaithros.gr/tracemyfish-anixneysi-alloioseon-labraki-solomo-bakalao-ellada-norbigia-islandia/
	Events Participation / Industry Events To be determined during the course of the project and as it produces demonstrable results **Status at end of project:** 1. **"AI for Industry and Business" online event organized by the Hellenic Federation of Enterprises on 23rd of March 2022 (https://tinyurl.com/mrmy5s3)** 2. **CivTech Alliance Global Scale-up Programme 2, Challenge 2: Green Public Procurement, Tech Online Day on 21st of October 2022** 3. **Participation to the 87th Thessaloniki International Fair (https://thessalonikifair.gr/en), 9-11 September 2023** 4. **Joint workshop between EC projects SAFFI, DiTECT and TraceMyFish in Athens, Greece, October 20th, 2023 (see program in appendix)**
Individual Dissemination Plan	SCiO's dissemination plan includes two main strands, namely: ▪ Dissemination via online means and specifically (a) social media channels, (b) press publications and news items via various publication channels (i.e., web-portals, newspapers etc) and (c) webinars for presenting the project results ▪ Dissemination via offline means, namely participation with booths to key events related to FoodTech, AI & Big Data analytics
Dissemination Means to be employed	SCiO will be able to: ▪ Share posts about the project via the company's social media channels such as Facebook, Twitter and LinkedIn (which include more than 1,500 followers) ▪ Prepare news items about the project and share via web portals with broad outreach that focus on the FoodTech Startups ecosystem. Participate in virtual and physical events as the ones mentioned in the relevant section (Dissemination & Communication),

	where the project's results can be presented and showcased to potential users and future adopters.
Running or upcoming EU projects TraceMyFish could cooperate with	At the moment, sibling BlueBio projects are those most fit to establish liaisons and future collaborations
Human Capacity Building Activities	• N/A

7.2 AUA

Partner Number: 2	Partner Acronym: AUA	Person(s) in Charge: George-John Nychas
Target Groups	\multicolumn{2}{l|}{Academia, industrial stakeholders within fishing value chain (specifically Mediterranean seabream/seabass value chain)}	
Dissemination & Communication Activities	\multicolumn{2}{l|}{*Conferences/Events (at least two in the following)* ▪ EFFoST ▪ Wefta ▪ IAFP (Aberdeen, Europe) ▪ IAFP (USA) **Status at end of project:** - AUA participated in RAFA conference (Proceedings of the 10th International Symposium on Recent Advances in Food Analysis (RAFA),6-9 September 2022, Prague, Czech Republic) with a poster presentation entitled - '' Multispectral imaging (MSI) coupled with machine learning for the evaluation of authenticity in several seafood'' - Lytou, A., Fengou, L, Mastrodima, V., Michaliodi, I, Nychas G-J. (2023), Investigation of the variability originated from different fish in the microbiological quality assessment of seabream fillets, 12th International Conference on. Predictive Modelling in Food, Saporo, Japan (June 2023) - poster - Anastasia Lytou, George-John Nychas, Lemonia-Christina Fengou, Aske Schultz Carstensen, Jørgen Lerfall, Anita Nordeng Jakobsen, Pythagoras Karampiperis, Antonis Koukourikos (2023) A machine learning approach for the estimation of freshness in Mediterranean seabream using a portable Multispectral Imaging (MSI) device, WEFTA, Copenhagen, Denmark (oral presentation) - Lytou, A., Tsakanikas, P., Fengou, L-C., Nychas, G-J (2022). Multispectral imaging (MSI) coupled with machine learning for the evaluation of authenticity in several seafood. Proceedings of the 10th International Symposium on Recent Advances in Food Analysis (RAFA), 6-9 September, Prague, Czech Republic (poster presentation). - Lemonia-Christina Fengou, Lytou Anastasia, George-John E. Nychas (2023). Survey: Microbiological quality of fish from retail, 10th International conference ''Mikrobiokosmos'', 30 November-2 December, Larissa, Greece}	

	Scientific Journals *(at least two in the following)* ● Food Control ● LWT-Food Science and Technology ● MDPI – Foods ● MDPI – Applied Sciences ● Food Research International ● Scientific reports **Status at end of project:** - A machine learning approach for the estimation of freshness in Mediterranean seabream using a portable Multispectral Imaging (MSI) device. In collaboration with Scio and VIDEOMETER (under preparation)
	Public reach magazines/news ▪ N/A **Status at end of project:** - Presentation of VideometerLite sensor and its capabilities at a Greek TV program (channel) – October 2023
	Events Participation / Industry Events AUA envisions and plans to disseminate results within the context of food related scientific conferences on an international level e.g., EFFoST, WEFTA, and IAFP **Status at end of project:** - RAFA conference (mentioned above), - AUA participated in Researcher's night (>15000 visitors) in Athens (September 2022) having the opportunity to present the concept of the TMF project as well as to demonstrate the VideometerLite - The AUA team participated in 2nd Agri Innovation Expo. During the event, the concept of the TMF project as well as the main ideas and findings were presented. The expo gave the opportunity to showcase TMF's innovative solutions and promote networking with the stakeholders. TMF's representation at the expo could lead to new opportunities and increased recognition as first

	steps for its implementation in the Aquaculture industry.
Individual Dissemination Plan	AUA's dissemination involves the following: ▪ Dissemination via online means and specifically (a) social media channels, (b) press publications and news items via various publication channels (i.e., web-portals, newspapers etc.) (c) webinars for presenting the project results (d) contributions to project newsletter, public news articles etc. (e) meetings and/or seminars with related stakeholders
Dissemination Means to be employed	AUA will be employ news and posts on AUA's homepage to communicate the project and the corresponding outcomes, magazines, scientific publications, oral/poster presentations in conferences and finally joint events with the participation of related stakeholders.
Running or upcoming EU projects TraceMyFish could cooperate with	Connection Ditect H2020 project (https://ditect.eu/). Other related BlueBio projects are under consideration
Human Capacity Building Activities	● 2-3 post doc fellowship (~2 years) ● VideometerLite performance and training. ● Student exchange. **Status at end of project:** ▪ Anastasia Lytou (AUA) visited VIDEOMETER premises in Copenhagen and joined VIDEOMETER team for a couple of weeks in April 2022. During this visit, she trained on VideometerLite and several other tools and software that will be used in the TMF project. ▪ Lemonia C. Fengou (AUA) visited Videometer premises in Copenhagen in May 2023 for 2-weeks. During her visit, fish freshness was further investigated, she was trained on the updated software, while next steps and issues concerning data analysis and Videometer software were further discussed with the partners. ▪ Anastasia Lytou visited Icelandic University and MATIS premises in Reykjavik in April 2023 for 2-weeks. During this visit, she trained on the Texture Analyzer, performing at the same time microbiological, and Multispectral Imaging analysis (VideometerLite1, VideometerLite2, VideometerLab4.

	▪ Training of M.Sc. students on the VideometerLite (AUA, Laboratory of Microbiology and Biotechnology of Foods

7.3 NTNU

Partner Number: 3	Partner Acronym: NTNU	Person(s) in Charge: Jørgen Lerfall

Target Groups	▪ Academia and industrial stakeholders with the interest of improved traceability along the seafood value chain:
	   o Food scientists
	   o Atlantic salmon producers
	   o Salmon slaughtering and processing owners
	   o Retailers	

Dissemination & Communication Activities	*Conferences/Events* ▪ EFFoST (https://www.effost.org/home/default.aspx) ▪ WEFTA (https://www.wefta.org/tp-32145-2/news/news#!section) ▪ AquaNor (https://aquanor.no/en/) **Status at end of project:** - Anita Nordeng Jakobsen, Sine Marie Moen Kobbenes, Marcus Hoff Hansen, Aske Schultz Carstensen, Jørn-Owe Johansen, Jørgen Lerfall. "Application of a portable multispectral imaging prototype for detection of spoilage in Atlantic salmon (Salmo salar L.) stored on ice." Oral presentation at the 59th WEFTA conference in Copenhagen, Denmark by Anita N. Jakobsen. October 16th-20th, 2023.	
	Scientific Journals ● LWT-Food Science and Technology ● Journal of Food Engineering ● Food Research International ● Scientific reports ● Aquaculture **Status at end of project:** Due to delayed generation of data in the salmon pilot, it was not possible to write any scientific publications within the first year.	

	However, we are aiming 1-2 papers to be written within the project's year two
	Public reach magazines ▪ Global aquaculture advocate (https://www.globalseafood.org/blog/tag/global-aquaculture-advocate/) ▪ Norsk Sjømat (https://sjomatbedriftene.no/norsk-sjomat/) **Status at end of project:** No articles not yet written, however, we are aiming to write a manuscript to be submitted to Norsk Sjømat, in spring 2023.
	Events Participation / Industry Events NTNU plans to participate and present results on scientific conferences and events such as EFFoST, WEFTA, and AquaNor. **Status at M12:** The consortium participated at this year's EFFoST conference but did not have any data from the project to present. However, in year 2 results were presented at WEFTA (see conferences above).
Individual Dissemination Plan	NTNU's dissemination plan includes two main strands, namely: ▪ Dissemination via online means and specifically (a) social media channels, (b) press publications and news items via various publication channels (i.e., web-portals, newspapers etc) and (c) webinars for presenting the project results ▪ Dissemination via offline means, namely participation with booths to key events related to Food Science and Aquaculture
Dissemination Means to be employed	NTNU will be able to: ● Share posts about the project via social media channels such as Facebook, Twitter and LinkedIn ● Publish scientific data from the project reaching both academia and relevant industrial stakeholders ● Participate in virtual and physical events as the ones mentioned in the relevant section (Dissemination & Cooperation), where the project's results can be presented and showcased to potential users and future adopters.
Running or upcoming EU projects TraceMyFish could cooperate with	**Qualisea:** Application of VideometerLite v.1 on Alaria eculenta. Collaboration between UoI, NTNU and SINTEF Industry, Biotechnology and Nanomedicine.
Human Capacity Building Activities	● One post doc fellowship (2 years) ● 1-2 MSc students annually ● Short-medium time mobility for 2 persons times two

	Status at end of project:
	- We are still searching for a post doctor candidate that fits the project, interviews have been conducted and hopefully the candidate is on board M1 2023. There is one MSc student working on the project at NTNU and two persons were on a short term mobility to UiO M3 2022.

7.4 VIDEOM

Partner Number: 4	Partner Acronym: VIDEOM	Person(s) in Charge: Nette Schultz
Target Groups	Players within the seafood industry in all levels of the supply chain: - Harvesting/fishing - Processing - Transporting - Retailers	
Dissemination & Communication Activities	*Conferences/Events* **Status at end of project:** - IASIM, Conference on spectral imaging in Esbjerg, Denmark, July3ʳᵈ-6ᵗʰ 2022. (T7.3 and T8.1) - DiTECT, SAFFI, TMF Workshop Athens 20th October 2023. "The Application of Spectral Imaging in the Field of Food Science" Lecture by Jens Michael Carstensen during DiTECT, SAFFI, TMF event in Athens.	
	Scientific Journals N/A **Status at end of project:** - Paper in preparation in collaboration with AUA - Paper in preparation in collaboration with UoI/Matís	
	Public reach magazines PlusProces, article in Danish magazine	
	Events Participation / Industry Events ANUGA Foodtec (T7.3 and T8.1) in Cologne, Germany April 26ᵗʰ -29ᵗʰ, 2022	
Individual Dissemination Plan	- Videometer's dissemination plan includes two main strands, namely: - Dissemination via online means and specifically (a) social media channels, (b) webinars for presenting Videometer technology (d) quarterly newsletter for Videometer stakeholders (more than 800 subscribers) - Dissemination via offline means, namely participation with booths to key events related FoodTech, Spectral Imaging and Machine Vision - Webinars **Status at the end of the project:** The following webinars have been held and have attracted a wide audience of specialists. - Free Videometer webinar – March 31ˢᵗ, 2022	

	- Spectral image acquisition and basic analysis – September 22nd, 2022 - Machine learning or Spectral images – October 6th, 2022 - Applications of spectral imaging for FoodAg integrity – October 20th, 2022 - In depth nCDA, nMahalanobis, MNF/PCA – October 27th, 2022. - Segmenation building – November 3rd, 2022. - Session Recipe building – November 17th, 2022 - Multispectral Fluorescence imaging with filter changer – December 1st, 2022 - Introduction to CDT – December 15th, 2022. - Spectral Image Acquisition and Basic Analysis, March 9th, 2023 - Machine Learning for Spectral Images, March 23rd, 2023 - Segmentation Building, May 11th, 2023 - Session Recipe Building, May 25th, 2023 - Spectral Image Acquisition and Basic Analysis, September 26th, 2023 - Machine Learning for Spectral Images, October 10th, 2023 - Applications of Spectral Imaging for FoodAg Integrity, October 24th, 2023 - Advanced MSI - In depth nCDA, Mahalanobis, MNF/PCA - November 7th, 2023 - Segmentation Building - November 21st, 2023. - Session Recipe Building - November 28th, 2023 - Multi-Spectral Fluorescence Imaging - December 5th, 2023 - Introduction to CDT - December 12th, 2023
Dissemination Means to be employed	Videometer will be able to: ▪ Share posts about the project via the company's social media channels such as Facebook, Twitter and LinkedIn (which include more than 1,500 followers) ▪ Prepare news items about the project and share via web portals with broad outreach that focus on the FoodTech and Machine Vision industries. Participate in virtual and physical events as the ones mentioned in the relevant section (Dissemination & Cooperation), where the project's results can be presented and showcased to potential users and future adopters and prepare workshops.
Running or upcoming EU projects TraceMyFish could cooperate with	DiTECT
Human Capacity Building Activities	● Webinars for training on Videometer technology ● Young researcher exchange: ● Hosted Andrea Rakel Sigurðardóttir (UoI), Lemonia Fengou (AUA) and Anastasia Lytou (AUA) at Videometer's premises.

7.5 UOI

Partner Number: 5	Partner Acronym: UoI	Person(s) in Charge: María Guðjónsdóttir
Target Groups	Scientific community, fishing industry, consumers.	

Dissemination & Communication Activities	*Conferences/Events* ▪ At least one annual conference/meeting participation planned. ▪ Potential conferences: WEFTA, EFFoST etc. **Status at end of project:** ● Sigurðardóttir et al. (2023). "Exploring multispectral imaging for nematode identification in fish fillets: towards automated detection". Oral presentation by UoI/Matís/Videometer, at the 59th West European Fisheries Technologists Association (WEFTA) conference in Copenhagen, Denmark, October 16th-20th, 2023. Presenting author: Andrea Rakel Sigurðardóttir, UoI. ● María Guðjónsdóttir. The Icelandic food and nutrition society's general assembly, October 20th, 2022. – Oral presentation of TraceMyFish by UoI. ● María Guðjónsdóttir. Sustainable Healthy Diets general assembly meeting, November 1st, 2022. – Oral presentation of TraceMyFish by UoI. ● María Guðjónsdóttir, Andrea R. Sigurðardóttir, Hildur Inga Sveinsdóttir. Multispectral imaging in marine research. The Icelandic Marine conference – Sjávarútvegsráðstefnan, Reykjavík, Iceland, November 2nd-3rd, 2023 – Oral presentation by UoI/Matís
	Scientific Journals ● At least one annual scientific peer reviewed publication planned. ● Potential journals include Food Chemistry, Journal of Food Engineering, LWT Food Science and Technology, MDPI-Foods. **Status at end of project:** The activities within the PhD student Andrea Rakel Sigurðardóttir's research project include 5 publications, in which 3 are directly linked to the TraceMyFish research activities. The manuscripts in preparation are: ● Automatic nematode detection in Atlantic cod with VideometerLab ● Prediction of Quality Index Method (QIM) sensory scores with multispectral imaging

- Prediction of texture and storage stability of Atlantic cod during cold storage with multispectral imaging

Public reach magazines
▪ At least one annual public news article, or other news media planned.
▪ Potential public reach magazines: TBD
Status at end of project:
Information on the TraceMyFish project has been promoted through the project's social media platforms (reaching about 200 followers) as well as through the Facebook page of the Faculty of Food Science and Nutrition at the University of Iceland. The Faculty Facebook page has a steady fanbase of 831 followers.

Events Participation / Industry Events
▪ Stakeholder meetings with Lýsi and BRIM, March 2022. BRIM interested in testing of Videometer technologies in their value chains.
▪ Stakeholder meeting with ÚR, April 4th, 2022: Producer of frozen fish products interested in adding quality monitoring with the VideometerLite and VideometerLab instruments for the onboard freezing processes. Activities planned in unison with Icelandic domestically funded research project "Bætt nýting vinnsluferla við sjófrystingu karfa" - Matvælasjóður / Improved processes of onboard freezing of redfish"
▪ Further stakeholder meetings planned in Iceland.
Status at end of project:
In addition to the abovementioned stakeholder meetings UoI has participated in the following events:
• Stakeholder meetings with BRIM in Iceland on September 21st and October 12th, 2022, for planning of whitefish value chain activities.
• Stakeholder meetings with Vísir hf, followed up by e-mail correspondence in October 2022 on Anasakis detection trials within the whitefish value chain, and planning of PhD student Andrea Rakel Sigurðardóttir doctoral project.
• Discussions with QualiSea BlueBio Cofund consortium on potential synergies between the projects. TraceMyFish techniques are likely to be valuable for seaweed quality assessment during the spring harvest in 2023.
• Discussions with Sustainable Healthy Diets consortium on potential synergies between projects. Non-destructive quality assessment fits well into strategies for increased sustainability within food production. Potential synergies identified for utilization of the TracMyFish techniques for product development from underutilized raw materials within the Sustainable Healthy diets project.

	● Interaction with the Icelandic marine sector at the Icelandic Marine Conference, November 2023.
Individual Dissemination Plan	UoI's dissemination plan include the following strands, namely: ▪ Dissemination via online means and specifically (a) scientific article writing and publication, (b) conference participation, (c) the project homepage (design and updates) (d) social media channels (Twitter, LinkedIn, Facebook), (e) contributions to project newsletter, public news articles etc. (f) stakeholder meetings and seminars **Status at end of project:** The overall indiviudal dissemination plan of UoI is unchanged from the original plan including ● Launching of TraceMyFish homepage ● Launcing of TraceMyFish social media channels (Twitter, LinkedIn, Facebook) ● Participation in Videometer training seminars ● Stakeholder engagement participation ● Conference and meeting participation ● Writing of scientific papers.
Dissemination Means to be employed	UoI will be use the following dissemination means News and posts on homepage, social media, magazines, scientific publications, oral/poster presentations, and stakeholder event participation **Status at end of project:** Unchanged from original plan.
Running or upcoming EU projects TraceMyFish could cooperate with	**QualiSea** - show interest in using the VideometerLite and VideometerLab techniques for seaweed quality monitoring **Biozoostain** – potential utilization of the VideometerLab techniques for process monitoring and product development. **Sustainable Healthy Diets** - potential utilization of the Videometer techniques for process monitoring and product development. **AccelWater** – potential utilization of the Videometer techniques for process monitoring and product development.
Human Capacity Building Activities	● Videometer setup and training in Iceland finished in March 2022. Feedback meeting with Videometer on May 4th on VideometerLite performance. ● Stakeholder meetings and seminars. ● Student exchange. **Status at end of project:** In addition to the above mentioned activities the following HCB activities have taken place:

	- Participation in stakeholder meetings and gatherings as listed in the report - Launching of PhD project of Andrea Rakel Sigurðardóttir, who is supervised by partners from UoI, Matís and Videometer. - Summer student project supervised by UoI/Matís in association with the Icelandic Student Innovation fund (Nýsköpunarsjóður námsmanna). **Young researcher exchange:** **Anastasia Lytou (AUA**) visited the **University of Iceland and Matís** in Reykjavík, in April 2023. Duration of stay: 2 weeks. During this visit, she trained on the Texture Analyzer, performing at the same time microbiological, and Multispectral Imaging analysis (VideometerLite1, VideometerLite2, VideometerLab4). **Sophie Keller,** PhD student at NTNU, Norway visited UoI and Matís in Iceland in January 2023 to take part in the planned whitefish value chain activities performed there. Duration of stay: 1 month. **Andrea Rakel Sigurðardóttir,** PhD student at UoI, Iceland visited **Videometer** in Denmark in May-June 2023. The PhD student is supervised by partners from UoI, Matís and Videometer. Duration of stay: 3 weeks. **Andrea Rakel Sigurðardóttir,** PhD student at UoI visited Videometer again in September 2023. Duration of stay: 1 week.

7.6 MATIS

Partner Number: 6	Partner Acronym: Matís	Person(s) in Charge: Hildur Inga Sveinsdóttir
Target Groups	Scientific community, fishing industry, consumers.	
Dissemination & Communication Activities	*Conferences/Events* - At least one annual conference/meeting participation planned. - Potential conferences: WEFTA, EFFoST etc. **Status at end of project:** - BlueBio Cofund meeting, October 6th, 2022. TraceMyFish presentation by Matís. - Sigurðardóttir et al. (2023). "Exploring multispectral imaging for nematode identification in fish fillets: towards automated detection". Oral presentation by UoI/Matís/Videometer, at the 59th West European Fisheries Technologists Association (WEFTA) conference in Copenhagen, Denmark, October 16th-20th, 2023. Presenting author: Andrea Rakel Sigurðardóttir, UoI. - María Guðjónsdóttir, Andrea R. Sigurðardóttir, Hildur Inga Sveinsdóttir. Multispectral imaging in marine research. The Icelandic Marine conference – Sjávarútvegsráðstefnan, Reykjavík, Iceland, November 2nd-3rd, 2023 – Oral presentation by UoI/Matís. *Scientific Journals* ● At least one annual scientific peer reviewed publication planned. ● Potential journals include Food Chemistry, Journal of Food Engineering, LWT Food Science and Technology, MDPI-Foods. **Status at end of project:** The activities within the PhD student Andrea Rakel Sigurðardóttir's research project include 5 publications, in which 3 are directly linked to the TraceMyFish research activities. The manuscripts in preparation are: ● Automatic nematode detection in Atlantic cod with VideometerLab ● Prediction of Quality Index Method (QIM) sensory scores with multispectral imaging ● Prediction of texture and storage stability of Atlantic cod during cold storage with multispectral imaging *Public reach magazines* ▪ At least one annual public news article, or other news	

	media planned. ▪ Potential public reach magazines: TBD
	Events Participation / Industry Events ▪ Stakeholder meetings with Lýsi and BRIM, March 2022. BRIM interested in testing of Videometer technologies in their value chains. ▪ Stakeholder meeting with ÚR, April 4th 2022: Producer of frozen fish products interested in adding quality monitoring with the VideometerLite and VideometerLab instruments for the onboard freezing processes. Activities planned in unison with Icelandic domestically funded research project "Bætt nýting vinnsluferla við sjófrystingu karfa" - Matvælasjóður / Improved processes of onboard freezing of redfish". ▪ Further stakeholder meetings planned in Iceland. **Status at end of project:** In addition to the abovementioned stakeholder meetings Matís has participated in the following events: ● Stakeholder meetings with BRIM in Iceland on September 21st and October 12th, 2022, for planning of whitefish value chain activities. ● Stakeholder meetings with Vísir hf, followed up by e-mail correspondence in October 2022 on Anasakis detection trials within the whitefish value chain, and planning of PhD student Andrea Rakel Sigurðardóttir doctoral project. ● Discussions with QualiSea BlueBio Cofund consortium on potential synergies between the projects. TraceMyFish techniques are likely to be valuable for seaweed quality assessment during the spring harvest in 2023. ● Discussions with Sustainable Healthy Diets consortium on potential synergies between projects. Non-destructive quality assessment fits well into strategies for increased sustainability within food production. Potential synergies identified for utilization of the TracMyFish techniques for product development from underutilized raw materials within the Sustainable Healthy diets project.
Individual Dissemination Plan	Matís's dissemination plan include the following strands, namely: ▪ Dissemination via online means and specifically (a) scientific article writing and publication, (b) conference participation, (c) contributions to the project homepage (d) contributions to social media channels (Twitter, LinkedIn, Facebook), (e) contributions to project newsletter, public news articles etc. (f) stakeholder meetings and seminars

Dissemination Means to be employed	Matís will be use the following dissemination means News and posts on homepage, social media, magazines, scientific publications, oral/poster presentations, and stakeholder event participation
Running or upcoming EU projects TraceMyFish could cooperate with	**QualiSea** - show interest in using the VideometerLite and VideometerLab techniques for seaweed quality monitoring **Biozoostain** – potential utilization of the VideometerLab techniques for process monitoring and product development. **AccelWater** – potential utilization of the Videometer techniques for process monitoring and product development.
Human Capacity Building Activities	• Videometer setup and training in Iceland finished in March 2022. Feedback meeting with Videometer on May 4th on VideometerLite performance. • Stakeholder meetings and seminars. • Student exchange. **Status at end of project:** In addition to the above mentioned activities the following HCB activities have taken place: • Participation in stakeholder meetings and gatherings as listed in the report • Launching of PhD project of Andrea Rakel Sigurðardóttir, who is supervised by partners from UoI, Matís and Videometer. • **Anastasia Lytou (AUA**) visited the **University of Iceland and Matís** in Reykjavík, in April 2023. Duration of stay: 2 weeks. During this visit, she trained on the Texture Analyzer, performing at the same time microbiological, and Multispectral Imaging analysis (VideometerLite1, VideometerLite2, VideometerLab4). • **Sophie Keller,** PhD student at NTNU, Norway visited **UoI and Matís** in Iceland in January 2023 to take part in the planned whitefish value chain activities performed there. Duration of stay: 1 month.

8 CONCLUSIONS

The communication and dissemination plan was revised and updated annually during the project duration. The key performance indicators identified for each activity provide easy monitoring of the effectiveness of the different means of communication and eases the assessment of whether all intended goals of the TraceMyFish project have been reached at the end of the project duration.

After the first year of the TraceMyFish projects most KPI parameters set for the first 12 months were close to or already fulfilled. More detailed data acquisitions in the first months of 2023 provided input for further publications, presentation at scientific and industrial events, and for the preparation of diverse communications and dissemination materials. The main KPIs within communication, dissemination and human capacity building activities for the project as a whole were thus achieved within the project duration.

9 APPENDICES

1. JOINT WORKSHOP FOR SAFFI, DITECT AND TRACEMYFISH

STAKEHOLDER WORKSHOP
20TH OCTOBER 2023

Stakeholder Workshop Invitation

Dear,

We would like to invite you to our stakeholder workshop which will be held on the **20th of October 2023 in Athens** at the Agricultural University of Athens

Objectives of the workshop: The workshop is jointly organized by three (3) EC-funded projects, namely SAFFI (https://saffi.eu/), DiTECT (https://ditect.eu/) & TraceMyFish (https://tracemyfish.hi.is/)

SAFFI (SAfe Food for Infant in the EU and China) is a 4-year multi-actor project of 20 partners (academics, health security players, infant food manufacturers, technological SMEs and an association of paediatricians) co-funded by the EC (H2020) and the Chinese MOST. SAFFI targets food for EU's 15 million and China's 45 million children under the age of three. It aims at developing an integrated approach to enhance the identification, assessment, detection and mitigation of safety risks raised by microbial and chemical hazards all along EU and China infant food chains.

DiTECT [Digital Technologies as an enabler for a continuous transformation of food safety system] is Bringing together research, industrial and food authority partners representing the agro-food industry in the EU and China, DiTECT aspires to establish the foundation for future food safety monitoring platforms, through the development of a standards-based, modular, Big Data-enabled platform, capable of accurately predicting food safety parameters of a given food product based on data collected in real-time via cost-efficient sensors, at crop, grain storage, livestock and finally in the food supply, incorporating blockchain processes.

TraceMyFish is a two-year research project, which aims to advance supply system in three geographically distributed blue bioeconomy value chains, by designing and implementing a iFish Management System that will allow the tracking and tracing of safety and quality-critical information across the links of the targeted value chains.

This workshop will focus on food (infant is included) safety, food spoilage, predictive modelling traceability, microbiological and chemical hazards, environmental contaminates, Internet of food, big data and data science

We would be grateful if you could inform us regarding your availability for the above date before 16 October 2023, so that we can proceed with the organisation of the workshop. This invitation is extended to others in your network with an interest in the challenges of food safety.

Thank you and looking forward to hearing from you.

Contact Persons
DiTECT: George-John Nychas (gjn@aua.gr)
SAFFI: Katerina Pissaridi (kpissaridi@jotis.gr)
TMF: Panagiotis Zervas (panagiotis@scio.systems)

STAKEHOLDER WORKSHOP
20TH OCTOBER 2023

20th October 2023
Agricultural University of Athens, Iera Odos 75, Athens 11855
Library (see attached map)

Agenda

20th of October 2023	
Time (Central European Time) *[1 hour behind in UK/IR]*	
09:30-09:50	Registration & Connection
09:50-10:00	Welcome (AUA)
10:00-10:15	**Dr. Erwan ENGEL** *SAFFI*
10:15-10:30	*Prof Emeritus George NYCHAS* *DiTECT*
10:30-10:45	*Dr. Antonis Koukourikos* *TraceMyFish*
10:45-11:00	**Break**
11:00-12:30	**Questions – Discussion – Closing**
12:30-13:30	**Buffet**

Connection information

Webinar's connection
Topic: Workshop -SAFFI, DiTECT & TMF *George Nychas is inviting you to a scheduled Zoom meeting.* *Time: Oct 4, 2023 09:30 AM Brussels* *Join Zoom Meeting* *TBD* *Passcode: 1234*

STAKEHOLDER WORKSHOP
20TH OCTOBER 2023
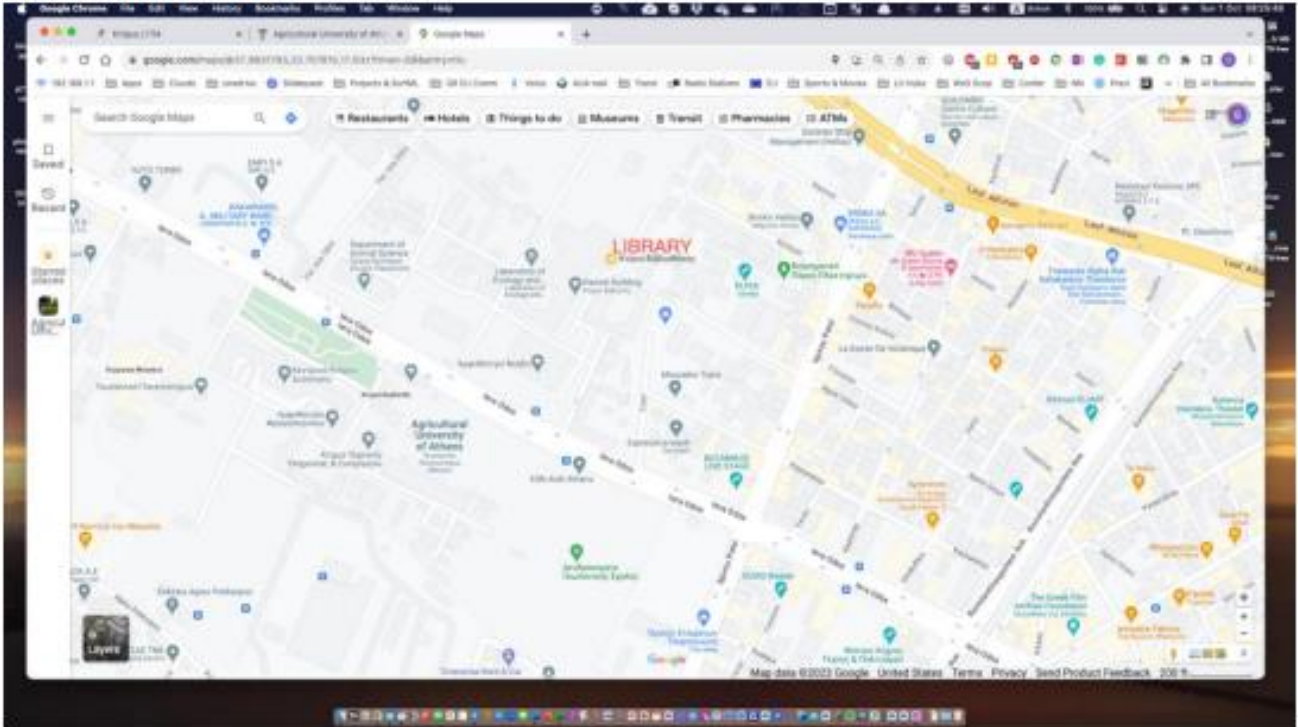
**2nd Agri Innovation Expo 2023, 21-23 September – Athens, Greece**

The AUA team participated in 2nd Agri Innovation Expo. During the event, the concept of the TMF project as well as the main ideas and findings were presented. The expo gave the opportunity to showcase TMF's innovative solutions and promote networking with the stakeholders. TMF's representation at the expo could lead to new opportunities and increased recognition as first steps for its implementation in the Aquaculture industry.

Training of M.Sc. students on the VideometerLite (AUA, Laboratory of Microbiology and Biotechnology of Foods
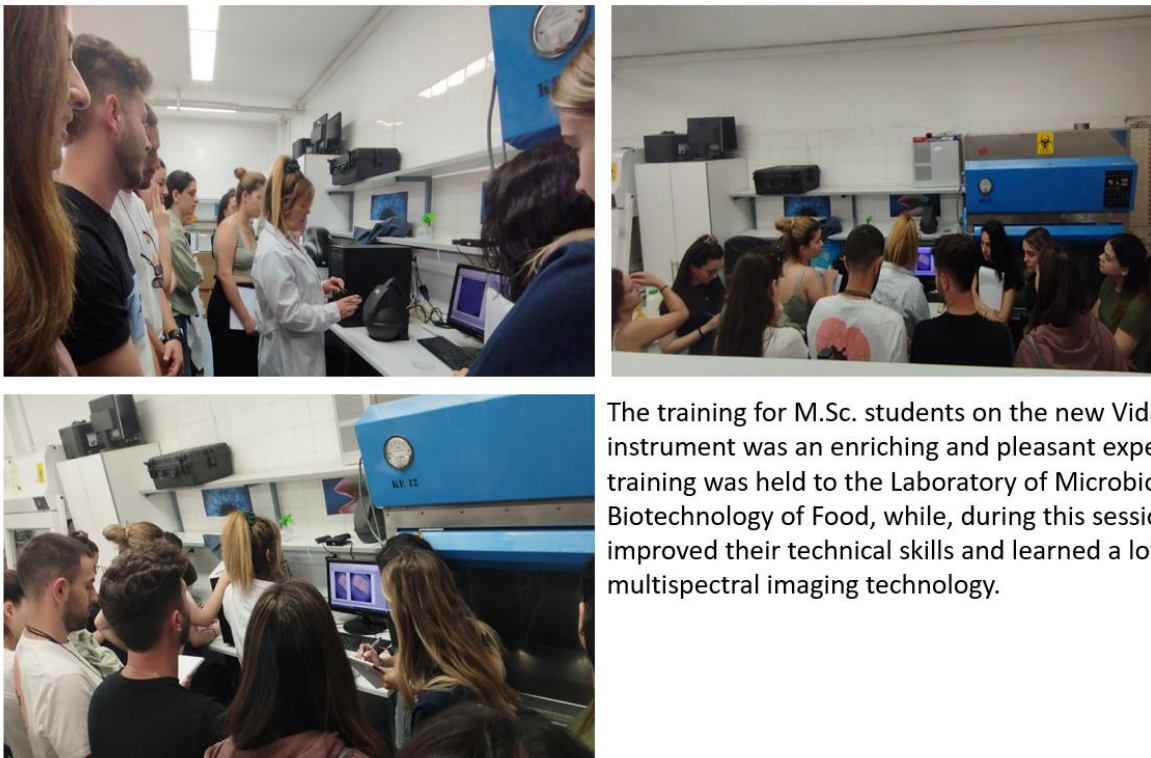
The training for M.Sc. students on the new VideometerLite instrument was an enriching and pleasant experience. The training was held to the Laboratory of Microbiology and Biotechnology of Food, while, during this session, students improved their technical skills and learned a lot about multispectral imaging technology.

Presentation of VideometerLite sensor and its capabilities at a Greek TV program (channel) – October 2023
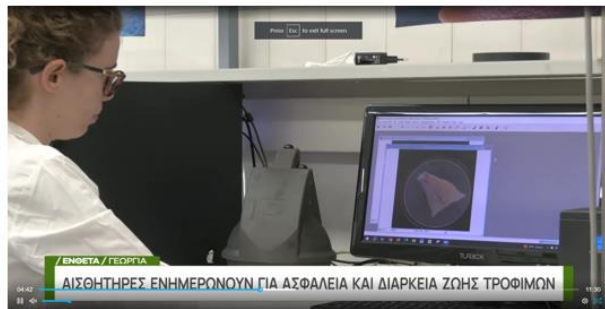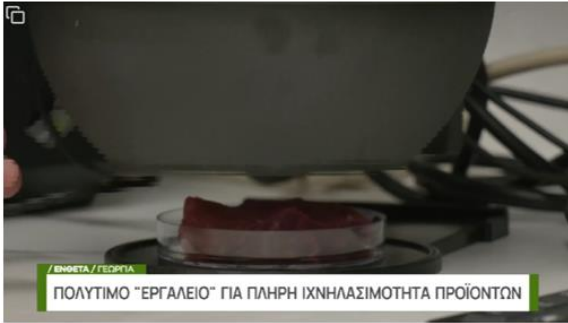
24th -26th October 2023. Resilient Blue Bio-refinery technologies training course

Dr. Fengou participated in the "Advanced BlueBio Training Course" titled "Resilient Blue Bio-refinery technologies: innovative solutions to valorize fishery side streams" which was organized by NTNU and held in Aalesund. The course featured a diverse range of presentations, from academic experts and representatives of the Norwegian industry. During the course, attendees engaged in laboratory activities and collaborated in groups to develop short proposals. Additionally, a visit to local fish farms was organized, providing valuable insights. This course provided an excellent platform for knowledge exchange, question exploration, networking opportunities, and the chance to enjoy the beautiful city of Aalesund.