ODYSSEA

Operating a network of integrated observatory systems in the Mediterranean Sea

ODYSSEA GA Meeting, Lisbon

Meeting notes and action items

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ODYSSEA Project Information	
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Table of Contents

ODYSSEA General Assembly Meeting in Lisbon
Date: October 23-25, 2018
Venue: Chamber of Commerce, Lisbon, Portugal

1- Summary of sessions

1. **Overview:** Georgios presented an overview of project goals, status of project activities and next steps for Y2 which he termed "**the Year of the Observatories**".

We are now mainly finished with preparatory phase of ODYSSEA; the consortium is developing a community of users who will benefit in an ongoing way from the value of marine data access. We have mapped the end users at the 9 observatory locations. The Platform is in a good state – V1 to be released by end of Jan and available to selected stakeholders from various sectors for first use. V2 by end of 2019.
Training for capacity building and creation of jobs at sea has begun.

Y2 of the ODYSSEA project is most challenging. It will include integration of many components and their deployment: observatories, the Platform with its algorithms, models, sensors. Data flow and alarms/alerts must be clarified. The **Observatory Manager (OM) role is becoming much more active**. OM should be ready to report local potential users and contact them to promote the Platform. They need technical capacity, (i.e. put in place and in motion operational teams with qualified people) for monitoring/modelling activities and instruments (computer/office) must be set up. Observatory managers need technical capacity to deploy instruments – training sessions are planned at Alseamar and Develogic for the glider and lander respectively. They must solve logistics in order to acquire licenses, train and deploy instruments.

This coming February: All WP leaders are required to lead preparation and fully participate in the **project interim review in Brussels.**

2. **ODYSSEA support to policy measures**

    a. Daniel CEBRIAN-MENCHERO (SPA-RAC) spoke of implementation obligations of the **Barcelona Convention** Parties regarding monitoring of the status of Mediterranean environment. ODYSSEA Marine Observatories will fill in data gaps, increase resolution and benefit from using UNEP/IMAP indicators for Eutrophication, Hydrology, Pollution among others.

    b. Mercedes de Juan (VPORTS) spoke of implementation of the **Ballast Water Convention** in the framework of the Barcelona Convention. ODYSSEA can provide a tool to monitor and implement several EU conventions in this area. This is a big gap and coordination with stakeholders is crucial. Alien species control will be far easier. Working groups are being established to create protocols, analyse data available/requested, manage cooperation between ports environmental agencies and maritime administrations.

ODDYSEA will be providing marine data on ballast water, to support compliance with a number of policies, will add huge value and save money. This is beyond the DoA and will replace deployment of sensors in this observatory. This should be communicated to the PO and if required added as an amendment.
Georgios: perhaps Marco's observatory should consider a similar path. At any rate, the definition of credible alternatives to initially proposed arrangements is a prior condition for smooth implementation and involved partners (UNIBO & VPORTS) will of course comply with this requirement.

3. **First three selected use cases & associated business cases** (as selected in Athens at WP leaders meeting) were discussed in further detail with input from partners.

    a. Marion and Laura introduced a methodology to generate the business case from the use case.
    b. The three top priority cases include: Biodiversity, biological pollution and erosion and are
    c. considered for inclusion in V1 of the Platform (release date estimated end January 2019).
    d. Working groups were established for each use case to further develop the use case scenarios and link to business case.
    e. WGs will consist of a team leader, a front-end expert, back-end developer, algorithm developer, expert in specific field.
    f. See 'Services: definition) ppt sent by Lorinc for details and follow up.

Decision: Add Meny to the business Working Group

4. **Next set of use cases selected** for further exploration and for incorporation into the Platform at later stage. (V1 or V2)

    a. See 'Use case by Service- partner assignment excel prepared by Marion in appendix to this summary.

AI: Lorinc, Marion to set up working group for each use case

    b. Laura: presented the **Policy use case**.
    Simon: ODYSSEA may provide a more cost-effective way to implement the IMAP Policy.
    Georgios: if ODYSSEA can use its tools to cover one or several of these indicators in a cost-effective way, this becomes a business case.
    Ilias: there are specified dictionaries and data are received by the countries. No one will pay for this data. If we could get national or regional data through ODYSSEA, as a permanent source of data which can fill the gaps in more locations, this could be very interesting.

5. **Networking with other initiatives**

    a. Presentation by Dr Ilias Mavroeidis, Programme Management Officer – Governance at UN Environment / Mediterranean Action Plan Coordinating Unit
    There is a lot of synergy between MAP and ODYSSEA. Ilias suggested inviting someone from ODYSSEA to join one of their next meetings/workshops. A side event of ODYSSEA for the Ministerial Meeting set for December 2019 in Naples would be of particular interest.

AI: Laura to follow up with Ilias on ODYSSEA participation.

    b. Presentation by Dr Sana Benismail, Institut National des Sciences et Technologie de la Mer (Tunisia)
    CLAIM project is about cleaning plastic litter in the Med. CLAIM would be happy to collaborate and share data. They are finishing another H2020 project – developing very low -cost sensors to measure hydrographic parameters – would like to test these through ODYSSEA observatories – ODYSSEA and CLAIM are both in the same Gulf of Gabes.
    Propose to compare ODYSSEA microplastics sensor with the methodology of CLAIM.

AI: Organize a confcall with the CLAIM Coordinator George from HCMR.

6. **Platform Development** (this summarizes multiple platform development sessions held in parallel over the 3 days, on various aspects of platform development)

a. **Interface and integration of data obtained by equipment into the platform. (Laurent, Rob, Sergio, Raanan, Nicolas, Simon K)**

Review of all **sensor components** (gliders, surface platform, lander) and integration of data to the Platform – **dataflow summary** ppt by Laurent is an appendix to this summary.

AI: Meny to provide legal advice regarding data flow/publication. Advise Alseamar regarding rights to publish data retrieved in a specific country on the ODYSSEA server.

Discussion of centralized or decentralized pre-processing QC QA of data and what they share. Pedro can automate QA and QC process to validate the data. Initial plan to keep the QA and QC at platform level with option to move this to observatory level if they ask.

AI: Carlo to prepare a template for all sensor manufacturers.

AI: Pedro to prepare a template for calibration parameters of all sensors on gliders/lander/

b. **Detailed development and algorithm integration**: Eduard is working to package and integrate post-processing algorithms into the platform. Eutrophication will be the first algorithm- the eutrophication algorithm for V1 (Jan, 2019). Claire to implement the semantics algorithm; Theodora suggests the Efficiency coefficient as a second algorithm. V1 will be deployed on CLS servers to avoid any problems of accessibility at this point. Docker is still missing and method for transmitting in-situ data to the platform from the observatories. This could be manually done. This will be set up in March – not for V1.

AI: Eduard to follow up with Assaf S. for update on the wave power algorithm

c. **Data sources for use cases**

AI: Convene **legal work team** for platform terms of user and data sharing issues– Meny, Marion, Simon K. Meny to speak with legal person at CLS.

Marion/Tony: current terms of use is OK for today.

Need to be able to integrate any type of data which can be useful for users in our use-cases. Should prepare a template- legal relation discussions should include this information.

Meny: each addition of new data requires a check of the terms of use. Ongoing monitoring is needed.

AI: Lorince prepare a template for datasets which are relevant for each use case/sector. List of products/list of services has been prepared already.

How do we rank the parameters? Based on which criteria? How do we present data to each user? This is part of description of services.

d. **Interface and integration of the models into the platform (Katerina, Nicolas)**

Integration of the first model results into ODYSSEA platform was discussed between Katerina, Nicolas, Eduard, Nikolaos (Kokkos), Marco, Paulo and Joao.

The first model results to be transferred will be from the Thracian Sea Observatory (to test FEWS publishing of results) and Morocco Observatory (to test AQUASAFE publishing). Marco will also upload test results of NEMO and BFM.

AI: Nicolas will share ftp for uploading model results by the 1st week of November

AI: Hidromod to update convertor to NetCDF-CF and add the metadata requested by CLS,

i. Update to CF full compliant following CLS check webpage,
ii. Global data attributes list (check with Nicolas)
iii. Set up publishing from AQUASAFE following D2.4

AI: Nikos, Joao and Marco to upload test forecasting results (end of November):

I. Hydrodynamic Model Output:
   (a) Number of variables: 5 (currents (u velocity, v velocity), sea level, water temperature, salinity)
   (b) Hourly forecasts
II. Wave Model Output:
   (a) Number of variables: 3 (significant wave height, mean wave direction, peak wave period)
   (b) Hourly forecasts
III. Water Quality Model Output:
   (a) Number of variables: 4-6
   (b) Daily averages

AI: Georgios, Nicolas, Katerina, Nikos, Joao and Marco to discuss (after the first uploads) storage limitations, and which levels to keep variables for (probably following CMEMS format).

7. **Training**

   Planned incorporation of models into the observatories – with strong support for ongoing operations.

8. **Citizen science** to build stakeholder involvement and contribution described by Arik (EcoOcean) and Citizen Science Sea Watch Application described and demonstrated by Inbar (SPNI). Discussed integration of data from the App into the ODYSSEA Platform. Claire described **Tweet harvesting and semantic information** analysis.

AI: Nicolas to estimate effort required to incorporate the App data into the Portal.

9. **Business planning (Marion, Menelaos, Simon vD, Sonja)**
   Discussion centered a) on business planning of services to be provided and b) ensuring sustainability after end of financing.
   Interest by end users is a good sign. Eutrophication should be ready by end February and will become the first test case. Activities that will be closely followed are the mapping of potential end-users (DELTARES) and platform development (Marion). Business planning group should meet in Brussels in combination with the Progress Report review.

AI: Simon vD to kickstart the business models. First identify costs and potential revenue for maintaining each observatory. Include what is needed from each observatory to deploy the instruments

AI: Meny will prepare a letter of understanding which will cover issues like liability, services to be offered, intellectual property rights etc.

AI: Deltares team will prepare slides describing services for the 3 cases (erosion, fisheries and litter).

10. **EMODNet and ODYSSEA** (Patrick Gorringe)
    Suggested presenting ODySSEA data at EMODNet and acknowledging ODYSSEA

11. **Training session: models** (Adelio, Katerina, Marco)
    The training session involved presentation of the models implementation methodology and the local platforms for the Observatories, presentation of first models results in the Northern Adriatic Sea, and

presentation of running the local platforms in operational mode (example of AQUASAFE by Adelio for Morocco, Algeria and Israel).
The responsibilities and the involvement of Observatories in model setup, calibration and validation tasks was discussed.
A separate mailing list has been created, namely Observatory-Tech, that will have bi-monthly meetings for all issues regarding models' implementation for the Observatories.
The urgent need to proceed with purchasing/or renting of high-end computing facilities for running models in operational mode.

AI: Katerina to organise 1st bimonthly meeting early December
AI: Ra'anan to manage hardware purchase/renting with Observatories

Coordinators of the 2 systems (AQUASAFE & FEWS) agreed to test uploading data on FTP server suggested by Nicolas in netCDF 4 uncompressed. There was discussion about predetermining the file type and size that will be produced from the models and the way that they will be transferred to the ODYSSEA platform.

Decision: Files will be transferred to the platform and not retrieved from the Observatory computers.

12. **Training session: interface** (Nicolas, Simon K)
    Training on the Platform interface was provided for Observatory Managers as a parallel session.

13. **Observatory readiness** levels was assessed for each site. Outstanding need for clearance in many N. African countries. (time for response estimated between 2-6 months). Discussed training readiness, costs associated with instrumentation and possible visit to each country for follow up. Deployment of instrumentation has to be completed end of 1st semester 2019 and training end of 1st quarter 2019.

AI: Ra'anan & Menelaos to follow closely and assist progress
AI: Essam to send Rob the exact location of the observatory in Egypt.

14. **Upcoming Dissemination:**
    Euronews will visit partners for Futuris documentary

15. **Next major meetings**
    a. Next WP leader meeting will take place in May, in Toulouse
    b. Next General Assembly Meeting will be held again 2nd half of October in Tunis, hosted by RAC/SPA (Daniel, Slim) and ANDDCVS (Hekma)

2- Action Items

	Description	Responsible	Date
1	Add Meny to the business Working Group	GA decision	done
2	Set up working group for each use case which will prepare slides describing services that will be offered for erosion/fisheries/marine litter	Lorinc, Marion	30.11.18
3	Put value on services provided in alignment with version 1 of the Platform	Marion	30.11.18
4	Follow up with Ilias on ODYSSEA participation in MAP Working Groups	Laura	30.11.18
5	Organize a confcall with the CLAIM Coordinator George from HCMR	Slim	30.11.18
6	Provide legal advice regarding data flow/publication. Advise Alseamar regarding rights to publish data retrieved in a specific country on the ODYSSEA server	Meny	30.12.18
7	Prepare a template for all sensor manufacturers	Carlos	30.11.18
8	Prepare a template for calibration parameters of all sensors on gliders/lander/	Pedro	30.11.18
9	Follow up with Assaf S. for update on the wave power algorithm	Eduard	30.11.18
10	Convene **legal work team** for platform terms of user and data sharing issues– Meny, Marion, Simon K. Meny to speak with legal person at CLS.	Marion	30.11.18
11	Prepare a Letter of Understanding to be used by ODYSSEA partners in their dealings with end-users and potential customers covering issues such as liability, services to be offered, intellectual property etc.	Meny	30.11.18
12	Prepare a template for datasets which are relevant for each use case/sector. List of products/list of services has been prepared already.	Lorinc	20.11.18

13	Estimate effort required to incorporate the Citizen's Science App data into the Portal	Nicolas	30.11.18
14	Kickstart the business models: identify costs and potential revenue for maintaining each observatory.	Simon vD	30.11.18
15	Prepare slides describing services for the 3 cases (erosion, fisheries and litter	Lorinc	30.11.18
16	Share ftp for uploading model results	Nicolas	30.11.18
17	Update convertor to NetCDF-CF and add the metadata requested by CLS	Adelio	30.11.18
18	Upload test forecasting results of Hydrodynamic Model Output, Wave Model Output, Water Quality Model Output	Nikos, Joao and Marco	
19	Discuss (after the first uploads) storage limitations, and which levels to keep variables (probably following CMEMS format)	Georgios, Nicolas, Katerina, Nikos, Joao and Marco	15.12.18
20	Follow closely and assist progress observatory readiness; manage hardware purchase/renting	Ra'anan & Menelaos	ongoing
21	Observatories will develop maps with end-users	Observatory Leaders Ra'anan & Menelaos	ongoing
22	Send Rob the exact location of the observatory in Egypt	Essam	30.11.18
23	Send post-processing algorithms for eutrophication to Eduard	Marco	30.11.18
24	Start talks to activate Adriatic Observatory in cooperation with Emilia Romagna Regional Protection Agency and report progress	Marco	30.11.18
25	Define credible alternative to (real-time) sensors in Valencia Observatory	Mercedes	15.12.2018

3- Associated Documents

ODYSSEA Use-case by service
ODYSSEA data-flow from sensors to observatories