

Workshop on the use of Structural Funds for the construction of distributed e-Infrastructures supporting ENVironment initiatives

May 12th, 2014

EU Commission - DG CONNECT

Avenue de Beaulieu 25, (room S1), 1160 Brussels

[EU Commission website announcement](#)

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REPORT FROM THE WORKSHOP

- Europe 2020 Flagship initiative “Innovation Union” identified the crucial role of world-class research infrastructures (RIs) for the completion of the European Research Area. In fact, it highlighted RIs can be instrumental to attract talent into innovative clusters and as a breeding ground for ICT and key enabling technologies.
- The European Strategy Forum on Research Infrastructures (ESFRI) is specifically devoted to identify the new research infrastructures (RIs) of pan-European interest with the goal of promoting the long-term competitiveness of European Research and Innovation. The identified RIs are listed in the ESFRI Roadmap; its last update was performed in 2010 including 48 projects.
- The Innovation Union initiative set the goal that 60% of those projects should be implemented by 2015. In December 2012 the Competitiveness Council mandated ESFRI to ensure the follow-up of implementation of already on-going ESFRI projects.
- Individual countries commit to participate in ESFRI RIs following specific strategies, which usually are also based on regional interests.
- The inclusion of the regional dimension in RIs construction will facilitate social cohesion but more importantly knowledge cohesion across Europe.
- The distributed nature of Environmental ESFRIs offers opportunities for regional involvement to develop innovation clusters:
 - They have common features (data openness, interoperability, demand of ICT resources and developments, applicability for environmental management and research) which make them attractive for regional authorities as they have potential to raise the academic, technological, economic and environmental standards of their administered territories.
 - They contribute to the Regional development with positive impacts on the economy, society and trans-national cooperation between the territories where they are base or where they offer services.
 - Recently, ESFRI has launched a draft report that will be discussed in the formal Competitiveness Council to be held in 26 May 2014. In this report, the environmental RIs projects EISCAT-3D, EMSO, EPOS, EURO-ARGO, IAGOS, ICOS, and LifeWatch have been identified as projects with a high likelihood to be implemented in 2015.
 - Moreover, this ESFRI report identified the potential for linking and networking data to create integrated services from EURO-ARGO, IAGOS, ICOS and LifeWatch for greater scientific impact.
- In addition, Europe 2020 Flagship initiative “Digital Agenda for Europe”, especially into is Pillar V Research & Innovation (e.g., in Action 53), emphasizes the important role of e-Infrastructures to equip competitive research environments (including research infrastructures). In fact, advanced ICT tools for compute- and data-intensive processing and management should be developed to this end.
- Actually, Data evolves to Information, which progresses to Knowledge, and finally it is translated into a tangible Employment creation.

- LifeWatch is a particularly relevant case of ESFRI ENV from the regional perspective:
 - As it is a distributed e-infrastructure, some regions are aware of its potential for:
 - Capitalizing already existing investments
 - Improving ICT developments that may be useful for biodiversity research and for other purposes
 - ESFRI has particularly highlighted its already demonstrated capability to integrate different funding sources, including structural funds, and for taking advantage of currently operational facilities distributed in the different countries.
 - It has raised the interest of researchers (both biodiversity and ICT-oriented), Industry (ICT) and policy makers of the environmental field (International, national, regional, and local)
- This interest was reflected in the attendance to this workshop, over 80 persons from 15 countries and over 20 regions.
- Several countries have already invested structural funds in LifeWatch (Greece, Italy, Romania and Spain). These countries and others are thinking in mobilizing funds from the new MFP 2014-2020 (Greece, Hungary, Italy, Portugal, Slovakia and Spain).
- This regional interest has been also found for other ESFRI ENV initiatives such as EMSO, ICOS or EuroArgo, where Spanish and Italian regions have already indicated their willingness to commit structural funds.
- This regional involvement, which reflects the potential positive impacts of RIs in the Regional economic and social environment, will enhance the sustainability of the above-mentioned infrastructures as they will be supported by a local R&I environment, both public and private, that will allow cross-fertilization.
- However there are some particularities that should be taken into account when considering the regional perspective:
 - The above-mentioned RIs have to be specifically considered in the operative programmes of the Smart Specialization Strategies (RIS3) of the regions interested in mobilizing structural funds.
 - Therefore these regional strategies have to be aware of the different European initiatives occurring at different levels to improve funding effectiveness: JPIs, JTIs, EIPs, ERANETs, etc.
 - The construction of the different blocks of the distributed infrastructures should fit within the overall planning of the infrastructure with which they are related
 - The construction should take into account the technical novelties and the developments of EU policies and regulations regarding interoperability of data, intellectual property rights, e-infrastructures, etc.
- The projects to be funded in the H2020 framework should take into account this regional perspective and interest since the earliest stages, guaranteeing synergies in the distributed developments in order to avoid duplications. The ESFRI suggestion for clustering some environmental infrastructures demands further coordination of the regional actors and exchange of good practices.

- Therefore, a forum could be set to properly address specific issues related to the use of European Structural and Innovation Funds in Research Infrastructures. Participants in this forum would be regional and national Administrations committed to the different infrastructures, the involved ERICs, relevant technical advisors from public and private sectors and probably EC officers from the Directorates involved (DG REGIO, DG CONNECT, DG RTD, maybe DG ENV).

CONCLUSIONS

1. RIs are important both for the progress of the European excellence in Science and Innovation, particularly those included in the ESFRI roadmap, as well as for the Regional development of the territories that have identified them in their Innovation Strategies (including in a distributed manner) in terms of economy, high-quality employment and trans-national cooperation. Therefore, RIs in general and environmental RIs in particular, are important targets for both European Regional and RTD&I policies.
2. This dual nature of the impacts of RIs calls for a synergistic combination of European Structural and Innovation Funds (ESIF) and H2020 funds, as well as of other National and Regional funding. At the same time, this involves particularities related with the investment of ESIF in ESFRI RIs that need to be specifically addressed.
3. EC and national authorities should set specific guidelines to the regional authorities interested in mobilizing ESIF in the construction and operation of ESFRI RIs and their use, combined or sequential, in different stages of the RIs construction and operation.
4. Due to their particular distributed nature, a pilot study is needed to establish a forum involving ESFRI ENV RIs to explore ways to promote and optimally combine resources and different from local, regional, national and pan-European (ESIF and H2020) sources.

MAIN RECOMMENDATIONS & RISKS IDENTIFIED

- a. The creation of new Environmental RI must be based performed through an iterative and incremental update process involving the existing distributed facilities. Special attention must be placed to the expected impact in the regional industrial sectors.
- b. Therefore, it is necessary to take benefit of ongoing international initiatives such as GBIF, LTER, ALTERNET, CETAF, GEO/EU BON, COOPEUS, etc., as their national and regional nodes already exist. A multi-layer integration is needed, so a bottom-up approach from regional nodes is essential.

- c. As a result, the existing knowledge and services related with biodiversity and environmental information from cooperating initiatives among territories should be better connected. This a real challenge for Environmental RIs which also includes specific topics such as shared ICT developments, Intellectual Property Rights (IPR) and Open Access (RDA connection). All of these items demand the involvement of the interested regions.
- d. In that sense, ongoing initiatives such as EGI.eu/IBERGRID-IBERLIFE and common Marine Biodiversity programmes established in both Mediterranean and Atlantic basins provide a common ground to reinforce the development of a shared distributed e-Infrastructure. They could be an example of good practices to integrate physical and virtual media through the Service Centre of LifeWatch ERIC.
- e. The implementation of distributed Environmental RIs would be at serious risk if regional Smart Specialization Strategies (RIS3) policies are not taken into account during its construction phases. Their consideration would prevent H2020 funding instruments from being simple extensions of Preparatory Phase projects, enabling “realistic” constructions and granting the sustainable operation of new-born facilities. This a crucial issue as normally Preparatory Phases are usually conceptual-based exercises and they do not take into consideration the actual commitments of the countries (including their regions). New “drivers/catalysts” should be appointed in order to integrate all the pieces of this complex jigsaw puzzle.
- f. As already mentioned in the conclusions above, a pilot study is needed to establish a forum involving ESFRI ENV RIs to explore ways to promote and optimally combine local, regional, national and pan-European (ESIF and H2020) resources.



EUROPEAN COMMISSION

Directorate-General for Communications Networks, Content and Technology

Excellence in Science

e-Infrastructures

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1ST MEETING: LIFEWATCH

“e-Science European Infrastructure for Biodiversity and Ecosystem Research”

12 May 2014

BU25 0/S1

Avenue de Beaulieu 25, 1160 Brussels

AGENDA

9h30 – 9h50 *Welcome and introduction to e-infrastructures*

Luis C. Busquets Pérez, e-Infrastructures, DG CONNECT C.1

9h50 – 10h10 *Overview of ESFRI ENV Research Infrastructures*

Anna-Maria Johansson DG R&I, Research Infrastructures B.3

10h10 – 10h30 *Overall objectives of the meeting*

Fernando Balletero, Deputy Director-General of International Relations and European Affairs (SGRIE), Ministry of Economy and Competitiveness (MINECO), Spain

10h30 – 10h50 *Smart Specialization Strategies and the implementation of the ESFRI Roadmap*

Octavi Quintana i Trias, e-Infrastructures, Principal Adviser to DG R & i: "Task force on smart specialization", DG R & i

-----10h50-11h10 *Coffee break*-----

11h10-11h30 *Towards the construction of a shared distributed e-Infrastructure to support ENV initiatives based on Structural Funds: LIFEWATCH reference case study*

Juan Miguel González-Aranda, Head of Unit for e-Science, SGRIE, MINECO, Spain

11h30-12:30h FIRST SESSION: LIFEWATCH (LW) COMMON FACILITIES Case Studies:

11h30-11h50 Andalusia Region-Spain

Eva María Vázquez Sánchez, General Director of Research, Technology and Enterprise of Andalusia Government-Junta de Andalucía

11h50-12h10 Extremadura Region-Spain

Victor Píriz & Antonio Verde FUNDECYT-GOBEX, Government of Extremadura Region-Junta de Extremadura & José Manuel Pérez - Guillermo Díaz - Carmen Moreno from Directorate of Technology CIEMAT-MINECO

12h10-12h30 Regione Puglia-Italy

Paolo Casalino, Director of Ufficio Rapporti con le Istituzioni dell'Unione Europea – Regione Puglia in Brussels

12h30-14:10h SECOND SESSION: LIFEWATCH DISTRIBUTED FACILITIES Case Studies:

12h30-12h50 Case Study-France:

Région Auvergne

Vincent Breton, NGI.FR-France Gilles

12h50-13h10 Case Study-Greece:

Maria Koutrokoi, International S&T Cooperation Directorate, General Secretariat for Research and Technology/GSRT, Hellenic Ministry of Education and Religious Affairs;

and Christos Arvanitidis, Coordinator of LifeWatch Greece

13h10-13h30 Case Study-Hungary:

Katalin Török Coordinator of LifeWatch Hungary

13h30-13h50 Case Study – Portugal:

Nuno Ferrand & António Múrias dos Santos – PORBIOTA – Portuguese LifeWatch Node

and

Carolina Guimarães Representative from North Region (CCDR-Norte)

13h50-14h10 Case Study – Slovakia:

Luboš Halada Coordinator of LifeWatch Slovakia

-----14h10-14h45 Lunch-----

OTHER ESFRI ENVIRONMENT case studies

Session chaired by Gelsomina Pappalardo, Chair of ESFRI ENV (or on her behalf, Jesús Miguel Santamaría Uceda, ESFRI ENV committee)

14h45-15h00 Introduction by session Chair

EMSO “European Multidisciplinary Seafloor and Water Column Observatory”:

15h00-15h20 Canary Island Region-Spain case study

José Joaquín Hernández Brito, Plataforma Oceánica de Canarias
PLOCAN Manager

15h20-15h40 Southern Italy-Sicily Region case study

Francesco Italiano from Istituto Nazionale di Geofisica e Vulcanologia
(INGV) –EMSO Coordination

EURO ARGO “European contribution to ARGO program”:

15h40-16h00 Balearic Islands-Spain case study: SOCIB contribution to the observing of the European seas and coast in line with Blue Growth initiative

Joaquín Tintoré, from Balearic Islands Coastal Observing and Forecasting System (SOCIB)

ICOS “Integrated Carbon Observation System”:

16h00-16h20 ICOS case study

Marjut Kaukolehto on behalf ICOS Statutory Seat

-----16h20-16h35 Coffee break-----

16h35 – 16h50 Main report on sessions conclusions

16h50 –17h45 Discussion on the identification of common challenges to financing shared e-Infrastructures requirements through structural funds and H2020 calls

17h45 – 18h00 Conclusion report and close of the meeting