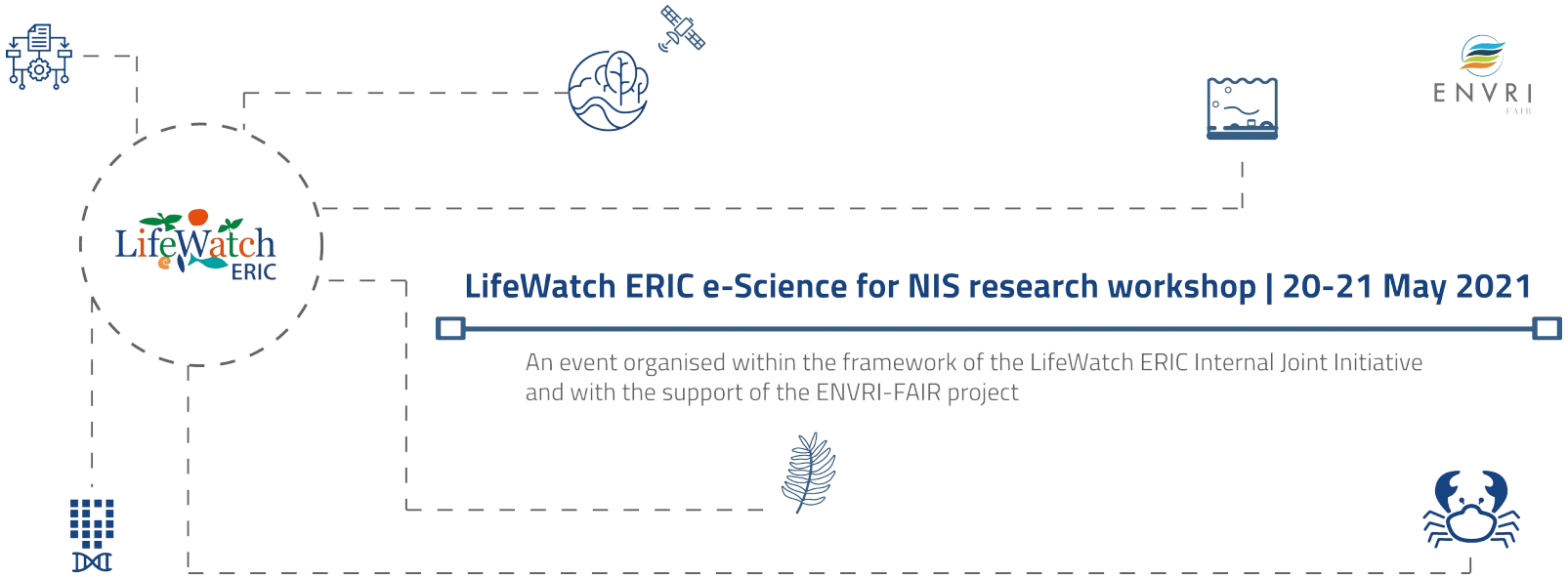


LifeWatch ERIC Internal Joint Initiative : Impact of Non-Indigenous Invasive Species on Marine Ecosystems

By: Christos Arvanitidis, Juan Miguel González-Aranda, Alberto Basset, Peter Van Tienderen and Lucas de Moncuit de Boiscuillé

LW ERIC Internal Joint Initiative (IJI)

- Boost the integration of tools & services into the LifeWatch ERIC web portal;
- Focus on a major scientific issue in biodiversity and ecosystem research with relevant socio-economic implications;
- Produce new and synthetic knowledge needed by institutions, administrations and managers to give solutions to major environmental problems at different scales;

LifeWatch ERIC needs to boost its construction and to engage users in developing their research activities into the Virtual Research Environments of the e-Science Infrastructures, by clearly demonstrating and documenting the added value these new technologies bring to address challenging hot topics.

LifeWatch ERIC has started an Internal Joint Initiative with the exact aim of addressing these needs and reinforcing the positioning of **LifeWatch ERIC** within the biodiversity and ecosystem scientific community. As a subject for the demonstration case, LifeWatch ERIC has selected non-indigenous and invasive species (NIS).

If you are interested in the IJI and want to join us on the validation cases, just drop us an e-mail service.centre[at]lifewatch.eu.

Validation cases

Nine validation cases have been agreed on by the scientific community representatives focusing on various aspects of NIS invasion, stemming from the desire of the infrastructure to use the most participative interdisciplinary approach to investigate this wide topic.

As an immediate result of this collaboration, scientists and ICT experts jointly outlined a conceptual paper and designed a workflow that will serve as a living timeline along which different e-tools have to be developed to help address relevant issues related to NIS for scientists, managers, decision-makers and society.

1. Combining Modeling and remote sensing techniques to monitor and control the spread of invasive species: the case of *Ailanthus altissima*
2. European ARMS programme: long-term monitoring of hard-bottom communities for invasive marine species
3. Risk assessment of NIS introduction and establishment, habitat vulnerability to NIS and estimation of the impact on Biotopes
4. Functional biogeography of invasive species: the case of two widely-distributed omnivorous crustaceans
5. Successive invasions in the Mediterranean Sea: How the history of *Caulerpa taxifolia* can inform on the new invaders *Caulerpa racemosa* and *Rugulopteryx okamurae*

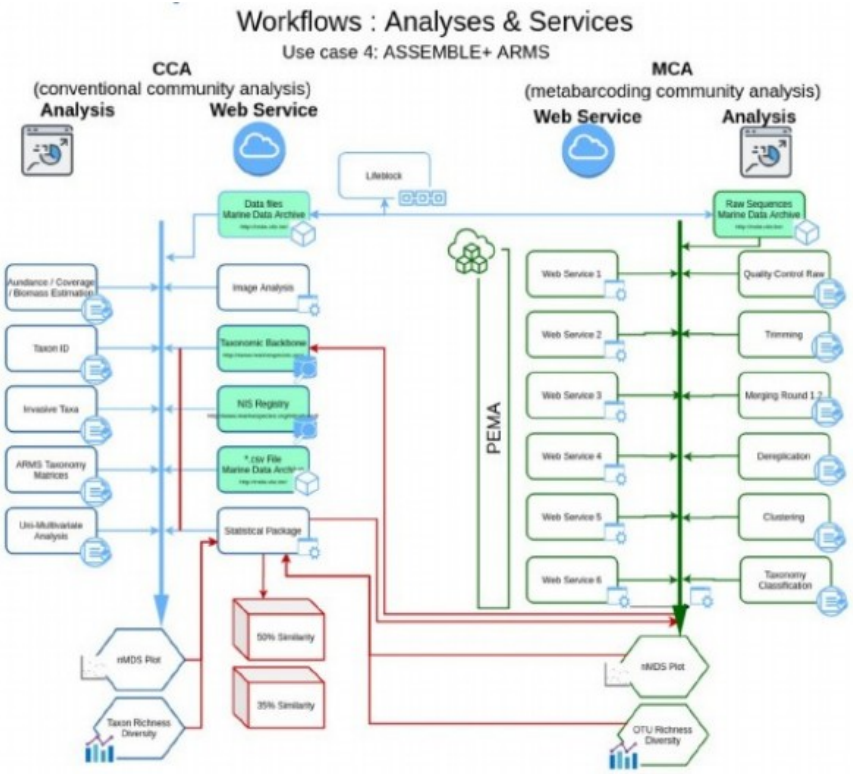
Internal Joint Initiative

- **Rationale & Objectives**
- **Framework & Knowledge Map**
- **Validation Cases**
- **Dahlem Type Workshops**
  - **Rome, 02-06/12/2019**
  - **Seville, 14-18/10/2019**
- **Collaborative Space**

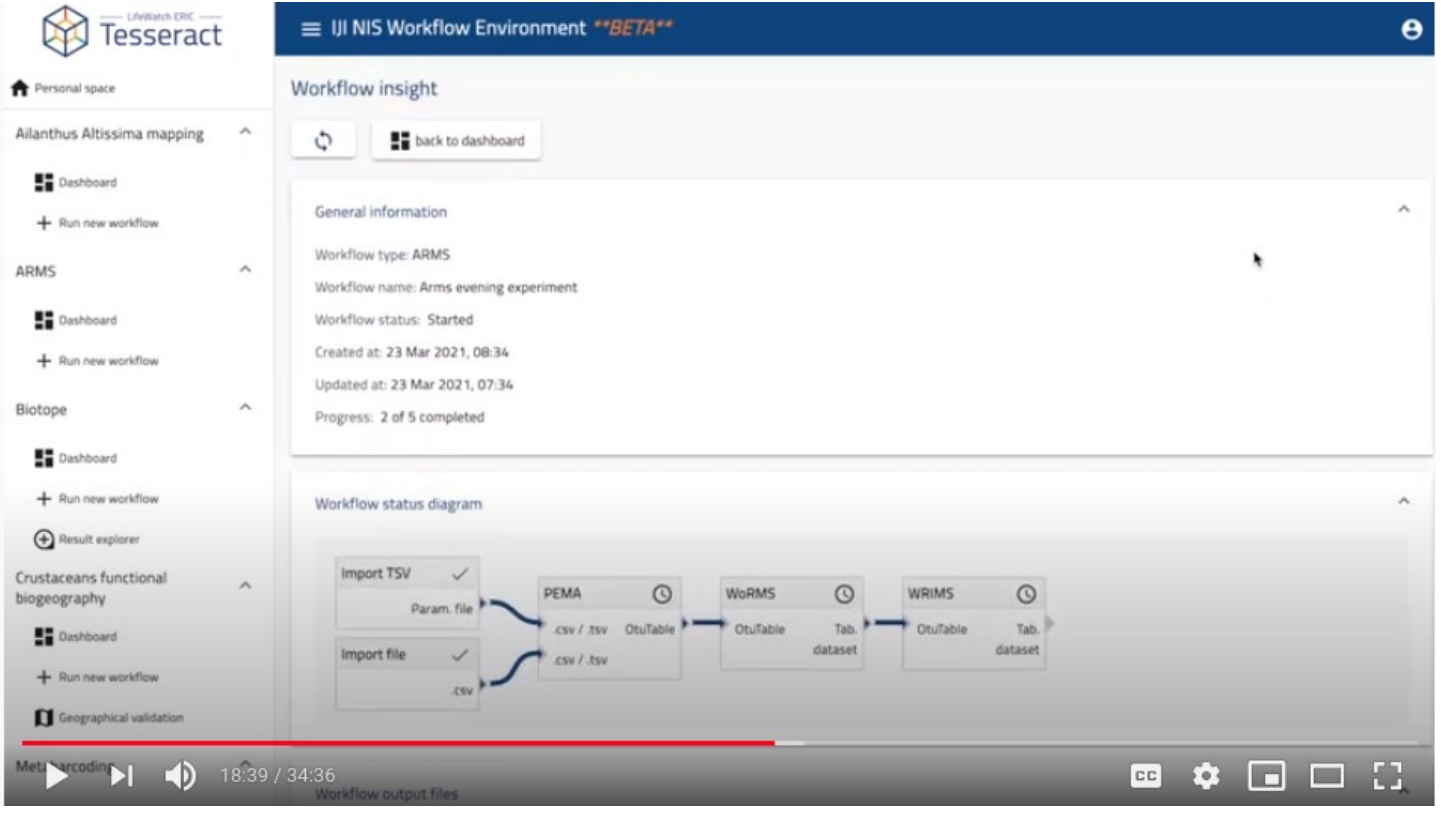
LW ERIC IJI: ARMS on NIS

https://www.youtube.com/watch?v=HtDzII9dN4k&feature=youtu.be

- 2 Dahlem Type Workshops in 2019 (Seville & Rome);
- 5 Validation cases identified;
- Teams formed;
- Workflows designed;
- 1 scoping paper on its way.



LW ERIC IJI: ARMS on NIS



LW ERIC IJI: Where from here? ENVRI FAIR

- Cross-domain exercise: How to make RI assets to communicate to each other? Working Groups
- Data standards, annotation, ontologies, catalogues – FAIR Data, within the ENVRI FAIR Science Cluster
- Vertical and Horizontal Composability of services (e.g. Tesseract), within the ENVRI FAIR Science Cluster

LW ERIC IJI: Where from here? EOSC Future

- Cross-domain exercise: Two Test Science Projects within EOSC
- Climate Change Impact on Biodiversity and Ecosystems in Europe - Assessing the impact of Non-Indigenous Invasive Species (NIS) in European ecosystems (NIS-Impact) (ENVRI FAIR, EOSC-Life, SSHOC)
- Dashboard on the State of the Environment (ENVRI FAIR)

Thank you for your attention

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