



D17.3

Landscape analysis of the environmental RI community in Europe

WORK PACKAGE 17 – Coordination of RI
communication, development and implementation
of the ENVRI strategy

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ABSTRACT

This document gives an overview of the projects, networks and initiatives that were identified as relevant for the environmental research infrastructure (ENVRI) community. It further describes the open ENVRI community meetings that were organized aiming at engaging these identified communities and involving them in a dialogue. Last but not least, the results and benefits of such collaboration are presented here.

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DOCUMENT AMENDMENT PROCEDURE

Amendments, comments and suggestions should be sent to Magdalena.brus@icos-ri.eu

TERMINOLOGY

A complete project glossary is provided online here:

<https://envriplus.manageprojects.com/s/text-documents/LFCMXHHCwS5hh>

PROJECT SUMMARY

ENVRIplus is a Horizon 2020 project bringing together Environmental and Earth System Research Infrastructures, projects and networks together with technical specialist partners to create a more coherent, interdisciplinary and interoperable cluster of Environmental Research Infrastructures across Europe. It is driven by three overarching goals: 1) promoting cross-fertilization between infrastructures, 2) implementing innovative concepts and devices across RIs, and 3) facilitating research and innovation in the field of environment for an increasing number of users outside the RIs.

ENVRIplus aligns its activities to a core strategic plan where sharing multi-disciplinary expertise will be most effective. The project aims to improve Earth observation monitoring systems and strategies, including actions to improve harmonization and innovation, and generate common solutions to many shared information technology and data related challenges. It also seeks to harmonize policies for access and provide strategies for knowledge transfer amongst RIs. ENVRIplus develops guidelines to enhance transdisciplinary use of data and data-products supported by applied use-cases involving RIs from different domains. The project coordinates actions to improve communication and cooperation, addressing Environmental RIs at all levels, from management to end-users, implementing RI-staff exchange programs, generating material for RI personnel, and proposing common strategic developments and actions for enhancing services to users and evaluating the socio-economic impacts.

ENVRIplus is expected to facilitate structuration and improve quality of services offered both within single RIs and at the pan-RI level. It promotes efficient and multi-disciplinary research offering new opportunities to users, new tools to RI managers and new communication strategies for environmental RI communities. The resulting solutions, services and other project



outcomes are made available to all environmental RI initiatives, thus contributing to the development of a coherent European RI ecosystem.



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LANDSCAPE ANALYSIS OF THE ENVIRONMENTAL RESEARCH INFRASTRUCTURE

Introduction

The landscape of environmental research infrastructures (RI) is evolving constantly and it has been foreseen that during the lifetime of the ENVRIplus, new Research infrastructure projects and initiatives will emerge and the landscape of environmental Research Infrastructures might be reorganized (e.g. new RIs supported by H2020 Integrated activities calls or new RIs can emerge via ESFRI roadmap update process). To ensure that ENVRIplus is serving the entire environmental RI community - also the new RIs – task 17.3 conducted a regular mapping of the landscape.

Those new projects and initiatives identified during the mapping exercise were then invited to so called “ENVRI community meetings”, the annual gathering of all the environmental RIs, EC funded Integrated Infrastructure Initiatives, and other relevant RI networks as well as scientists/science communities interested in environmental RI matters. The open ENVRI community meetings enabled presentation of the ENVRIplus outcomes and facilitated the dialogs and interactions on the future needs, challenges and developments in the environmental RI community.

Some of the more advanced communities have applied for the Associated Partnership to ENVRIplus and the BEERi (Board of the European Environmental RIs) membership, and thus started a direct cooperation and became part of the ENVRI community.

This deliverable gives an overview of the projects, networks and initiatives discovered during the mapping of the landscape and their current status (in February 2019). It as well gives a summary of Open ENVRI community meetings organized during the project’s lifetime.



Environmental Research Infrastructure landscape

The table below provide an overview of the relevant projects, networks and initiatives that were discovered through a mapping of the European Commission funded projects. The coordinators of these projects (no matter if they were still active or past projects), were invited to open ENVRI community meetings. The idea of such meetings was to a) introduce the ENVRIplus project and its expected outcomes to these networks, b) engage them in a dialogue about their future needs, c) discuss how to actively involve the communities to fill in the gaps in the current environmental RIs landscape.

About eighteen different projects and networks participated in the open ENVRI community meetings, which resulted in nine of them applying for the associated partnership to ENVRIplus project and/or membership in BEERi (the Board of European Environmental Research infrastructures). The criteria for application and the application process are attached in Appendix 1. Their active participation in the project, and in BEERi, proved to be very fruitful, especially in terms of transfer of the knowledge from more mature RIs to these new/starting communities.

To provide a more concrete examples of the benefits, they had a chance to be involved in a) the joint communication activities, b) the training activities, c) contribute to work on the White paper on further integration of RIs in the environmental field including recommendations on co-locating research sites on national and international level, d) contribute to the development of ENVRI strategy as well as to sustainability plan, etc.

	PROJECT / NETWORK / RESEARCH INFRASTRUCTURE	FUNDING SCHEME	FUNDING PERIOD	STATUS	COOPERATION
ATMOSPHERIC DOMAIN					
	ARISE2	INFRADEV-1-2014 - Design studies	2015-09-01 to 2017-02-28	Project ended	BEERi member
	MACC-III	H2020-Adhoc-2014-20	2014-08-01 to 2015-08-31		
	EUFAR	INFRA-2012-1.1.13. - Research Aircrafts	2014-02-01 to 2018-01-31	Project ended	BEERi member
	BACCHUS	FP7-ENV-2013-two-stage	2013-12-01 to 2018-05-31	Project ended	



	EUROCHAMP-2020	FP7-INFRASTRUCTURES-2008-1	2016-12-01 to 2020-11-30	Project running	BEERi member
	PEGASOS	FP7-ENV-2010	2010-01-01 to 2014-12-31	Project ended	
	HEMERA	H2020-INFRAIA-2017-1-two-stage	2018-01-01 to 2021-12-31	Project running	BEERi member
	ESBO DS	H2020-INFRADEV-2017-1	2018-03-01 to 2021-02-28	Project running	
ECO/BIO DOMAIN					
	MIRRI	FP7-INFRASTRUCTURES-2012-1-RTD	2012-11-01 to 2016-04-30	Project ended	
	SYNTHESYS (CETAF/DiSCCo)	FP7-INFRASTRUCTURES-2012-1-RTD	2013-09-01 to 2017-08-31	Project ended	BEERi member
	EU BON	FP7-ENV-2012-two-stage	2012-12-01 to 2017-05-31	Project ended	
	AQUACOSM	H2020-INFRAIA-2016-1	2017-01-01 to 2020-12-31	Project running	BEERi member
	AgINFRA	FP7-INFRASTRUCTURES-2011-2	2011-10-15 to 2015-02-14	Project ended	
	BioFRESH	FP7-ENV-2008-1	2009-11-01 to 2014-04-30	Project ended	
	BioVEL	FP7-INFRASTRUCTURES-2011-2	2011-09-01 to 2014-12-31	Project ended	
	iMarine	FP7-INFRASTRUCTURES-2011-2	2011-11-01 to 2014-09-30	Project ended	
	MARS Network	FP7-ENV-2013-two-stage	2014-02-01 to 2018-01-31	Project ended	
	PESI	FP7-INFRASTRUCTURES-2007-2	2008-05-01 to 2011-04-30	Project ended	
	TREES4FUTURE	FP7-INFRASTRUCTURES-2011-1	2011-11-01 to 2016-04-30	Project ended	
	EMPHASIS-PREP	H2020-INFRADEV-2016-2	2017-01-01 to 2020-12-31	Project running	BEERi member
	ASSEMBLE Plus	H2020-INFRAIA-2016-1	2017-10-01 to 22-09-30	Project running	
	AQUAEXCEL2020	H2020-INFRAIA-2014-2015	2015-10-01 to 2020-09-30	Project running	
	EPPN2020	H2020-INFRAIA-2016-1	2017-05-01 to 2021-04-30	Project running	
	LifeWatch	FP7-INFRASTRUCTURES-2007-1	2008-02-01 to 2011-01-31	Project ended	BEERi member
HYDROLOGY / MARINE DOMAIN					
	Hydralab +	INFRAIA-1-2014-2015	2015-09-01 to 2019-08-31	Project running	



	EUROMARINE	FP7-ENV-2010	2011-02-01 to 2013-07-31	Project ended	
	Marinet	FP7-INFRASTRUCTURES-2010-1	2011-04-01 to 2015-09-30	Project ended	
	Marinet2	H2020-INFRAIA-2016-1	2017-01-01 to 2021-06-30	Project running	
	SEADATACLOUD	INFRAIA-01-2016-2017	2016-11-01 to 2020-10-31	Project running	
	AtlantOS	BG-08-2014	2015-04-01 to 2019-06-30	Project running	
	Assemble plus	H2020-INFRAIA-2016-1	2017-10-01 to 2021-09-30	Project running	
	EUMarineRobots	H2020-INFRAIA-2017-1-two-stage	2018-03-01 to 2021-02-28	Project running	
	DANUBIUS	H2020-INFRADEV-2016-2	2016-12-01 to 2019-10-30	Project running	BEERi member
SOLID EARTH					
	RICAS2020	INFRADEV-1-2014 - Design studies	2015-06-01 to 2018-05-31	Project ended	
	QUEST	FP7-PEOPLE-ITN-2008	2009-12-01 to 2013-11-30	Project ended	
	REAKT	FP7-ENV-2011	2011-09-01 to 2014-12-31	Project ended	
	SHARE	FP7-ENV-2008-1	2009-06-01 to 2012-11-30	Project ended	
	VERCE	FP7-INFRASTRUCTURES-2011-2	2011-10-01 to 2015-09-30	Project ended	
	EUROVOLC	INFRAIA-02-2017	2018-02-01 to 2021-01-31	Project running	
	SERA	INFRAIA-01-2016-2017	2017-05-01 to 2020-04-30	Project running	
MULTIDOMAIN					
	ARICE	INFRAIA-02-2017	2018-01-01 to 2021-12-31	Project running	

The enlargement of the ENVRI community

Following pictures illustrate the growth of the ENVRI community during the lifetime of the ENVRIplus project from May 2015 until April 2019.





FIGURE 1 ENVIRONMENTAL RESEARCH INFRASTRUCTURE COMMUNITY IN MAY 2015



FIGURE 2 ENVIRONMENTAL RESEARCH INFRASTRUCTURE COMMUNITY IN APRIL 2019 (9 NEW RESEARCH INFRASTRUCTURES INVOLVED IN THE COLLABORATING ACTIVITIES)



Open ENVRI community meetings

1st meeting

The first meeting was organized on Tuesday, 10th of May 2015 in Zandvoort, Netherlands.

Agenda

- Introduction of participating projects/RIs - Participants
- ENVRIplus introduction – Werner Kutsch
- Current Environmental Research Infrastructure (ENVRI) landscape – Gelsomina Pappalardo
- Building the ENVRI community - Sanna Sorvari
- ENVRI Virtual Community Platform – Magdalena Brus
- Joint Strategy for the European environmental (in-situ) research infrastructures – Ari Asmi
- Cross-domains cooperation – Paolo Laj

There were about 35 participants in the workshop representing 12 external projects, organizations or initiatives

2nd meeting

2nd ENVRI community meeting was organized in Málaga, Spain on 7th of November 2017. It was organized as “Joint workshop of ESFRI Environmental Strategic Working Group and ENVRI community”. All the external projects and initiatives were again invited to participate and contribute to discussions.

Agenda

9:00- 9:30 Welcome and scope of the meeting

9:30 – 10:15 ENVRIplus project & ENVRI community landscape (ENVRIplus Coordinator Werner Kutsch)

10:15- 10:45 Coffee break

10:45 – 11:45 **Research Infrastructure Innovation**

Moderator: Laura Beranzoli (EMSO)

Rapporteur: Erik Delory (JERICO-NEXT)

Presentation: Glenn Nolan (EUROGOOS)

Panellists: Jacques Roy (ANAEE), Valerie Thouret (IAGOS), Glenn Nolan (EUROGOOS)

11:45 – 12:45 **Socio-economic impact of Environmental Research Infrastructures**

Moderator: Mairi Best (EMSO)

Rapporteur: Stefanie Holzwarth (EUFAR)

Presentation: (Werner Kutsch, ICOS)

Panellists: Ana Casino (DiSSCO), Jean-Francois Rolin (IFREMER), Abad Chabbi (INRA), Werner Kutsch (ICOS), Michael Schultz (Danubius)

12:45 – 13:45 Lunch break

13:45 – 14:45 **Data and e-needs, ENVRI community and EOSC**

Moderator: Sanna Sorvari (ACTRIS),

Rapporteur: Markus Fiebig (ACTRIS) TBC

Presentation: Massimo Cocco (EPOS)

Panellists: Francesca Guglielmo (IS-ENES), Zhiming Zhao (ENVRIplus Theme 2), Massimo Cocco (EPOS), Thierry Carval (SEADATACLOUD)



14:45 - 15:15 Coffee break

15:15 – 16:00 International activities and role of Environmental Research Infrastructures

Moderator: Claire Gourcuff (Euro-Argo)

Rapporteur: Jacco Konijn (ENVRiplus)

Presentation: Ari Asmi (ENVRiplus)

Panellists: Michael Mirtl (eLTER), Helen Graves (EPOS), Paolo Laj (ACTRIS)

16:00 – 16:45 Regional impact, Pan-European dimension

Moderator: Jens Nejstgaard (AQUACOSM)

Rapporteur: Sabine Philippin, ACTRIS)

15 min presentation Juan Miguel Gonzales-Aranda (LifeWatch)

Panellists: Ole Jørgen Lønne (SIOS) Anders Tjulin (EISCAT), Jon Parr (EMBRC), Juan Miguel Gonzales-Aranda (LifeWatch),

16:45 – 17:00 Wrap up, Conclusions

3rd meeting

The 3rd meeting was organized on November 9th 2018 in Riga, Latvia. Six new projects or communities participated in here.

Agenda

- Environmental Research Infrastructure (ENVRI) landscape and Building the ENVRI community - Sanna Sorvari Sundet
- ENVRiplus introduction and programme of the ENVRI week – Ari Asmi
- ENVRI Virtual Community Platform – Magdalena Brus
- Introduction of the newly Associated Research Infrastructures
 - DANUBIUS
 - EUROCHAMP
 - EMPHASIS
- Introduction of the projects/networks/communities participating for the first time – Attendees
- Future of the ENVRI community
- ENVRI FAIR – Helen Graves
- ENVRI Strategy and Sustainability – Ari Asmi
- Integration of the Research Infrastructures related to terrestrial ecosystem research – Michael Mirtl
- Open Discussion

4th meeting

The 4th meeting will be the final ENVRiplus Dissemination event that is going to be organized in Brussels, Belgium on 4th of June 2019. The event is planned to be an interactive event combining talks, panel discussions, and science market format – all discussing the European Environmental Research Infrastructures and the results of their joint collaboration.

In more detail, the event will focus on

- The societal impact of European Environmental Research Infrastructures
- The key role of European Environmental Research Infrastructures in the global Earth observations
- The strategy of the Environmental RIs for the future
- The added value in collaboration, sharing expertise and resources across the Earth system disciplines

The entire community has been invited to this event including the projects and networks listed above.



Conclusion

The open ENVRI community meetings proved to be a very good concept to engage the RI projects and networks that were not part of the ENVRIplus, but were important from the ENVRI community perspective. They initiated a close collaboration with nine RI projects that are now considered to be part of the community. As a result of this activity, EUFAR, ARISE, EUROCHAMP, HEMERA, DANUBIUS, AQUACOSM, LifeWatch, EMPHASIS and DiSCCo became the members of BEERi, a Board for European environmental research infrastructures. This allowed them to participate in and contribute to strategic discussions and activities for their own benefit as well as for the benefit of the entire ENVRI community.



Appendix 1

Criteria and process for Associated Partnership to ENVRIplus project and BEERi membership

Background

ENVRI cluster is a well-recognized player in the European and international Research Infrastructure landscape as it represents a vast number of Environmental Research Infrastructures. The activities of ENVRI cluster are currently supported by the EC funded project for cluster cooperation – ENVRIplus.

ENVRI cluster encourages all Environmental Research Infrastructure communities, which are not involved in our ongoing ENVRIplus project, but are interested in participating in ENVRIplus project activities, to apply for:

- the Associated Partnership to ENVRIplus project to create a clear and unambiguous relationship between organization(s) representing the Research Infrastructure in question and ENVRIplus project and its Beneficiaries
- the BEERi (Board of European Environmental Research Infrastructures) membership, allowing the Research Infrastructure in question to nominate two representatives for the BEERi, participating in the strategic discussion concerning the ENVRI community.

Associated Partnership to ENVRIplus project

ENVRIplus encourages research institutions that have a clear and established relationship with the Environmental and Earth system Research Infrastructures to become Associated Partner in the project. This relationship is usually demonstrated by a significant contribution to the RI development (e.g. coordination or participation in ESFRI RI or IA project).

Associated Partners are expected to participate actively in ENVRIplus project, contributing their expertise to the project's objectives and benefit from the activities undertaken within the project, e.g.:

- Participate in the different Themes & Work Packages of ENVRIplus project;
- Benefit from the ENVRIplus activities related to the development of ENVRI Reference Model
- Benefit from training opportunities and possibilities of staff exchange for the associated Research infrastructure staff members;
- Access to project meetings (ENVRI weeks);
- ENVRIplus support in communication & dissemination activities (without using the ENVRIplus financial resources)

Note: Associated partnership to ENVRIplus does not guarantee a membership in BEERi (Board of European Environmental Research Infrastructures). The application for BEERi membership needs to be approved separately by the Board itself.

Associated Partners are not charged for participating in the project, and they are expected to cover possible costs related to their activities within ENVRIplus. Some limited travel costs may be covered by the project on request, decided on a case-by-case basis, and in agreement with the ENVRIplus grant agreement and consortium agreement contracts.



How to Apply for the Associated Partnership

Any legal entity clearly linked to Environmental & Earth system Research Infrastructures and interested in associating with ENVRIplus is invited to contact Coordination office, Associated Partners applications are received, examined and discussed by the ENVRIplus Executive Board, and proposed and validated by the General Assembly, The admittance of an Associated Partner is based on the coherence of the proposed activities with the project's objectives and the maturity/relevance of the Research Infrastructure the entity is representing, Associated Partners are asked to sign a non-disclosure agreement to protect any confidential, proprietary information available under the project. If your institution is interested in becoming an associated partner of ENVRIplus, contact ENVRIplus Coordination Office. We would like to know following details:

- Name of the applying legal entity
- Name of the main contact & the contact information
- Research Infrastructure that is being represented by the legal entity
- Briefly describe the proposed activity in/contribution to ENVRIplus project (e.g., description of planned activities and objectives, to which WPs specifically do you wish to contribute, possible integration in ENVRIplus, mutual benefits, deliverables to the project, technological development, innovation potential and knowledge transfer, etc.)

Board of European Environmental Research Infrastructures (BEERi) membership

BEERi encourages all the research communities that have already demonstrated readiness to plan, construct, implement and/or run pan-European RI operations for serving user communities in the field of environmental research or in Earth system science, to apply for the membership to BEERi.

Criteria

Readiness for BEERi membership could be demonstrated by being one of the following:

- Legal entity for research infrastructure (e.g. ERIC, AISBL, or other international organization form),
- ESFRI Landmark,
- ESFRI Roadmap project,
- ESFRI Emerging project,
- RI networks funded by EC RI and e-RI Work Programme (e.g. IA project, design study),
- Another type of network application can be discussed case by case in the BEERi meeting.

How to apply for the BEERi membership

Interested party should send a written indication of the interest to be a member of the BEERi:

- Written indication should be sent to chair of the BEERi (contact below) ,
- Chair of BEERi will inform the BEERi members about the written indication and asks BEERi an approval for the membership;
- When the request is accepted, new BEERi member needs to nominate two representatives for the BEERi (RI Director / Coordinator);
- A new BEERi member needs to sign the non-disclosure agreement.

