

MILESTONE N°19

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MILESTONE NAME: Start of PSS implementation

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- Report after a specific action (TEMPLATE B) (test, diagnostic, implementation,...)
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Document description

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<u>JERICO-S3 MILESTONE</u> Joint European Research Infrastructure network for Coastal Observatory Science, Services, Sustainability	
Milestones title	Start of PSS implementation
Work Package Title	WP4
Milestones number	MS19
Description	JERICO-S3 Pilot Supersite (PSS) implementation (task 4.3) is supported by detailed planning of each action. This implementation plan addresses the key regional research questions, including sampling strategy, PSS integration strategy, best practices used, identification of data flows, QC routines and products, dissemination plan, and links to other regional observatories, PSSs and RIs. Once the implementation plan has been agreed among partner, the implementation period can be started.
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TABLE OF CONTENT

MILESTONE N°19	1
MILESTONE NAME: Start of PSS implementation	1
Document description	2
TABLE OF CONTENT	4
1. Objectives	4
2. Implementation process	4
3. Main report	5
4. Next steps (work plan)	6
5. Annexes and references	6

1. Objectives

The implementation of JERICO-RI Pilot Supersites includes a list of Actions for each PSS. Originally the implementation phase was planned for 2 years, but the start is slightly delayed due to covid-19. The current implementation period is from January 2021 to August 2022.

Each Action has its own objectives. The partnership and observation platform used are defined, including also other data sources and external partners when necessary. Details of the Action provides an outlook how it improves the regional and pan-European integration of observations and how the topic of Action is approached.

Once planning is completed and agreed among WPs, the PSS implementation may start. In some Actions, with straightforward planning, the actual implementation has been started already prior finalisation of MS19.

2. Implementation process

Each PSS includes several JERICO-RI partners, contributing to the operational observations. For each PSS and for each Action, one partner has been nominated for coordination, being the main contact point and leading the reporting actions. PSS and Action leads were in charge of providing the required information for the Actions. A template to collect information in uniform manner was created by WP Leads.

The process of Action planning was supported by between WP (WP 1 and WP3 included, as noted in MS 18), within WP4, within PSS and within each Action meetings. Finalisation of implementation plan was delayed partly due to covid-19 not allowing on-site partner meetings.

The final phase of planning took place in fall 2020, and the last modifications in Actions planning were done at 20.12. 2020. For practical reasons, the moment of official start of PSS implementation period is considered as January 2021.



3. *Main report*

Most of the Actions include collection of new data, and the related best practices, data flows and QC actions are described. Plan continues by identification of key results of each Action, identification of key users and links (inside JERICO-S3 project as well as outside it), and by planning the dissemination. The PSSs Actions links inside and outside JERICO-S3 are presented all together at the end.

Each PSS/Action was planned with the following entries:

- Map showing the key sustained platforms with in PSS
- Platforms in PSS
- Objectives.
- Action Lead and other Partners
- JS3 Platforms included
- Other data sources and external partners for implementation
- Overall timetable of Action
- Description of Action
- Best practices used or developed
- Data flows
- Data QC routines
- Data management issues
- Expected results
- Users of results
- Dissemination of results
- Links

The Actions included

4.1. Implementation strategies: Gulf of Finland Pilot Supersite
GoF PSS #1 Harmonized observations
GoF PSS #2 The performance of operational forecast models
GoF PSS #3 Optical data for Ocean Color product validation
GoF PSS #4 Detection of cyanobacterial blooms
GoF PSS #5 Mapping the deep-water oxygen conditions
GoF PSS #6 Biological interplay with the carbonate system
GoF PSS #7 Forecast models for cyanobacterial blooms
GoF PSS #8 Extreme events affecting phytoplankton - AQUACOSM collaboration I
GoF PSS #9 Promotion of the use of PSS data and products
GoF PSS #10 Connecting the other RIs in the region

4.2. Implementation strategies: North-West Mediterranean Pilot Supersite
NW-MED PSS #1: Reconstruction of the 3D coastal dynamics
NW-MED PSS #2: Impacts of river discharge to coastal ecosystems
NW-MED PSS #3: Extreme events affecting phytoplankton - AQUACOSM collaboration II
NW-MED PSS #4: Biogeochemical data and ocean colour products
NW-MED PSS #5: RI interactions
NW-MED PSS #6: Transnational integration



4.3. Implementation strategies: North Sea and English Channel Pilot Supersite
NSEA PSS #1 Harmonised observations of regional C fluxes
NSEA and CHANNEL PSS #2 Riverine input to the North Sea
CHANNEL PSS #3 Harmonised observations of plankton biomass, diversity and productivity dynamics
CHANNEL PSS #4 Products for Eutrophication Status Assessment
NSEA and CHANNEL PSS #5 Intercomparison of phytoplankton distribution using data integration
NSEA and CHANNEL PSS #6 Identification of Observational Gaps
NSEA and CHANNEL PSS #7 Cross-regional communication between PSSs (North Sea and Channel)
NSEA and CHANNEL PSS #8 Support to EU directives and ecosystem management
NSEA and CHANNEL PSS #9 Interaction with other RIs on ecosystem studies, eutrophication, coastal management and carbon fluxes

4.4. Implementation strategies: Cretan Sea Pilot Supersite
CRETAN PSS #1 Solubility and biological pumps
CRETAN PSS #2 Improved approximations of Primary Production
CRETAN PSS #3 Extreme events affecting phytoplankton - AQUACOSM collaboration III
CRETAN PSS #4 Upscale of Regional Data to a wider area
CRETAN PSS #5 New sampling strategies, new technologies, best practices
CRETAN PSS #6 Partnership building

4. *Next steps (work plan)*

Implementation continues until fall 2022. The next steps include following topics

D4.2 : Refined PSS monitoring strategies [M19]

Assessment and refinement of D4.1 after 1 year of PSS implementation. Revision of D4.1 after careful analyses of the initial status of implementation and obtaining feedback from other WPs.

D4.3 : Progress report on PSS implementation [M22]

Progress report of PSS implementation. Reporting especially regional integration, data flows, and development of products. Report modified workplan, responding to the feedback from D4.2.

As there was a delay in D4.1 and start of PSS implementation, these deliverables are likely to go a little further to gather the necessary information on PSS progress.

5. *Annexes and references*

Implementation plan *JERICO-S3 D4.1. JERICO-S3 Pilot Supersite monitoring strategies* can be found at

https://www.jerico-ri.eu/download/jerico-s3_deliverables/JERICO-S3_DELIVERABLE_4.1_V2-FINAL.pdf