



ICOS

INTEGRATED
CARBON
OBSERVATION
SYSTEM

Evaluating ENVRI services

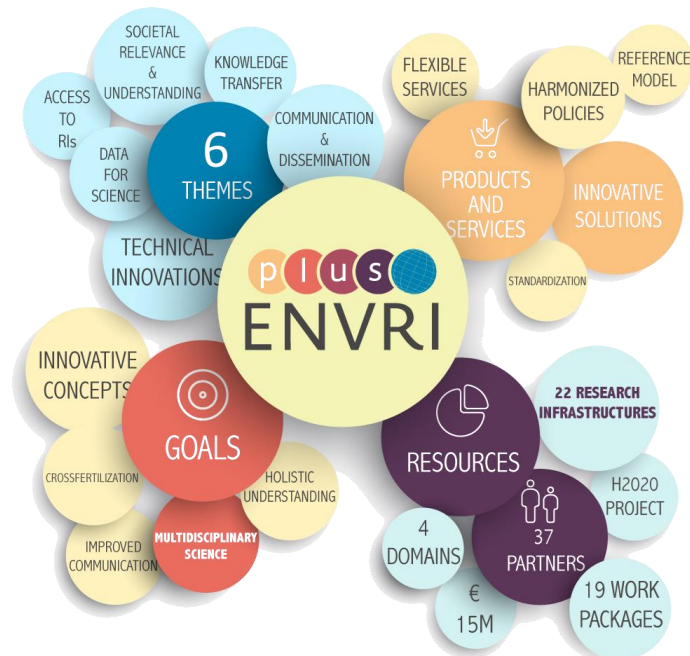
Experiences from ENVRIplus

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ICOS Carbon Portal

ENVRI-FAIR webinar, June 17, 2022

ENVRIplus – precursor of ENVRI-FAIR

- ENVRIplus was a Horizon 2020 project, running 2015-2019
- Brought together 20+ Environmental and Earth System Research Infrastructures, projects and networks & technical specialist partners
- Aimed at creating a more coherent, interdisciplinary and interoperable cluster of Environmental Research Infrastructures across Europe.



“The Earth is our lab”

<https://envriplus.eu/>

Service evaluation (& validation) activities in ENVRIplus

- Work Package 9 dedicated to service deployment
- Support provided to RIs for documentation, validation and evaluation of their services
- 9 science demonstrators created by project partners
 - SD1: Support EISCAT_3D Users to Reprocess Data Using User's Algorithms
 - SD2: The Eddy Covariance Fluxes of GHGs
 - SD3: SOS & SSN Ontology Based Data Acquisition & Near Real Time Quality Control
 - SD4: EuroArgo Data Subscription Service
 - SD5: Sensor Registry
 - SD6: New particle formation event analysis on interoperable infrastructure
 - SD7: gCube-based VRE for Mosquito Diseases Study
 - SD8: Dynamic Ecological Information System - Site and Dataset Registry
 - SD9: PROV-Template Registry and Expansion Service



ENVRI-relevant evaluation aspects & criteria

- Accessibility or ease of use
 - Maturity (technological readiness)
 - Sustainability (technological & operational)
 - Visibility
 - Degree of adoption (in & outside of community)
 - Impact & relevance
 - Scope, potential & depth
- +
- FAIR (Findability, Accessibility, Interoperability & Reusability)

See [ENVRIplus deliverable D9.1](#)

The evaluation questionnaire

- LimeSurvey software platform
- One form for all 9 science demonstrators
- 70 questions in 7 sections:
 - About the respondent
 - Selecting service to evaluate
 - Service documentation
 - General impressions & potential impact
 - Technical aspects
 - Demonstrator-specific questions
 - Evaluation of the survey tool

<https://survey2.icos-cp.eu/index.php/572397>

ENVRiplus Science Demonstrator evaluator (D9.4)

This survey-based service evaluation tool demonstrator has been developed in the framework of ENVRiplus Work Package 9, "Service validation and deployment". The tool is described in more detail in the ENVRiplus deliverable report "D9.4 Serving key data service stakeholders and policy initiatives version 2", available at <http://www.envriplus.eu/deliverables/>. If you have questions or concerns about the survey and how your answers are managed, please get in touch with Maria Johnsson (maria.johnsson at ub.lu.se) and Margareta Hellström (margareta.hellstrom at nateko.lu.se).

Welcome to the ENVRiplus WP9 Science Demonstrator evaluation tool!

This evaluation tool demonstrates how one can collect feedback on services by using the ENVRiplus Science Demonstrators (as defined in ENVRiplus deliverable 9.2) as examples. The main objectives of this Demonstrator are to 1) provide experience of how to build a service evaluation tool based on a generic survey platform like LimeSurvey, and 2) allow the ENVRi community to give feedback to the developer teams behind the Science Demonstrators.

Please note that the Science Demonstrators are not "fully developed" services, but rather reflect relatively early stages of development. For this reason, some of the common questions may be difficult to answer, or appear to be less than 100% applicable. We hope that this won't be too much of a problem.

At the end, you will be able to leave feedback on the survey itself. To make this easier, all questions have a number - please note down the number of any "problem questions" as you go along, so that you can report back to us - this will really be a great help to the survey development team! (Depending on the choices you make, some questions may not be shown - this is not an error!)

Thank you for your participation!

List of all questions: [ENVRiplus deliverable D9.4](#)



What to do with the collected info?

- Compile scores for the criteria, following standardised algorithms
- Be open and transparent with outcomes
 - share evaluation scores with end users
 - visualise score patterns and how these develop over time
 - don't hide criticism or complaints
- Inform service developers, management about the feedback and take action if necessary
- Consider responses from different stakeholders (users, IT experts, etc.) separately
- Curate all survey responses in a GDPR-compliant manner



See [ENVRiplus deliverable D9.4](#)

Some ideas on how to continue...

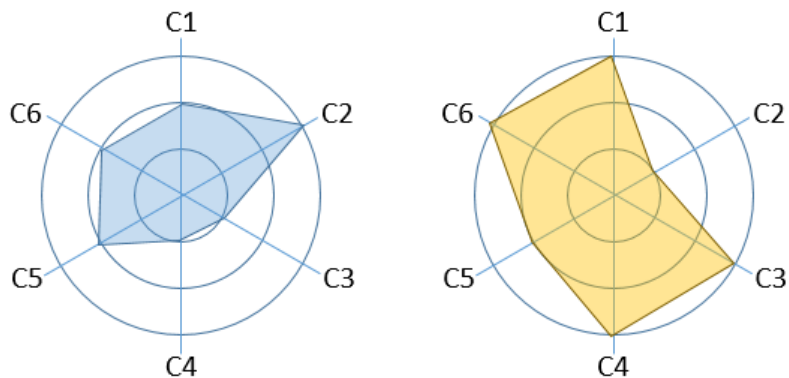
- Compile advice to RIs on how to tailor their evaluation activities to specific stakeholders (service developers, e-infrastructures, end users, ...)
- Analysis of which evaluation aspects and related criteria are relevant for different types of services, and how to calculate informative scores
- Concrete implementation of mechanisms for collecting evaluation feedback that can be built in to the ENVRI-Hub (and RI service portals)
- Design (interactive) visualisations of collected evaluation data, allowing to both monitor changes over time & compare different services



Visualising evaluation outcomes

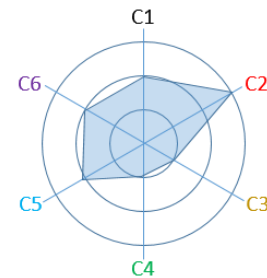
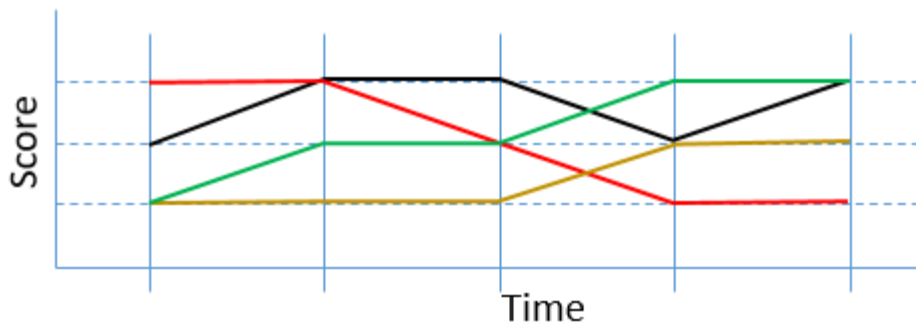
Radar plots:

two services
(at one time)



Time series:

evolution of
scores over
time (per
service)





Thanks
for
listening!

You're welcome to get in touch with Maggie with your questions via
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