ENVRIPLUS

GENERAL INTRODUCTION

Ari Asmi – ENVRIplus director
CONTENTS

- Strategy and aims
- Factsheets
- Structure
- Products
Primary customers are Research Infrastructures (RIs)

- All products of the projects MUST be useful to 2 or more RIs

- RIs take directly part of the development via participation in the workpackages (Customer driven, co-design approach)

- All products are meant to be open and available to all
  - Connection to developing RIs and non-European partners

- The aim is to also learn from existing developments – sharing is the key
NOT STARTING FROM ZERO...

Earlier ENVRI project produced many important starting points
- ENVRI Reference model to understand structure and production system the Environmental RIs.
- First steps towards interoperable virtual laboratories
- Cultural development for collaboration (stronger together!)
- Understanding of the landscape
- COOPEUS extended to EU/US interface and collaboration
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PROJECT SUMMARY

Project Number: 654182
Starting date: 1st of May 2015
Duration in months: 48
End of the project: 31st of April 2019
Coordinating institution: University of Helsinki
  Coordination will be changed to ICOS ERIC once it is founded

Call (Topic): INFRADEV-4-2014-2015 - Implementation and operation of cross-cutting services and solutions for clusters of ESFRI and other relevant research infrastructure initiatives
PROJECT SUMMARY

- 15 M € budget
- 37 beneficiaries
- 22 Research Infrastructures
- 19 Work Packages organized in 6 Themes
- 90 Deliverables
- 4 Domains (Atmosphere, Biosphere, Marine, Solid Earth)

- 3 overarching goals:
  - favoring cross-fertilization between infrastructures
  - implementing innovative concepts and devices across RIs, and
  - facilitating research and innovation in the field of environment to an increasing number of users outside the RIs
CONTACT

- ENVRIplus Coordination Office: envriplus-coordination@helsinki.fi

- Find us on:
  - Twitter - @ENVRIplus
  - Facebook page – ENVRIplus
  - LinkedIn Group – ENVRIplus

- Website: www.envriplus.eu

Werner Kutsch
Coordinator

Paolo Laj
Co-Coordinator

Ari Asmi
Project Director

Magdalena Brus
Project Manager
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H2020 Project

Project Number: 654182
THEMES & WORK PACKAGES

3. Access to Research Infrastructures
   WP 10 - Governance for sustainable and accessible access to RI's
   WP 11 - New Concepts and Tools for Physical Access

4. Societal Relevance and Understanding
   WP 12 - A framework for Environmental Literacy
   WP 13 - Developing an Ethical Framework for Research Infrastructures
   WP 14 - Citizen Observations and Participative Science

5. Knowledge transfer
   WP 15 - Training, e-Learning and courses
   WP 16 - Staff Exchange

6. Communication and Dissemination
   WP 17 - Coordination of Research Infrastructure communication, development and implementation of the ENVRi Strategy
   WP 18 - Dissemination, Liaison and Collaboration

1. Technical Innovations
   WP 1 - New sensor technologies: innovation and services
   WP 2 - Metrology, quality and harmonization
   WP 3 - Improving measurement networks: common technological solutions
   WP 4 - Joint operations across the Research Infrastructure domains

2. Data for Science
   WP 5 - Reference model guided Research Infrastructure design
   WP 6 - Inter - Research Infrastructure data classification and citation services
   WP 7 - Data processing and analytics
   WP 8 - Data curation and cataloguing
   WP 9 - Service validation and deployment
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THEME 1 – TECHNICAL DEVELOPMENTS

- Common **new sensors** and the associated market
- **Sensor requirements** across disciplines
- Common **unmanned platforms** and applications
- **Network-enabled** sensors

- **standardization** of measurements and methods
- services to use of **heterogeneous time series**
- new services for **satellite validation**

1. Technical Innovations
   - WP 1 - New sensor technologies: innovation and ser
   - WP 2 - Metrology quality and harmonization
   - WP 3 - Improving measurement networks: common solutions
   - WP 4 - Joint operations across the Research Infras/ domains
... TECHNICAL DEVELOPMENT CONTINUED

- Adaptation of technologies to **extreme conditions**
- Innovative solutions to improve **networking at distributed RIs**
- Improved standardization of **transmission technologies**
- Strategies for enhancing common RI field operations
- Proof-of-concept experiments joining expertise from several RIs
THEME 2 - DATA

- **ENVRIPLUS Reference Model** development
- **ontological framework** based on the ENVRIPLUS RM
- **design and implementation plan** for common operations

- Inter RI **data identification and citation services**
- Connection to RDA and publications
- Case studies of **data citation**

- Improving the efficiency of **data processing**
- **System-level optimisation** among data, processing, and underlying services,
Automatic, self-adaptable **curation and semantic annotation** services.

Improving **catalogue** interoperability

Improving the efficiency of **data provenance**

**Testing of usability** of developed services in their intended environment.

**Deployment** of the developed results.
THEME 3 ACCESS

- Guidelines on access to RIs
- RI strategy for flexibility and sustainability

- Existing paths of physical access to RIs
- Conditions for access to RIs across disciplines
- Governance tools and TNA within RIs to promote inter-disciplinary research
**THEME 4 SOCIETAL RELEVANCE AND UNDERSTANDING**

- Link Earth observation data to human systems
- Develop Reference Model to understand data impact
- Feedback system to adjust data generation to the evolving needs of the human system

- Ethical aspects in Earth sciences
- Shared ethical reference framework
- Social role conducting research activities
- Assessing the ethical and social aspects

- Citizen science test cases
Teaching RI operators **key skills**
Training workshops on **Time series analysis**
**RI management training**
Training packages for **RI products use**
**Secondary School** level education on environmental issues related to the RIs

Experience **sharing symposia** for RI staff
**Staff exchange program**
THEME 6 COMMUNICATION AND DISSEMINATION

- Communication and coordination on the ENVRI strategy
- BEERi
- Cluster level integration
- Sustainability of ENVRI

ENVRI-community ≠ ENVRIPLUS

- ENVRIPLUS dissemination strategy
- Promotional material
- Linking the environment to economics
- ENVRIPLUS consultation groups
OVERVIEW

● Project FOR the research infrastructures
● Co-Design approach
● Open products
● Open collaboration

● Themes:
  ● Technology
  ● Data
  ● Access
  ● Societal
  ● Knowledge transfer
  ● Communication

Please visit our joint COOPEUS and ENVRIPLUS booth in AGU!

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Next ENVRI WEEK in May 9.-13.