



V2 D1.8 SEA2LAND 4th General Assembly Meeting Minutes



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Document Summary

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V1	03/08/2022	INITIAL VERSION
V2	04/10/2022	DISSEMINATION LEVEL PU, INSTEAD OF CO, REMOVAL OF CONTENT DETAILS, DUE TO CONFIDENTIAL CONTENT: Industrial Exploitation) Commercial Expectations by some partners as appears in Annex 1, Part B

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Project coordinator: NEIKER-INSTITUTO VASCO DE INVESTIGACION Y DESARROLLO AGRARIO SA

Abstract

The present Minutes Report was generated in order to provide an overview of the 4th SEA2LAND General Assembly Meeting. Certain technical parts were discussed during the meeting and for further information, contact the project coordinator.

Disclaimer

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1 Meeting Details

Title of Meeting	4th General Assembly Meeting
Date of Meeting	28-30/06/2022
Meeting Time	<u>See Agenda (Section 2)</u>
Meeting Location	Bilbao – Arkaute- Bilbao
Organizer of the Meeting	(NEIKER)
Type of Meeting	Ordinary Meeting

List of Participants

Project Partner	Representative
Nº1 NEIKER	Miriam Pinto Tobalina, Susana Virgel, Maritxel Makazaga, Itziar Orozko Idoia Ziluaga (29th)
Nº2 BARNA	Leire Ariztegui (28th)
Nº3 CAVIAR	Diego Mendiola
Nº4 NUTRI	Marie Soone
Nº5 AZTI	Carlos Bald, Haizea Dominguez and Monica Gutierrez
Nº6 CATAR	Christine Raynaud
Nº7 UNIVPM	Josué Gonzalez Camejo and Corinne Andreaola
Nº8 ABT	Tamás Bardócz
Nº9 UVIC-UCC	Lidia Paredes and Tiago Vitor Akaboci
Nº10 FERTINAGRO	Carlos Fuertes and Miriam Meléndez
Nº11 GRONN	Tommy Olsen and Lars Riiser Evju
Nº12 NIBIO	Bente Føreide; Mette Goul Thomsen
Nº13 ISQ	Marco Antonio Estrela, Helena Monteiro
Nº14 INPT	Jean-François Fabre, Claire Vialle
Nº15 UGENT	Cagri Akyol and Jingsi Zhang
Nº16 ECRI	Liina Edesi and Tiina Talve
Nº17 UMIL	Claudia Vecchiarelli
Nº18 CAPA	Jean-Luc Lafargue and Patrice Mahieu.
Nº19 FIBL-CH	Jan Landert, Philipp Oggiano
Nº20 ULIEGE	
Nº21 NLR-NN	
Nº22 INI	Eva Martínez de Narvajás, Mirentxu Asín and Camino Fábregas
Nº23 INIA	Luis Inostroza
Nº24 FIBL-EU	Pia Pedross
Nº25 IPS	Ana – Marija Špichagel and Petar Klanac
Nº26 COPEMO	Delegated to UNIVPM

2 Agenda

Tuesday, 28th June 2022

Time (CET)	Day 1
9.30	Session open, <i>NEIKER</i> Welcome
9.40 – 10.30	WP2 (NEIKER-Task leaders) 50' <ul style="list-style-type: none"> • (Task 2.1 NEIKER and Task 2.3 AZTI) • Discussion about results obtained nutrient imbalance
10.30- 10.50	WP3 (AZTI-Task leaders) <ul style="list-style-type: none"> • Task 3.1
10.50 – 11.10	COFFEE BREAK
11.10-12.00	WP3 (AZTI-Task leaders) <ul style="list-style-type: none"> • Task 3.2, • Task 3.3, • Task 3.4
20'	
20'	
12.00 – 13.30	WP4 (UVIC-UCC – Task leaders) 1h hour 15 min (Task 4.1 – Task 4.3) <ul style="list-style-type: none"> • Task 4.1 • Task 4.2, • Task 4.3, • Task 4.4 • Task 4.5
20'	
20'	
20'	
20'	
13.30	LUNCH
14.30-15.15	WP3-WP4 (WPleaders and task leaders) <ul style="list-style-type: none"> • Discussion/working session about pilots implementation Moderators: Miriam Pinto, Carlos Bald, Lidia Paredes
15.15	Visit to AZTI pilot
20.30	DINNER

Wednesday, 29th June 2022

Time (CET)	Session 2
9.30 – 13.30	Visit to NEIKER pilot
13.30 – 14.30	LUNCH
14.30 – 15.15	WP5 (Task leaders) <ul style="list-style-type: none"> • Task 5.1 ECRI • Task 5.2, NIBIO • Task 5.3, NEIKER • Task 5.4 ULIEGE
15.15 – 16.00	WP1 NEIKER-INI
16.00 – 16.15	COFFEE BREAK
16.15 -17.00	WP9 Presentation (INI) Working session about regional events
17.00 – 17.20	WP8 Presentation (IPS)

Thursday, 30th June 2022

Time (CET)	Session 2
9.30 – 10.30	WP6 (UGENT) <ul style="list-style-type: none"> • WP status • Working session. Moderator: Çağrı Akyol
10.30 – 10.50	COFFEE BREAK
10.50 – 12.20	WP7 (FIBL-CH) 1 hour <ul style="list-style-type: none"> • WP status • Working session. Moderator: Jan Landert
12.20 – 12.30	Meeting end Group picture

3 1st Day Minutes

3.1 Welcome

Meeting's First Session: June 28th, 2022

Miriam Pinto (NEIKER) welcomes all partners to SEA2LAND's Fourth Project Meeting. She thanked them all for the efforts for attending the 1st in person consortium meeting. A participants roundtable introduction was held. Miriam Pinto (NEIKER) explains the agenda with all partners and introduces the topics to be explained and discussed during the Fourth Consortium Meeting. She goes over the agenda and the different WPs to be analysed throughout the day's session.

3.2 WP2

NEIKER's Representative, Miriam Pinto presents the objectives of WP2, and the status of the tasks. Task 2.2, 2.4, 2.5 and 2.6 has just finished, and deliverables were uploaded in Continuous reporting module. She focuses on task 2.1 and task 2.3.

- Task 2.1

Concerning task 2.1 remarks the specific objectives and the methodology is being used. A mention is done regarding data collection in some countries in which there were lack of detailed data, and that probably it will be needed more information.

A paper copy of P balance (t P and kg P/ha) is provided to all meeting attendants. She provides explanations of such maps. She provides explanation about the differences at NUT3 level and remark that consider data at NUT2 and NUT1 cannot properly considered.

During 2022 the work will focus in improving the maps, it has started the comparison the of results obtained after extrapolations in some countries with those provided by the partners, soil cartography and other sources.

A mention of the risks related to this task is done, in both cases they appeared, and mitigation measures were applied.

- Task 2.3

Carlos Bald (AZTI) exposes task objectives and partners involved. A draft deliverable was generated. He presents data, and remark difficulties to get the information in certain countries at NUT3 level. The complexity of the fish value chain and the absence of data does not allow to establish the geographical distribution with more precision than regionally.

To conclude Carlos, exposes some items, between them: there is an increasing demand on raw material for fishmeal production. However, this option for the studied side-streams does not compete as it is part of an integrated biorefinery process. In Estonia it doesn't work with sludge due to its low availability

NEIKER finish the session remarking the need of data about crops and marine data.

3.3 WP3

Carlos Bald (AZTI) makes a short introduction about WP3 next deliverables and milestones.

Concerning D3.5. Technical datasheets, they will ask to fertilisers specialist in the consortium about what it must be included in datasheets.

Task 3.1

Marie Soone (NUTRI) exposes task objective and the work implemented in the first 17 months, material collection (Fish waste, Fish sludge Food waste (from horeca) and Tree leaves and common reed litter), sidestream characterization and the main conclusions obtained.

Regarding Subtask 3.1.3. Formulation of tailor-made fertilizers, Initial testing of fish waste fermentation, testing of different granulating methods and small-scale vermicomposting production have been done. A summary of results interpretation is presented.

Initial pot trial has been carried out to find out the best side-stream composition of granules for further development of bio-based fertilisers. A mention about results is made.

Regarding Subtask 3.1.2. Technology/process implementation

Details of prototype of technological solution for fish based biofertilizer production is provided.

To conclude exposes the work done in the task for each partner and minor deviations of the initial plan and resources.

Task 3.2

Carlos Bald (AZTI) explains task objective and procedures implemented

He shows figures about results of Enzymatic hydrolysis and autolysis trials.

Results of the trials for obtaining and intermediate product from the liquid side-streams from the tuna processing are explained.

Concerning intermediate products production, AZTI explains the work made with BARNÁ, 2 hydrolysis batches, and the hydrolysates were concentrated by AZTI and then the concentrate was sent to FERTINAGRO to formulate final fertilisers. A silage trial was carried out simultaneously.

Concerning task 3.2.3 Biostimulants production as an alternative bio-fertiliser, Miriam Pinto (NEIKER) presents the work done inside the Cantabrian Sea Pilot Case to cultivate microalga.

Concerning deviations, no deviations have appeared.

Task 3.3

Corine Andreola (UNIVPM) presents the work done inside this pilot case

She shows the scheme of the pilot

She explains pilot trials: shredding and wet separation made by UNIVPM, and the analysis made to recovered shell compared with two well-known commercial calcium corrective agents, to be assessed as liming agent (made by UMIL).

Details about enzymatic hydrolysis assays are provided. The biostimulant effect is tested by UMIL. Results have to be further investigated since not statistically reliable data are achieved.

Concerning composting pilot trials details of the experiment are provided

Pyrolysis test has been made a lab scale to obtain Biochar. Biochar characterization was made.

Chitin extraction (lab scale) from shrimp shell is explained.

3.4 WP4

Lidia Paredes (UVIC-UCC) makes a short introduction about WP4 objectives.

Task 4.1

Marie Soone (NUTRI) exposes the work done in the 1st year concerning the trials made in Estonia and Norway about fish sludge collecting, bokashi fermenting and drying

In Estonia, a first test of Bokashi fermentation was initiated, A second assay was made with fish sludge with 5% dry matter, and measurement of changes in N loss and other properties before and after drying were made, comparing impact of bokashi to drying.

In Norway, explanations about the work to collect fish sludge are provided.

Details about bokashi assays were provided using fish sludge after sedimentation and pressing, but the sludge was too solid to be mixed.

Tommy Olsen (Gronn) mentions concerning risks that fish sludge is still prohibited to be used in organic fertilisers and that Energy prices may threaten the practice of drying sludge.

Task 4.2

Christine Raynaud (CATAR) exposes the activities implemented since task 4.2 starting. Data about the raw materials used: aquaculture industry by-products, and their characterization are provided.

Details about the TMC pilot plants (2 for process development and optimization, BC21 and EV25) developed by CATAR and the BBFs to be provided.

And the TMC trials for the feasibility study are provided. Conclusions of schemes 1 and 2 are shown, and 2 more schemes (3-4) were tested to optimise the process.

Christine exposes the tasks to be done in coming months and mentions the risks they have in their task.

Task 4.3

Lidia Paredes (UVIC) exposes the biorefinery process to recover nutrients from marine aquaculture sludge.

Concerning the current status of the pilot plant units, she mentions that in the case of acid scrubber, they are still working in the design of the unit, being the other ones available.

She exposes the origin of fish sludge from a company with Recirculating aquaculture system RAS and results of its characterisation.

She explains the assays made for the valorisation of the liquid fraction and the results of N, P, K recoveries obtained. She explains the assays made for the valorisation of the solid fraction and the results of the dynamic respirometer test.

Finally, she mentions the potential risk and mitigation measures.

Task 4.4

Tiago Vitor Akaboci (UVIC) does a short introduction of the activities implemented since last consortium meeting.

He exposes the raw material used.

He shows the schemes of valorisation solid and liquid fraction.

Results of Biodrying tests at lab-scale are showed.

Results of Biodrying tests at lab scale and pilot scale of mixture of raw materials are showed. Experiments, are detailed.

Finally, he exposes the work to be done till month 24.

Task 4.5

Lidia Paredes (UVIC) reminds that this task won't start till August 2023.

Lidia exposes WP milestones

WP3-WP4 session

Discussion/working session about pilots' implementation

During this session the objective is to share with all the partners the main concerns and challenges of pilots in WP3 and WP4.

4 2nd Day Minutes

4.1 WP5

Task 5.1

Liina Edesi (ECRI) explains the main objective of task 5.1, to evaluate the uptake of plant nutrients (N, P and K) from BBFs, developed in WP3 and WP4. Based on the results, 3–5 promising BBFs will be selected for further field trials.

She shows task timeline, the samples to do pot testing should be received in June-August. Samples from Norway and Estonia have been received. Some of the pilots don't have samples yet. She reminds that pot test should be finished in December, and complete Plant chemical analyses and uptake calculations January or February.

The amount of BBFs used in a pot experiment depends on its N, P and K content. For pot experiments, they need enough material of each BBF.

Methodology of pot trials is exposed, being in ECRI 10 weeks growth duration. And in FIBL-CH 14 weeks growth duration. FIBL-CH will do P-/K-availability for 8 products but a remark is done that they can do more, if necessary.

AZTI will send samples of its products to FERTINAGRO, being available in September. UNIVPM will send the samples in July. CATAR will send samples next week. NUTRI will send biostimulants to ECRI, FIBL-CH and NEIKER. UVIC will send solid samples (2).

Task 5.2

Miriam Pinto (NEIKER) introduces the task. The objective is to know if the BBF's perform in field as predicted from pot trials, and to get data for modelling. It is a set of comparable experiments throughout Europe: Belgium, Norway, Estonia, Spain. Note: during the meeting CAPA mentions to NEIKER the interest of doing field testing also in France.

A detailed protocol and methodology of the experiments has been prepared; the number of the tested fertiliser will be between 3 and 5. Pot tests will be finished and have results available before starting this task. Considering the results, some BBFs will be selected for field testing.

Reminder about milestones and deliverables is made.

Task 5.3

Miriam Pinto (NEIKER) exposes how this task will be implemented. A workshop in on modelling (DNDC) was held in Bilbao 25-26/10/21. Furthermore, a draft of the definition of parameters to be measured in field trials is available. The list of next activities is detailed.

Task 5.4

Miriam Pinto (NEIKER) exposes the main objective of this task and how is expected to be implemented: evaluating the performance of the best 2 BBF on minimum 2 crops and different soils (number to be determined) in different climates.

Concerning the work done, during the WP5 Kick-off meeting a Virtual visit of the Ecotron facilities was done and the first discussion of the options with the WP5 participants.

Since September 2021: Internal discussion and planning of the SEA2LAND Ecotron trials at ULiège.

Finally, Miriam mentions 2 main risks related with this wp.

- Produced BBFs do not meet specific requirements of cultivar and soils close to the study case.
- Delay in BBFs production, not ready when time season starts. Data expected?

Miriam mentions that it will be necessary to reach an agreement to match the amounts that pilots can produce and the minimum area for field testing.

4.2 WP1

Eva Martínez de Narvajás (INI) presents the actions carried out since last coordination meeting.

A summary of networking activities is exposed: SEA2LAND is member of Biorefine Cluster Europe and Nutrient Recycling Community, a first contact meeting was held with Walnut Coordinator, project presentation made at [ESNI 2022](#), and a preliminary contact from [LIFEAGROPAPER](#) project coordinator.

She exposes the activities to be done in coming months, and the status of WP deliverables and milestones.

Mention of the WP risks as mentioned in Grant agreement is done.

Eva Martínez de Narvajás remarks that the main next step is the 1st PERIODIC REPORTING. She shows the timeline to reach at the end of August with the periodic report released to REA. Details of the process, explanations about cost eligibility, how to calculate personnel costs, timeline and others are exposed.

Finally, INI exposes that 1st review meeting has been agreed by 16/09/22 with a draft of meeting agenda and 2 external experts appointed for attending the review meeting. The structure of the content of WP ppts for that meeting is also exposed.

A previous preparatory meeting will be held early in September (8/09/22).

Concerning next consortium meeting. INI – NEIKER expose that next consortium meeting is proposed to be held online in January and in June in person. INI will send a doodle to fix the dates for next consortium meeting for second half of January.

4.3 WP8

Ana-Marija Špicnagel (IPS) presents the content in WP8. Objectives, tasks (8.1-8.5), approach, outcomes, deliverables, milestones, etc as WP hasn't started yet.

The approach of the work to be done is made. Deliverables to be released and WP milestones are exposed.

Concerning the work, in task 8.1 Petar Klanac will explain the work done. Work to be done in the tasks are presented. The preliminary strategy for business model and business plan development is presented.

Petar Klanac (IPS) provides an overview of the task and the work to be done in the next couple of months. Task leader is NEIKER and although task start is expected to be July 2023, it will start earlier. The task includes mapping stakeholder groups in 9 EU participating countries. It will cover 3 main segments:

- methodology of mapping stakeholder groups based on literature review
- overview of stakeholder groups in the SEA2LAND project
- general conclusions and recommendations

In the last 2 months the methodology of mapping stakeholder groups has been defined.

4.4 WP9

Mirentxu Asín (INI) presents the main aspects of WP9. She starts reminding all partners that they have the obligation to promote and disseminate SEA2LAND project's actions and results during its lifetime. She mentions the legal obligations described in grant Agreement.

A mention about how the WP is being implemented is made.

A mention about the activities implemented since last consortium meeting is made. Analytics summary of website, social media are provided.

Mirentxu Asin does an exposition about workshops in each pilot case.

5 3rd Day Minutes

5.1 WP6

Cagri Akyol (UGENT) reminds to partners WP6 objectives.

He explains the table with the IP/BBFs to be released by the different pilots in WP3 and WP4

Concerning sampling and shipment, he remarks that not all samples have been received in the requested way. Pathogens analysis will be done by UMIL.

Cagri Akyol further showed the progress UGENT has achieved so far with the characterization of BBFs.

UGENT explains the process for measurement of nitrate leaching (in controlled and field conditions) and GHG emissions in controlled conditions. In the case of microplastics a protocol is drafted but not finished yet, due to the samples' high organic matter content.

Concerning soil health measurement, it is not defined yet it will be done next year.

Deliverables list and Milestone list are exposed.

Figure of task timeline is shown.

5.2 WP7

Jan Landert (FIBL-CH) starts presenting an overview of WP7 tasks, deliverables, and milestones. He goes over each WP task exposing the work done and to be done

Kick of meeting has been held, deepening in the goals and approach of the different tasks.

Concerning data collection combined data collection will be done for tasks 7.1, 7.2 and 7.3

He shows the activities and their status

Task 7.1

Carlos Fuertes exposes the steps of the TEA process (data collection protocol, TEA template (excel template is currently under development), Pilot TEA of the application and deliverable).

Concerning the task timeline remarks that is scarce.

Concerning the data collection protocol and TREA template will be send to each pilot responsible and FERTINAGRO expect to receive the data at the end of the summer

Task 7.2.

LCA will be implemented in 2 steps

Step 1: BBF-production inventory and impact assessment of BBF.

Two task meetings have been held. In the second meeting they deepened in how to allocate environmental impacts from the fisheries, and from the pilots/process to produce some BBFs and how to allocate inputs in the process.

Partners also discussed the issue of upscaling. At this moment it is a challenge as some of the pilots are still in lab scale. They assume that they will have data at pilot scale and to reach industrial scale they propose to do upscaling interviews with each pilot leaders.

T7.3

Jean Francois Fabre (INPT) goes over TASK 7.3

He shows the different methodology choices

T7.4

This task hasn't started yet. It starts next year. Activities expected to be done are exposed

All the partners are expected to participate.

List of WP deliverables are presented, all deliverables are achievable. In the case of D7.1 expected to be delivered in M24, the cooperation of pilot's leaders is needed to provide the data in due time.

List of MS WPs are presented in the case of M21, M23 and M40, the deadlines to achieve them are uncertain at this moment:

M21: LCA inventories by M24, as data collection could take slightly longer than foreseen so that compilation of data could in the worst case be slightly delayed. However, **no** impact on deliverables. M23: Agronomic data received and M24: Information to develop DSS both by M40 are uncertain at this moment as data from crop prediction model could be delayed. We are monitoring the situation and considering alternative input data (such as data from pot trials).

Jan Landert exposes other aspects related with WP7: Common data collection of Task 7.1, 7.2 and 7.3 and personnel changes

5.3 WP7 working session

Jan Landert (FIBL-CH) exposes that there are 2 open questions to discuss in this session

We need to finish a deliverable form task 7.1 end of year, and the question is how to update data from some of the pilots not pilot scale yet. What process to update the data? Jan proposes to pilot leaders, to inform WP7 when a change in the process of a pilot is made.

The second issue is concerning data quality. Will them estimates or they will be data from measurements? The question is what the easiest way is to collect the quality of the data. FIBL-CH exposes that during interviews this will be done. Corinne Andreola (UNIVPM) mention that interviews is a good option to know data quality.

Data from Baltic, and North Sea pilot cases have been received, waiting to receive the rest in July.

Miriam Pinto (NEIKER) thanks all the partners and SEA2LAND 4th Consortium Meeting ended.

SEALAND



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