

SEVENTH FRAMEWORK PROGRAMME

ICT PPP

Future Internet



**The Environmental Observation Web and its Service
Applications within the Future Internet**

FP7-284898

Collaborative project

D7.2.2 Dissemination Plan & Report II

Atos

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1 Abbreviations and acronyms

Abbreviation / Acronym	Description
CA	Consortium Agreement
DOW	Description of Work
DWG	Dissemination Work Group
EC	European Commission
ENVIROFI	The Environmental Observation Web and its Service Applications within the Future Internet
EU	European Union
FI	Future Internet
FIA	Future Internet Assembly
FI-PPP	Future Internet Public-Private Partnership
FP7	7th Framework Programme
GA	Grant Agreement
ICT	Information and Communication Technologies
R&D	Research & Development
RSS	Really Simply Syndication
SME	Small Medium Enterprises
WP	Work Package

Table 1. Abbreviations and Acronyms

2 Executive Summary

This document provides a guideline for all dissemination activities carried out by ENVIROFI, with a primary objective to support sustainable uptake of project results by user communities and to receive feedback and validation on ENVIROFI activities and directions.

The scope of the dissemination plan is defined in the Annex I to the Project Contract 'Description of Work' as follows:

The primary objective of dissemination activities is to create awareness for ENVIROFI's results and support a sustainable uptake of these results by user communities and to receive feedback and validation on ENVIROFI activities and directions. To achieve this, the project has identified target user groups and implemented measures to reach them in the most effective way. In doing this, the consortium took into account the cross-domain nature of the project at the intersection of the environmental domain and the Future Internet area. The project aimed to perform its dissemination activities in close cooperation with major players from both domains. In this respect, ENVIROFI particularly focused on a close coordination of its dissemination activities with the other FI-PPP projects via its participation in the relevant FI-PPP boards organised by CONCORD, which is the Programme Facilitation and Support project.

Other objectives of the dissemination activities of ENVIROFI are:

- To demonstrate the project concept to key stakeholders at European level.
- To manage the attendance to relevant conferences and the production of publications, in order to attain maximum effectiveness and respecting confidentiality conditions as well as the exploitation agreements and strategies of the consortium.
- To pave the way for exploitation of project results.

The initial version of the document provided the strategy outline for creating awareness on ENVIROFI among its targeted stakeholder groups, and it has been reviewed and updated with the results of the work carried out and providing conclusions on the impact of the activities reported.

3 Approach

3.1 Objectives

The primary objective of ENVIROFI's dissemination activities is to communicate project requirements and results to the identified target audiences. The particular nature of the project as an approach to integrate environmental data across domains is a challenge as well as an opportunity to strengthen the link between different domains and create a new generation of services.

Other objectives of the dissemination activities of ENVIROFI are:

- to demonstrate the project concept to key stakeholders,
- to participate in relevant conferences and workshops,
- to produce suitable on- and offline publications,
- to pave the way for exploitation of project results.

3.2 Target Audiences

In order to create maximum impact and efficiently use the dissemination budget, ENVIROFI has focused on activities aimed at the project's primary target audiences.

Primary target audiences include:

- Public and private institutions performing regulatory functions, monitoring tasks or services in the environmental area
- Companies, especially SMEs, performing environmental services or offering environmental products.
- The environmental research community and the ICT for environment community in particular.
- The Future Internet research community

Measures for the primary target audiences had a high share of overall dissemination activities and particularly included interactive and personal dissemination channels like, e.g., conferences and workshops.

For secondary target audiences, dissemination activities mostly included printed and electronic publications.

Secondary target audiences include:

- Policy makers in the environmental sector
- The media, particularly the trade press in the environmental and the ICT sector
- Interested citizens and the wider public

3.3 Coordination with FI-PPP Support Action and Other FI-PPP Projects

In addition to the project's own specific dissemination efforts, ENVIROFI supported the FI-PPP programme-level dissemination participating in the Dissemination Work Group set for this purpose. The Dissemination Work Group (DWG) is comprised by the core team of CONCORD partners and one representative from each of the FI-PPP projects. Its main objective is to align the dissemination strategies and activities of all FI-PPP projects to achieve a broad diffusion of information and uptake of platforms and tools.

The DWG constitutes the space where programme-level dissemination strategies are discussed and

the key areas for optimization of results through the coordination of efforts identified. In addition, the WG provides a service function to individual projects, providing group-based advice and best practice examples for their specific dissemination needs.

In particular, ENVIROFI provided collaboration to the DWG's activities through:

- participation in the periodic audio conferences
- ensuring that ENVIROFI's dissemination needs are effectively represented in the DWG's actions
- provision of updated material and contents to the CONCORD newsletter and web site
- identification of opportunities of ENVIROFI's dissemination actions for programme-level cooperation.

3.4 Planning and Execution Processes

The execution and organisation of dissemination activities will be reviewed throughout the lifetime of the project on a regular basis in the framework of the WP7 meetings (either in physical meetings or video/audio conferences). Procedures of internal meetings are defined in the Quality Plan and Project Handbook (D8.2).

3.5 Quality Management

ENVIROFI put in place quality management procedures for its dissemination activities, which are in line with the Grant Agreement (GA) and the Consortium Agreement (CA). Procedures of internal meetings are defined in the Quality Plan and Project Handbook (D8.2). Where specific procedures are not described in this document, the general quality management regulations as defined in the CA will be applied.

3.5.1 Approval procedures for publications and presentations

Dissemination activities including but not restricted to publications and presentations shall be governed by Article II.30 of the GA and Article 8.3 of the CA. The governance of dissemination is defined in the GA as follows:

At least 45 days prior notice of any dissemination activity shall be given to the other partners concerned, including sufficient information concerning the planned dissemination activity and the data envisaged to be disseminated.

Following notification, any of those partners may object within 30 days of the notification to the envisaged dissemination activity if it considers that its legitimate interests in relation to its foreground or background could suffer harm. In such cases, the dissemination activity may not take place unless appropriate steps are taken to safeguard these legitimate interests. The partner objecting to a publication shall include a precise request for necessary modifications. Any objection to the planned publication shall be made in writing to the Coordinator and to any partner concerned within 30 days after receipt of the notice. If no objection is made within the time limit stated above, the publication is permitted.

An objection is justified if:

- a) the objecting Party's legitimate academic or commercial interests are compromised by the publication; or
- b) the protection of the objecting Party's Foreground or Background is adversely affected.

If an objection has been raised the involved partners shall discuss how to overcome the justified grounds for the objection on a timely basis (for example by amendment to the planned publication and/or by protecting information before publication) and the objecting Party shall not unreasonably continue the opposition if appropriate actions are performed following the discussion.

3.5.2 Standard Acknowledgement and Disclaimer

All publications or any other dissemination relating to foreground shall include the following statement to indicate that said foreground was generated with financial support from the EU:

The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 284898.

Open documents published by the ENVIROFI consortium such as public deliverables and scientific publications should also include the following statement:

STATEMENT FOR OPEN DOCUMENTS

(c) [Year of Publication] ENVIROFI Consortium

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3.5.3 Evaluation of Effectiveness and Impact

Within Task 7.2 the project defined measurable criteria for evaluating the efficiency and effectiveness of the dissemination activities in regard to their impact. These were both quantitative data, like number of website visitors, participants in workshop sessions, presence at key conferences, external workshops and R&D focused media or number of peer-reviewed publications, as well as qualitative data, e.g. based on interviews and written/verbal feedback by individuals from primary or secondary target audiences.

4 Coordination with other FI-PPP activities

The process for communication and dissemination strategy setting and implementation on programme level is structured into six steps:

1. Communication goals and objectives
2. Target audiences
3. Key messages
4. Strategic guidelines and positioning
5. Communication channels, instruments, and measures
6. Resonance analysis and communication controlling

The communication and dissemination strategy on programme level is defined through a combined top-down and bottom-up approach. Initially, communication goals are jointly defined in a top-down manner as a starting point for the other steps in the process. At the same time, the specific goals and measures of the FI-PPP project, which should be aligned with the programme level goals and measures, will provide further input for programme-wide goal setting and the detailed definition of target audiences, key messages and priorities.

		Audiences		
		ICT RR&D&I	FI User Groups	Int'l Community
Targets	FI PPP Community	Industry & University R&D Partners	Use Case Partners	Int'l Research Cooperation
	Policy Makers	National/EU ICT Policy makers (regulation, infrastructure)	National and Regional Authorities	Global Internet Forums and Standards Bodies
	Industry and SMEs	ICT Clusters and ecosystems (incl. Incubators, Spin-offs, Living Labs)	Industrial and SME end user groups, intermediaries (e.g. Associations, Living Lab partnerships)	Global networks (e.g. Supply Chains, Open Source community)
	Final end users and citizens	EU Coding community and start-ups	Citizens and individual FI service end users, Living Lab co-design communities	International Living Lab networks World opinion in general

Table 2. Targets and Audiences for the FI PPP¹

The central body for communication and dissemination strategy setting and implementation is the Dissemination Working Group (DWG), which is coordinated and supported by CONCORD, and members from ENVIROFI contributed during the project lifetime to the WG activities.

4.1 Dissemination WG

The objective of the Dissemination Work Group was to align the dissemination strategies and activities of all FI PPP projects to achieve a broad diffusion of information and uptake of platforms and tools. CONCORD aims to support this process, working together towards a vision where by 2016 the FI PPP is seen as a single, multi-faceted effort carried forward by a broad partnership of stakeholders bringing

¹ Ref. FI-PPP Dissemination Strategy, version 0.10, CONCORD

Europe to the forefront of Future Internet developments and their implementation to support a competitive and sustainable society. This occurs through all participating projects contributing to programme-level dissemination in addition to their own specific dissemination efforts.

The Work Group (WG) consists of a core team of CONCORD partners and one representative from each of the FI PPP projects. The WG constitutes the space where programme-level dissemination strategies are discussed and the key areas for optimization of results through the coordination of efforts identified. In addition, the WG provides a service function to individual projects, providing group-based advice and best practice examples for their specific dissemination needs.

Participation in the WG and its activities was on a voluntary, non-binding basis. The WG was holding (and continues to hold during phase 2) audio conferences and physical meetings, and coordinates through on-line collaboration.

Specific CONCORD project deliverables supported the shared objectives of the Dissemination WG, such as the common FI PPP dissemination tools, templates, the shared calendar of events, etc. The WG ensures that these actions effectively represent and support the dissemination needs of individual projects.

In particular, WG representatives from FI-PPP projects ensure that updated material is provided for the programme newsletter (CONCORD Snack) and web site on a regular basis to effectively represent progress and results. In addition, dissemination actions of individual projects may constitute opportunities for programme-level cooperation – i.e. exchange of speakers for public events; such joint actions will be coordinated by the Dissemination WG.

Supporting these activities is the CONCORD platform, which provides the Dissemination WG with the collaboration tools and workspaces necessary for its on-going activities of coordination. The structure and contents of the FI PPP Portal and other physical dissemination materials will be agreed upon by the Dissemination WG on proposal by the CONCORD Project.

ENVIROFI Dissemination WG members were formally designated by the project and were empowered to take dissemination-related decisions in the context of the WG's activities.

The WG defines and updates the overall FI-PPP dissemination strategy that is submitted to the Programme Steering Committee for approval on a yearly basis. All communication with other WGs, FI PPP boards, the FIA, etc. will be managed by the CONCORD WG representatives, within a policy of full transparency to all WG participants. Beyond that, the WG operates in an autonomous and independent fashion for the implementation of programme level dissemination actions within the context of the general strategy.

For internal WG coordination, the CONCORD Project nominates the WG Leader. Individual FI projects each nominate a representative to the Dissemination WG who then becomes the interface between the Dissemination WG and ENVIROFI.

4.1.1 Dissemination Tools

Some basic dissemination tools and channels were made available by CONCORD for the delivery of Programme level communication and the conveyance and coordination of individual project dissemination actions, like the FI PPP Corporate identity, consisting of the logo and its various uses, applications and templates for a coordinated graphics image. These were incorporated to the own ENVIROFI templates for Deliverables and PowerPoint presentations.

The FI PPP corporate identity builds on the pre-existing logo which was designed as a variant of the FIA and FIF logos, shown below:



The approach adopted for the FI PPP maintains the logo itself but adopts a strong graphical setting that surrounds the logo, developing hexagonal shapes with the use of a strong purple colour.



Figure 1. The FI PPP corporate design in a “strong” graphical setting

To account for the different variations required in the balance between programme-level and project-level communication, different variations of this design have been produced with a gradually “softer” presence of the FI PPP image with respect to, say, the logos of individual projects or project partners. We thus have the following examples:



Figure 2. “Softer” graphical settings with the same programme logo

5 Dissemination Activities

The following sub-sections identify the action items scheduled and describe the identified means of communication deployed for dissemination and community building aspects in support of the long term exploitation objectives.

The relationship between any dissemination activity in this section and identified stakeholder communities and target audiences from the previous section shall be assessed following the evaluation criteria defined in section 3.5.3 evaluation of effectiveness and impact

5.1 Visual Identity Guideline

The visual identity supports the partners to communicate more effectively to the project target audience.

The main element of the graphical identity is the logotype. Also templates for presentations and slides have been designed for this purpose.

5.1.1 Logo

A project logo has been designed to boost the visual identity of the project. The ENVIROFI logo will be included in all the dissemination products such as the deliverables, project website, posters, brochures, presentations, papers, etc.



Figure 3. ENVIROFI logo

The ENVIROFI project has prepared templates to be used by partners in the preparation of public papers and in all the events and meetings where ENVIROFI's results and activities are presented.

The template for presentations was adapted from the one provided by the CONCORD project with references to the ENVIROFI project. All the templates can be found in the ALFRESCO project repository.

5.2 Online Activities

5.2.1 Project Website

A public project website was set up during the preparation of the ENVIROFI proposal and will be updated on a regular basis during the project lifetime. The web address is: <http://www.envirofi.eu>.



Figure 4. ENVIROFI Website front page

The website is meant to act as the online business card of the project, allowing a word wide promotion of the project and summarising the project situation and results during the entire project duration. The ENVIROFI website provides access to the following key information in a concise and appealing manner:

- Description of project objectives, partners and funding
- Access to public project documents and results
- Announcements on project activities
- Links to other relevant activities and information sources

Statistics of the visits and pages more visited have been followed through a dedicated account in Google Analytics.



Figure 5. Website statistics in Google Analytics

5.2.2 RSS Newsfeed and Newsletter

As part of its web-based dissemination activities, the project will set up an RSS newsfeed based on news items published on the public project website. This newsfeed could be used, for example, on the FI-PPP website to provide aggregated news from ENVIROFI and other FI-PPP projects – this needs to be discussed and agreed with CONCORD.

Based on the news items published via the ENVIROFI website and on important event dates, the project will regularly publish a quarterly electronic newsletter starting from the third quarter of 2011.

Annex II – ENVIROFI Newsletters at the end of this document compiles all 6 newsletters published during the project lifetime and also available at the project website (<http://www.envirofi.eu/Downloads/Newsletters/tabid/4872/Default.aspx>).

5.2.3 Twitter

The Consortium has set up a Twitter account in order disseminate the project results by using one of the most relevant social networks nowadays:

<http://twitter.com/ENVIROFI>

5.3 General Publications and Event Material

Promotional material, such as flyers, posters and multimedia material were produced to disseminate the project results. This material followed the corporate identity. All the material produced for the events has been reported in the form of each event (see section 5.5).

5.3.1 Project Flyer

ENVIROFI produced a project flyer, which summarised the purpose, the research work and the envisaged impact of the project in a style that is also understandable for the interested public.

The flyer was distributed at major conferences and workshops to the target audiences mentioned above.

5.3.2 Press Releases

Targeted media to be included are local, national and European newspapers, magazines as well as radio and TV broadcasters. Press releases contain project related information, news and results in a style suitable for the general public.

5.3.3 Project Posters

Two posters have been initially designed for the INSPIRE 2011 Conference. The first version of the poster has the purpose to catch the eye of the audience and the second version provides technical content. Based on this initial design, additional posters were produced during the lifetime of the project by the individual partners when necessary.



Figure 6. Eye-catcher poster



Figure 7. Technical poster



Figure 8. Istanbul GEO Plenary poster



Figure 9. AGILE Conference poster



Figure 10. Marine Knowledge Management poster

5.4 Papers, Magazine Articles and Press Releases

The table below shows all the accepted and published publications, including scientific papers, magazine articles and other publications.

Related Project Publications (most recent first)	
01	S. Schade, C. Granell. Shaping Digital Earth Applications through Open Innovation - Setting the Scene for a Digital Earth Living Lab. Accepted to International Journal of Digital Earth (Special Issue on Digital Earth Applications: Technological Design and Organisational Strategies), 2014, ISSN 1753-8947. doi: 10.1080/17538947.2013.804600
02	C. Granell, S. Schade. Environmental Informatics for Sustainable Development. Accepted to Encyclopedia of Information Science and Technology, 3rd Edition. Hershey: Information Science Reference (IGI Global), 2014
03	C. Granell, S. Schade, N. Ostländer. Seeing the forest through the trees: A review of integrated environmental modelling tools. Computers, Environment and Urban Systems, 41: 136-150, 2013, ISSN 0198-9715. doi: 10.1016/j.compenvurbsys.2013.06.001
04	S. Modafferi, A. Chakravarthy and Z. Sabeur (2013). Multi-level Data Fusion of Environmental Data in Future Internet Applications. Accepted for publication at the proceeding of the 21st Ital-ian Symposium on Advanced Database Systems, 30th June – 3rd July 2013, Roccella Jonica (RC), Italy
05	Z. Sabeur, A. Chakravarthy, M. Bashevoy and S. Modafferi (2013). Structured Multi-level Data Fusion and Modelling of Heterogeneous Environmental Data for Future Internet Applications. Geophysical Research Abstracts, Vol. 15, EGU2013-6311-2, 2013, EGU General Assembly 2013
06	C. Granell. Environmental observation and the Future Internet - ENVIROFI Day in Dublin. Eurescom Mess@ge 1-2013, 14-15, 2013
07	C. Granell, L. Diaz, S. Schade, N. Ostländer and J. Huerta (2013). Enhancing integrated environmental modelling by designing resource-oriented interfaces . Environmental Modelling & Software, 39, pp 229–246.
08	J. Tuominen, N. Laurene, E. Hyvönen, "Publishing and Using Plant Names as an Ontology Service", published in the First International Workshop on Semantics for Biodiversity (S4BioDiv), ESWC 2013, CEUR Workshop Proceedings, Vol 979, http://www.ceur-ws.org/Vol-979 , Montpellier, France, May, 2013
09	D. Hayn, M. Kobernus: "Tomorrow's Telemetering Today: Citizen Observatory Approach with Micro Sensors and Smart Prognostics". Smart Systems Integration, Amsterdam, NL; 13.03.2013 - 14.03.2013; in: "Proceedings of the Smart Systems Integration", VDE Verlag GmbH, Berlin, Offenbach (2013), ISBN: 978-3-8007-3490-0; Paper-Nr. 118, 3 S
10	S. Schade, F. Ostermann, L. Spinsanti and W. Kuhn (2012). Semantic Observation Integration . Future Internet 2012, 4(3)
11	K. Janowicz, A. Broering, C. Stasch, S. Schade, T. Everding and A. Llaves (2013). A RESTful Proxy and Data Model for Linked Sensor Data . International Journal of Digital Earth, 6(3): 233-254.
12	S. Schade and P. Smits (2012). Why Linked Data Should Not Lead to Next Generation SDI . IGARSS 2012, Munich, Germany.
13	A. Perego, C. Fugazza, L. Vaccari, M. Lutz, P. Smits, I. Kanellopoulos, and S. Schade (2012). Harmonization and Interoperability of EU Environmental Information and Services . IEEE Intelligent Systems 27(3): 33-39.

- 14 S. Schade and C. Granell (2012). [INSPIRE Fostering Innovation? Suggestion on a Living Lab Approach](#). INSPIRE Conference 2012, Istanbul, Turkey, 23-27 June 2012.
- 15 S. Schade, N. Ostländer, C. Granell, M. Schulz, D. McInerney, G. Dubois, L. Vaccari, M. Chinosi, L. Díaz, L. Bastin, R. Jones. (2012). [Which Service Interfaces fit the Model Web?](#) GeoProcessing 2012, Valencia, Spain.
- 16 M. Kobernus, S. Schade, D. Havlik, M. Egly, J. Pielorz, B. Denby (2012). [Agile Applications - A New Paradigm, an Old Devil](#). 8th International Air Quality Conference 2012, Athens, Greece
- 17 A. Tamayo, C. Granell, J. Huerta. Using SWE Standards for Ubiquitous Environmental Sensing: A Performance Analysis. Sensors, 12(9): 12026-12051, 2012.
- 18 S. Schade, N. Ostländer, C. Granell, M. Schulz, D. McInerney, G. Dubois, L. Vaccari, M. Chinosi, L. Díaz, L. Bastin, R. Jones. (2012, in press). Which Service Interfaces fit the Model Web? GeoProcessing 2012, Valencia, Spain.
- 19 M. Egly, D. Havlik (2012). Security and Privacy in Environmental Crowdsourcing Applications. 2nd Concertation Board Workshop: "Security, Identity and Privacy; challenges and opportunities within the European Future Internet", Zürich; 27.03.2012.
- 20 C. Delaney, P. Gaughan (2012). Next-generation decision support tools for the global marine sector, Eurescom, 1, 2012
- 21 C. B. Geyer, M. Egly, D. Havlik, P. Kutschera and G. Neubauer: "Green A Mobile Application for Environmental Observations", conference paper and presentation at COST Green Engineering Camp, 02-06 Juli 2012, Plitvice, Croatia
- 22 D. Havlik, P. Kutschera, C. Geyer, M. Egly: "Geospatial Service Interfaces and Encodings for Mobile Applications", conference paper and presentation at ENVIROINFO 2012, 29-31 August 2012, Dessau, Germany
- 23 M. Kobernus, D. Havlik, H. v.d. Schaaf, J. Pielorz, M. Falgenhauer: "A Quest for Affordable Personalized Atmospheric Exposure Estimates" conference paper and presentation at ENVIROINFO 2012, 29-31 August 2012, Dessau, Germany
- 24 S. Schade, B. Fogarty, M. Kobernus, K. Schleidt, P. Gaughan, P. Mazzetti and A. Berre (2011). *Environmental Information Systems on the Internet - A Need for Change*. In Hrebicek, J., Schimak, G. and Denzer, R. (Eds.) Environmental Software Systems. Frameworks of eEnvironment, Proceedings of the 9th IFIP WG 5.11 International Symposium, ISESS 2011, Brno, Czech Republic, June 27-29, 2011, pp 144-153. Awarded as best paper in the 'eEnvironment and Cross-border Services in Digital Agenda for Europe' track.
- 25 D. Roman, S. Schade and A. Berre (2011). *An Open Environmental Platform: Top-Level Components and Relevant Standards*. In Hrebicek, J., Schimak, G. and Denzer, R. (Eds.) Environmental Software Systems. Frameworks of eEnvironment, Proceedings of the 9th IFIP WG 5.11 International Symposium, ISESS 2011, Brno, Czech Republic, June 27-29, 2011, pp 217-225.
- 26 S. Schade, P. Mazzetti, Z. Sabeur, D. Havlik, T. Usländer, A. Berre, and J. Mon (2011). *Towards a Multi-Style Service-Oriented Architecture for Earth Observations*. EGU General Assembly 2011, Vienna, Austria.
- 27 T. Usländer, T. Batz (2011). *How to Analyse User Requirements for Service-Oriented Environmental Information Systems*. In Hrebicek, J., Schimak, G. and Denzer, R. (Eds.) Environmental Software Systems. Frameworks of eEnvironment, Proceedings of the 9th IFIP WG 5.11 International Symposium, ISESS 2011, Brno, Czech Republic, June 27-29, 2011, pp 161-168. 3rd prize awarded as best paper in the category "eEnvironment and Cross-Border Services in Digital Agenda for Europe"
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- Symposium, ISESS 2011, Brno, Czech Republic, June 27-29, 2011, pp 651-656
- 29 D. Havlik (2011). *Environmental Application Scenarios for the Future Internet*. EGU General Assembly 2011, Vienna, At.
- 30 D. Havlik. *Sensor Web and the Future Internet*. Sensor Web Enablement Workshop 2011, Brno, Czech Republic
- 31 D. Havlik: (2011). From Sensor Web to Observation Web. keynote: Seminar sensor web enablement, Utrecht, NL; 23.06.2011
- 32 K. Schleidt, N. Laurence (2011). *ENVIROFI - Bringing Biodiversity to the Future Internet*. TDWG Biodiversity Information Standards Conference 2011, New Orleans, U.S.A
- 33 N. Laurence, J. Tuominen, K. Schleidt and E. Hyvönen (2011). *Observing observations - an ontology-based approach for improving the reliability of biodiversity data*. TDWG 2011 Biodiversity Information Conference 2011, New Orleans, U.S.A
- 34 S. Schade, F. Ostermann and L. Spinsanti (2011). Functional Integration for the Observation Web. KEOD 2011, Paris, France
- 35 A. Broering, K. Janowicz, C. Stasch, S. Schade, T. Everding and A. Llaves (2011). Demonstration: A RESTful SOS Proxy for Linked Sensor Data. Semantic Sensor Network Workshop 2011, Bonn, Germany
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- 38 S. Schade, L. Díaz, F. Ostermann, L. Spinsanti, G. Luraschi, S. Cox, M. Nuñez and B. De Longueville (2011). Citizen-Based Sensing of Crisis Events: Sensor Web Enablement for Volunteered Geographic Information. Applied Geomatics, Springer, DOI: 10.1007/s12518-011-0056-y
- 39 A. Annoni, M. Craglia, M. Ehlers, Y. Georgiadou, A. Giacomelli, M. Konecny, N. Ostlaender, G. Remete-Fülöpp, D. Rhind, P. Smits and S. Schade (2011). A European Perspective on Digital Earth. International Journal of Digital Earth 4(4), pp 271-284
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- 41 D. Roman, S. Schade and A. Berre (2011). [An Open Environmental Platform: Top-Level Components and Relevant Standards](#). In Hrebicek, J., Schimak, G. and Denzer, R. (Eds.) Environmental Software Systems. Frameworks of eEnvironment, Proceedings of the 9th IFIP WG 5.11 International Symposium, ISESS 2011, Brno, Czech Republic, June 27-29, 2011, pp 217-225
- 42 S. Schade, P. Mazzetti, Z. Sabeur, D. Havlik, T. Usländer, A. Berre, and J. Mon (2011). Towards a Multi-Style Service-Oriented Architecture for Earth Observations. EGU General Assembly 2011, Vienna, Austria
- 43 S. Schade, F. Ostermann and L. Spinsanti (2011). Functional Integration for the Observation Web. KEOD 2011, Paris, France
- 44 A. Broering, K. Janowicz, C. Stasch, S. Schade, T. Everding and A. Llaves (2011). [Demonstration: A RESTful SOS Proxy for Linked Sensor Data](#). Semantic Sensor Network Workshop 2011, Bonn, Germany

45	C. Stasch, S. Schade, A. Llaves, K. Janowicz and A. Broering (2011). Aggregating Linked Sensor Data . Semantic Sensor Network Workshop 2011, Bonn, Germany
46	K. Schleidt, B. Fogarty, M. Kobernus, D. Havlik and S. Schade (2011). ENVIROFI: Future Internet for Future INSPIRE . INSPIRE Conference 2011, Edinburgh, Scotland
47	A. Berre, T. Usländer and S. Schade (2011). Identification and Specification of Generic and Specific Enablers of the Future Internet - illustrated by the Geospatial and Environmental Domain. ServiceWave 2011, Poznan, Poland
48	D. Havlik, S. Schade, W. van Wijk, T. Usländer and J. Hierro (2011). Leveraging the Future Internet – Public Private Partnership for the Environmental Usage Area . EnviroInfo Conference 2011, Ispra, Italy
49	Denis Havlik, Sven Schade, Zoheir A. Sabeur, Paolo Mazzetti, Kym Watson, Arne J. Berre, and Jose Lorenzo Mon, 2011, <i>From Sensor to Observation Web with Environmental Enablers in the Future Internet</i> , Sensors 2011, 11(4), 3874-3907. doi:10.3390/s110403874

Table 3. Project Publications

At the time of the project reporting and collection of information to prepare this document, a number of scheduled articles still had not been published. The table below summarises the articles to be published.

Scheduled articles	
01	T. Usländer, A. Berre, C. Granell, D. Havlik, J. Lorenzo, Z. Sabeur, S. Modafferi. The Future Internet Enablement of the Environment Information Space. Accepted to the International Symposium on Environmental Software Systems (ISESS 2013). Neusiedl am See, Austria, October 2013
02	Paper for the ISESS 2013 conference: H. van der Schaaf, M. Kobernus, M. Falgenhauer, J. Pielorz, K. Watson, "Data fusion in the environmental domain"
03	D. Havlik, J. Soriano, C. Granell, S.E. Middleton, H. van der Schaaf, A. Berre, J. Pielorz. Future Internet enablers for VGI applications. Accepted to EnviroInfo 2013 Conference. Hamburg, Germany, September 2013
04	G. Neubauer, A. Nowak, B. Jager, D. Havlik, G. Foitik, C. Kloyber, C. Flachberger (2013): „Crowdtasking for crisis and disaster management – opportunities and challenges”, for IDIMT 2013
05	Paper for the MODSIM 2013 conference: K. Watson, H. van der Schaaf, "Describing models on the web using OGC standards"

Table 4. Scheduled articles

The project published the following press release for the ENVIROFI day in Dublin:

Press Release	
01	C. Granell. Environmental observation and the Future Internet - ENVIROFI Day in Dublin. Eurescom Mess@ge 1-2013, 14-15, 2013.

Table 5. Press release

5.5 Workshops and Events

The partners have participated in workshops and events dealing the environmental, geospatial, Earth observation, ICT and semantic web and Internet of Things domains, with an initial focus to raise awareness about the project and to draw attention towards the project work and results.

It must be noted that the emphasis for participation in events was on quality, not quantity; the activity either helped to build required understanding in support of the work of ENVIROFI or facilitated the networking of stakeholder communities and thus raised awareness about the results of ENVIROFI.

The participation in conferences outside the EU was evaluated by the coordinator, ensuring that the good-value for money principle was respected.

5.5.1 Project workshops and meetings

In addition to the advisory board meetings, several community consultation **workshops were organised by the project**. These workshops allowed the consortium to interact with the stakeholder communities and collect feedback on the Future Internet requirements from the environmental usage area, specifications of environmental enablers, and the development of the project conceptual prototypes.

Event	
- First Advisory Board meeting in Ispra	
URL Link	Location, Date
- n.a.	- Ispra, Italy, October 6, 2011
Partner participant	Link to Publications / Presentation
- All partners	
Short Event Description	
- The first ENVIROFI Advisory Board meeting was co-located with the EnviroInfo conference and the ENVIP workshop on October 6, 2011. Seven of the ten board members attended the ENVIROFI session of the conference and met project representatives for in depth discussions thereafter. Most notably, the general approach of the ENVIROFI project and possible future directions were discussed with representatives from the private sector (Statoil, AeroVision, 52° north and interactive instruments), the public sector (DG Environment) and standardization bodies (ISO and OGC). It was agreed to jointly work on a related white paper, additional Future Internet scenarios, and to meet again in conjunction with EGU 2012, in Vienna Austria.	

Table 6. First advisory board meeting

Event	
- Second Advisory Board meeting in Vienna	
URL Link	Location, Date
- n.a.	- Vienna, Austria, on 24th April 2012
Partner participant	Link to Publications / Presentation
- All consortium	
Short Event Description	
<p>- The second ENVIROFI Advisory Board meeting that was co-located with the European Geosciences Union (EGU) General Assembly. Six of the thirteen board members attended. The first results and challenges of the ENVIROFI project and possible future directions were discussed with representatives from the private sector (Statoil, AeroVision, 52° north), academia (Modul University of Vienna), the governmental sector (European Environmental Agency), and standardization bodies (OGC). The upcoming need to intensify stakeholder engagement across the value network as well as the required transition to multidisciplinary and exploratory applications has been highlighted. It was agreed to continue the many initiated discussions over the summer in bi-literal meetings and to jointly work on a related white paper..</p>	

Table 7. Stakeholder workshop October 2012

Event	
- Third Advisory Board meeting in Dublin	
URL Link	Location, Date
- n.a.	- Dublin, Ireland, 7 th March 2013
Partner participant	Link to Publications / Presentation
- ATOS, JRC, IOSB, AIT, IT INN, CNR, EEA, InTune.	
Short Event Description	
<p>The last and third Advisory Board meeting took place in Dublin (7th March 2013), and aimed to solicit the Board the following feedback on the main results and achievements of the ENVIROFI project. For doing so, we followed a three-step approach during the previous months:</p> <ul style="list-style-type: none"> • The ENVIROFI partners prepared a summary document of the achievements of the ENVIROFI project with a concluding section of lessons learned. • Such summary document was sent to the Advisory Board list 10 days prior to the AB meeting in Dublin. • The Advisory Board meeting in Dublin on 7th March (the day after of the ENVIROFI Conference) sought the Advisory Board feedback on each of the project results as specified in the in the present summary document, reflections on the ENVIROFI Conference Day, and ways in which the ENVIROFI project and the environment field in general may find his way in the next phases of the FI-PPP programme. 	

Table 8. Stakeholder workshop March 2013

Event	
- Stakeholder workshop	
URL Link	Location, Date
- n.a.	- Torniella (Roccastrada), Italy, Oct 2nd 2012
Partner participant	Link to Publications / Presentation
- CNR, EAA, AIT, AALTO	
Short Event Description	
<ul style="list-style-type: none"> - A Work Package 1 meeting was scheduled for October 1 and 2 2012 in Torniella, a small village located in the Farma Valley, Southern Tuscany, not far from the Belagaio reserve. It was proposed to include in the meeting a session open to the public, inviting local stakeholders contacted during the previous months to meet the researchers from the ENVIROFI team and to learn about progress in the biodiversity prototype. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - The event saw the participation of members of the local community, representatives of the local administrations, and environmental guides operating in the area, and represented a complement to the September 30 event. 	

Table 9. Stakeholder workshop October 2012

Event	
- Stakeholder workshop	
URL Link	Location, Date
- n.a.	- Florence, Italy, Jan 21st 2013
Partner participant	Link to Publications / Presentation
- CNR, AIT, EAA, JRC, ATOS, MI	
Short Event Description	
<ul style="list-style-type: none"> - In January 2013 a meeting of the ENVIROFI Consortium was scheduled in Florence, Italy. Taking advantage of the presence of various team members, a half-day public workshop was organized, as an opportunity to provide information about the project and, ideally, to meet some of the stakeholders operating in the Florence area. - The workshop took place at the Faculty of Agricultural Sciences. In addition to presentations by the three thematic work package leads, a presentation was given by Prof. Bussotti, from the University of Florence, as a representative of the FUNDIV Europe FP7 project. The FUNDIV Europe project is related to the collection of detailed data on forest biodiversity. Since some of the pilot sites for data collection under FUNDIV Europe are in fact located in the Farma and Merse valleys, i.e. coinciding with the starting point of several stakeholder interactions in the Southern Tuscan sites, contacts were established earlier in 2012 in order to identify potential additional synergies. 	

Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)

- The Florence workshop saw the attendance of various members from the stakeholder community, also from Rome and Milano, representing local administrations (Municipality of Florence, Province of Florence, Tuscan Regional Administration), research institutions, and consulting companies.
- The event was advertised through a rather extended mailing list in Tuscany, obtaining web visibility in various sites in Tuscany dedicated to environmental issues.

Table 10. Stakeholder workshop, January 2013

Event	
<ul style="list-style-type: none"> - ENVIROFI day conference 	
URL Link	Location, Date
<ul style="list-style-type: none"> - http://www.envirofi.eu/EnvirofiDay/tabid/10878/Default.aspx 	<ul style="list-style-type: none"> - Dublin, Ireland, March 6th 2013
Partner participant	Link to Publications / Presentation
<ul style="list-style-type: none"> - All partners 	
Short Event Description	
<ul style="list-style-type: none"> - The ENVIROFI Day Conference marked the final dissemination event of the ENVIROFI project. Therefore, we showed the main results of the project –enablers and the application demonstrators– as well as addressing phase 2 and 3 of the FI-PPP programme related issues – being (i) scenarios that connect different usage areas, i.e. environment and smart cities, energy, transport, etc.; (ii) open innovation ecosystems; and (iii) scaling potentials. - The conference addressed researchers, innovators and early adopters of ICT based solutions, particularly those with a strong interest in contributing with or benefiting from environmental information or services. While the environmental interests address areas of social benefit, economic factors are mainly appearing when connecting environmental themes with other domains (or usage areas). The FI-PPP and also this event brought the players of all of these communities together and paired this already heterogeneous setting with economists and social scientists, which aimed to understand the underlying drivers, challenges and opportunities. 	

Table 11. ENVIROFI day conference

5.5.1.1 Dissemination events associated to the “Citizens in Tuscany” Scenario

Work package 1 included a pilot named “citizens in Tuscany”, focused on the engagement of a diverse array of stakeholders in the testing of the prototype mobile application for the collection and sharing of biodiversity data. As a part of the stakeholder engagement process, a number of public presentations were organized during the course of the project in order to promote the testing of the prototype. All these presentations are documented either in section 5.5.1 or 5.5.2.

The public events were complemented by additional follow-up meetings with key stakeholders identified during the presentations. This allowed providing in-depth demonstrations of the biodiversity application, thus allowing to collect specific comments, as well as to document ideas and new requirements. The comments were relayed to the development team and were used to prioritize some of the requirements in the prototype.

The follow-up activities conducted since March 2012 were mostly focused on (a) maintaining a general level of information for all of the contacts acquired during the previous months, and (b) providing more specific interactions, including meetings, with stakeholders who showed greater interest in the ENVIROFI prototypes. The main scope of such meetings was to provide live demonstrations of the mo-

mobile app, so as to collect user feedback, especially in the case of users demonstrated interest in the prototype, but did not have an adequate Android device to conduct independent testing.

As a parallel activity to the testing, contacts with the development team of the ENVIROFI-BIO application were kept, in order to relay any issues deriving from the meetings and, thus, to prioritize bug fixes in light of subsequent public testing.

During the May-June period, meetings were held with seven stakeholders, covering expertise areas on forestry engineering, agricultural engineering, botanics, natural sciences, and environmental tourism. In addition to these specialists, it was possible to meet two members of local communities in rural areas, interested in the use of innovative technologies to promote biodiversity assets in their areas of residence. Furthermore, interactions which were started in the previous months with the Municipality of Florence and the Tuscan Regional Administration (both providing data to support the Tuscan pilot application) were maintained.

In general, the prototype application was seen with interest, and as a means to add value to existing activities. In one case, however, it was noted that the prototype was perceived as a tool competing with a pre-existing application. This specific situation (occurred with the Natural History Museum in Grosseto) suggests that, where a stakeholder is already investing in information technologies to support its activities, an additional effort should be made to explain how the set of enablers provided by ENVIROFI may complement existing solutions.

5.5.2 External events (ordered by date)

The Consortium has attended the following events:

Event	
- Future Internet Assembly (FIA) 2011	
URL Link	Location, Date
- http://www.fi-budapest.eu/index.php?menu=9	- May 18 th -19 th , 2011, Budapest
Partner participant	Link to Publications / Presentation
- ATOS, SINTEF, AIT	
Short Event Description	
<ul style="list-style-type: none"> - The European Future Internet Assembly (FIA), is a collaboration between projects that have recognised the need to strengthen European activities on the Future Internet to maintain European competitiveness in the global marketplace. - FIA is open to all researchers engaged in Future Internet research (be they at EU or not) to contribute and participate towards FIA's goals. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - Discussions at FI-PPP programme-level took place. Members from all FI-PPP programme projects attended. - Informal contact with the Dissemination Work Group was established. Members from all usage areas attended and FI-PPP programme-level dissemination strategies were discussed. 	

Table 12. FIA (2011)

Event	
- Irish Future Internet Forum (IFIF) 2011	
URL Link	Location, Date
- http://www.futureinternet.ie/FutureInternet11/index.php	- Kilkenny, Ireland, June 1 st , 2011
Partner participant	Link to Publications / Presentation
- Marine Institute	
Short Event Description	
- This conference supports knowledge sharing between Irish policy makers, funding agencies, industrial players and academic researchers. In doing so, this Forum addresses the challenges and, more importantly, the opportunities associated with the emerging Future Internet.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Key note speakers from around the globe provided their insights into the Future Internet.	

Table 13. IFIF (2011)

Event	
- The 2nd European Summit on the Future Internet	
URL Link	Location, Date
- http://www.future-internet.uni.lu/	- June 6 th – 7 th 2011, Luxembourg
Partner participant	Link to Publications / Presentation
- ATOS	- http://www.future-internet.uni.lu/images/stories/presentations/110602%20v04%20ENVIROFI%202nd%20FI%20Summit-%20Cavanillas.pdf
Short Event Description	
<ul style="list-style-type: none"> - The 2nd European Summit provides a natural forum for the presentation and discussion of the issues, trends and actions confronting the future of the Internet. The summit will be the focal point for the exchange and sharing of lessons learnt and for the presentation and discussion of some of the developments that have taken place in the domain of smart cities. - Particular emphasis will be given to presenting the first set of successful projects from the Future Internet PPP call. The summit will be followed by two workshops taking place on the 7th June. These will focus on two of the most pressing matters: <ul style="list-style-type: none"> 1) The end of IPv4 and the birth of IPv6, 2) e-Government and the Future Internet – problems, approaches and actions. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Objectives of ENVIROFI were presented among FI-PPP programme audience.	

Table 14. The 2nd European Summit on the Future Internet

Event	
- Future Networks and Mobile Networks Summit	
URL Link	Location, Date
- http://www.futurenetworksummit.eu/2011/	- June 15 th – 17 th 2011, Warsaw, Poland
Short Event Description	
<ul style="list-style-type: none"> - This was the twentieth in a series of Annual Conferences supported by the European Commission, which regularly attracts over 600 delegates from industry and research to share experiences and research results, identify future trends, discuss business opportunities and identify opportunities for international research collaboration under the ICT Theme of Framework Programme 7 (FP7). It contributed to showcasing European research in the field, and positioning it within the multiplicity of related initiatives supported in other regions of the world. - In the context of convergence, the 20th Future Network and MobileSummit addresses the challenges of building the Future Internet, based on mobile, wireless and fixed broadband communications infrastructures. 	

Table 15. Future Networks and Mobile Networks Summit

Event	
- ISESS 2011 International Symposium on Environmental Software Systems	
URL Link	Location, Date
- http://www.issess2011.org/	- June 27 th – 29 th 2011, Brno, Czech Republic
Partner participant	Link to Publications / Presentation
- AIT, SINTEF	
Short Event Description	
<ul style="list-style-type: none"> - ISESS, the International Symposium on Environmental Software Systems, was initiated in 1995 as a forum to present and discuss the fundamentals, progress and actual trends in this area in terms of methods, tools and state-of-the-art environmental informatics applications. Over the years, it has also evolved into an important networking tool for academics, environmental professionals, and other interested parties. - The conference displayed the state-of-the-art in the development and implementation of Environmental and Information Systems and e-Environment services, with a special focus on the following topics: <ul style="list-style-type: none"> o E-Environment and Cross-border Services in Digital Agenda for Europe o Environmental Information Systems and Services - Infrastructures and Platforms o Semantics and Environment o Distributed Modelling o Information Tools for Global Environmental Assessment o Advanced Approaches to Catchment Hydrology Simulation o Climate services and Environmental Tools for Urban Planning - The conference was organised by the Masaryk University in cooperation with IFIP, the Ministry of the Environment of the Czech Republic, the European Commission and the European Environment Agency 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - The conference was related with Environmental Information Systems and is open to a wide range of organisations, such as governmental institutions, international and intergovernmental organisations, environmental agencies and networks, scientists, academicians, politicians, businesses, public administration and decision makers in the field of environmental information, experts from ICT industry, specialists of theoretical and applied informatics, consultants, students and the concerned public. 	

Table 16. ISESS (2011)

Event	
- INSPIRE Conference 2011	
URL Link	Location, Date
- http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2011	- Edinburgh from 27th June - 1st July 2011
Partner participant	Link to Publications / Presentation
- n.a.	
Short Event Description	
<ul style="list-style-type: none"> The theme of this year's edition was "INSPIREd by 2020 - Contributing to smart, sustainable and inclusive growth". This edition of the INSPIRE Conference offered an opportunity to explore INSPIRE's contribution to Europe's 2020 strategic goals and to root its further implementation and development in the EU 2020 follow-up programmes. the INSPIRE Conference examined and reported on the progress being made in the development and implementation of INSPIRE Directive and Implementing Rules. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- ENVIROFI contributed to the event with a poster session, which helped to promote the projects results.	

Table 17. INSPIRE Conference 2011

Event	
- Second Annual SmartOcean Workshop. Driving new business opportunities at the interface between ICT and the Sea	
URL Link	Location, Date
http://www.marine.ie/home/aboutus/newsroom/NewsArchive/2011/secondannualSmartOceanWorkshop.htm	- 5th & 6th of July 2011, Marine Institute Galway
Partner participant	Link to Publications / Presentation
- Marine Institute, InTune	
Short Event Description	
<ul style="list-style-type: none"> The Marine Institute hosted an industry orientated workshop on July 5th and July 6th, 2001. The workshop explored market-led opportunities for the development and deployment of distributed sensing, communication and information technologies in global markets including Offshore Energy, Marine Environment, Transport and Security. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> Barbara Fogarty and Fergal Ward participated in the workshop introducing the ENVIROFI concepts for the development of Future Internet services for the global marine sector. The workshop highlighted new commercial and innovation opportunities emerging from Ireland's Hi Tech Marine Products and Service sector. 	

Table 18. Second Annual SmartOcean Workshop

Event	
- ENVIROINFO 2011	
URL Link	Location, Date
- http://www.ec-gis.org/Workshops/EnviroInfo2011	- 5th – 7th October 2011, Ispra, Italy, hosted by EC-JRC
Partner participant	Link to Publications / Presentation
- EC-JRC	
Short Event Description	
<ul style="list-style-type: none"> ENVIROFI partner JRC (Joint Research Center of the European Commission) hosted the 25th EnviroInfo conference at their premises in Ispra from 5 to 7 October 2011. The conference covered the field of processing environmental information prepared and distributed with cutting edge ICT technologies. In particular, it comprised the field of Environmental Informatics, i.e. informatics applications for the environment. Special emphasis was put on innovative applications supporting the sharing of environmental observations, complex modelling processes and simulation techniques. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> ENVIROFI organised a session on 'Environmental Information Services in the Future Internet', which was chaired by Sven Schade from the JRC. In this session ENVIROFI presented a paper on 'Leveraging the Future Internet - Public Private Partnership for the Environmental Usage Area', which was written by Denis Havlik, Sven Schade, Wout van Wijk, Thomas Usländer, and Juanjo Hierro. The presentation was complemented by a round table on stakeholders' expectations towards a Future Internet and by a discussion of the FI-Ware Future Internet chapters. In addition, Arne Berre from ENVIROFI partner SINTEF and Sven Schade chaired the ENVIP Workshop together with Gerald Schimak (representing the FP7 project TaToo) and Federico Prandi (representing the BRISEIDE project). This workshop helped to build community building among European funded projects that deal with environmental information services, infrastructures, and platforms. 	

Table 19. ENVIROINFO 2011

Event	
- Future Internet Week	
URL Link	Location, Date
- http://www.fi-poznan.eu/	- Poznan, Poland from 24th – 28th October 2011
Partner participant	Link to Publications / Presentation
- ATOS	
Short Event Description	
<ul style="list-style-type: none"> The session aimed at the identification of the needs from the FI communities to be involved in research projects for sustainable businesses. It was chaired by Dr. Petra Turkama, coordinator of the CONCORD project, and Jarmo Eskelinen, vice-chair of the European Network of Living Labs (ENoLL). 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> ENVIROFI participated in the FIA session 'When Infrastructure meets the user'. Antonio Oliván from Atos represented ENVIROFI in the panel. Further panel participants were representatives of the FI-PPP community (FI-WARE, INFINITY, ENoLL, HP, UNIVERSAAL, pMedicine). The round table discussion pointed out some challenges that the FI-PPP and Living Lab community have to face in order to identify those relevant activities needed to encourage the different communities to work together for achieving fruitful results. The ensuing lively discussion with the audience focused on the interesting questions how to approach user-driven innovation, and who these users are. 	

Table 20. Future Internet Week, Poznan

Event	
- International Conference on Knowledge Engineering and Ontology Development (KEOD)	
URL Link	Location, Date
- http://www.ic3k.org/	- Paris from 26th to 29th October 2011
Partner participant	Link to Publications / Presentation
- JRC	
Short Event Description	
- The KEOD 2011 was one of the three conferences which constitute the International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (IC3K). It was held in conjunction with the International Conference on Knowledge Discovery and Information Retrieval (KDIR) and the International Conference on Knowledge Management and Information Sharing (KMIS).	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- In the session on Sensor Networks at the Semantic Sensor Web (SSW) ENVIROFI consortium member Sven Schade promoted an alternative approach to classical logic-based solutions for semantic interoperability. As a result of the presentation, ENVIROFI has been invited to contribute to the upcoming special issue of the Future Internet Journal on Semantic Interoperability and Knowledge Building.	

Table 21. IC3K 2011

Event	
- eChallenges 2011 conference	
URL Link	Location, Date
- http://www.echallenges.org/e2011/	- Florence, Italy, from 26th to 28th October 2011
Partner participant	Link to Publications / Presentation
- CNR	
Short Event Description	
- The event aims to promote ICT knowledge sharing and innovation between commercial organisations, government agencies and the research community, exchange experiences about the current state of eAdoption at a sectorial, national or regional level and stimulate rapid take-up of Research and Technology Development (RTD) results by industry and in particular SMEs.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Paolo Mazzetti from CNR presented the ENVIROFI project within the "Future Internet PPP Matchmaking Session" organized by the FI-PPP CONCORD Project, for an audience of leading commercial, government and research organisations around the world.	

Table 22. eChallenges 2011

Event	
<ul style="list-style-type: none"> - 4th Semantic Sensor Network (SSN) Workshop, held within the International Semantic Web Conference (ISWC) 2011 	
URL Link	Location, Date
<ul style="list-style-type: none"> - http://iswc2011.semanticweb.org/ 	<ul style="list-style-type: none"> - Bonn, Germany, from 23rd to 27th October 2011
Partner participant	Link to Publications / Presentation
<ul style="list-style-type: none"> - JRC 	
Short Event Description	
<ul style="list-style-type: none"> - The general conference aims at presenting and discussing original work dealing with analytical, theoretical, empirical, and practical aspects of all areas of Semantic Web research. The SSN work-shop was especially dedicated to provide an interdisciplinary forum to explore and promote the technologies related to a combination of semantic web and sensor networking. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - ENVIROFI partner JRC contributed to a full paper and a demonstration on the application of Linked Data technologies within the Sensor Web. This demonstration was part of the 4th Semantic Sensor Network (SSN) Workshop. 	

Table 23. ISWC 2011

Event	
<ul style="list-style-type: none"> - TDWG Biodiversity Information Standards 2011 Annual Conference 	
URL Link	Location, Date
<ul style="list-style-type: none"> - http://www.tdwg.org/ 	<ul style="list-style-type: none"> - New Orleans, Louisiana, USA, from 16th to the 21st October 2011
Partner participant	Link to Publications / Presentation
<ul style="list-style-type: none"> - EAA, AALTO 	
Short Event Description	
<ul style="list-style-type: none"> - The focus of this year's conference was Technologies and Standards for Biodiversity Collections. In addition, it covered digitization technologies for biodiversity specimens 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - Katharina Schleidt presented the biodiversity information and survey applications planned within ENVIROFI. In addition, Nina Laurene presented the current status of the TaxMeOn Species ontology that will be providing the semantic backend for the ENVIROFI biodiversity pilot. Biodiversity information specialists from all over the world attended the presentations. 	

Table 24. TDWG 2011

Event	
- GEO Plenary 2011	
URL Link	Location, Date
- http://www.earthobservations.org/geo8.shtml	- Istanbul, Turkey from 16th to 17th November 2011
Partner participant	Link to Publications / Presentation
- N/A	
Short Event Description	
<ul style="list-style-type: none"> The GEO Plenary 2011 took place in Istanbul, Turkey from 16th to 17th November 2011. Meetings and workshops related to GEO activities were organized throughout the entire week. The Group on Earth Observation (GEO) is a voluntary partnership of governments and international organizations that is coordinating efforts to build a Global Earth Observation System of Systems, or GEOSS. The GEO Plenary is the main body of designated representatives of the Members and Participating Organizations of the GEO and it is its primary decision-making body. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> Members of the ENVIROFI consortium attending the GEO plenary and side-events and presented a new project poster at the exhibition area. This allowed discussions about the interaction between ENVIROFI and GEO/GEOSS, and with GEO-related projects funded under the European Commission Framework Programme. 	

Table 25. GEO Plenary 2011

Event	
- Workshop Coalition for Action on ICT in regional programmes	
URL Link	Location, Date
- http://www.ictregio.eu/	- Brussels, Belgium, on 19th – 20th January 2012
Partner participant	Link to Publications / Presentation
- N/A	
Short Event Description	
<ul style="list-style-type: none"> DG INFSO organized the workshop focused on the way ICT could be part of the strategy of DG REGIO. The aim was to increase the impact of the FI-PPP results on Europe through an efficient use of available regional and rural European funds. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> The deployment of outcomes from ENVIROFI and the other FI-PPP Use Cases has a high potential of impact on European citizens. Members of all projects in the Future Internet PPP programme were present in the workshop. 	

Table 26. Workshop Coalition for Action on ICT in regional programmes

Event	
<ul style="list-style-type: none"> - The Fourth International Conference on Advanced Geographic Information Systems, Applications, and Services, GEOProcessing 2012. 	
URL Link	Location, Date
<ul style="list-style-type: none"> - http://www.iaia.org/conferences2012/GEOProcessing12.html 	<ul style="list-style-type: none"> - Valencia, Spain, from 30th January to 4th February, 2012
Partner participant	Link to Publications / Presentation
<ul style="list-style-type: none"> - JRC 	
Short Event Description	
<ul style="list-style-type: none"> - The GEOProcessing 2012 conference was aimed to provide an interdisciplinary forum to address fundamental advances in geographic information systems and the emerging Web Service applications related to geographical sensors and huge volumes of spatial data. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - JRC contributed to a full paper on the applicability of web service interfaces for supporting the Model Web vision for integrated environmental models. The identified needs of integrated environmental modelling in respect to Internet technology, especially Web technology, will be integrated into the FI-PPP as particular requirements of the environmental usage area. 	

Table 27. GEOProcessing 2012

Event	
<ul style="list-style-type: none"> - 8th International Conference on Air Quality – Science and Application 	
URL Link	Location, Date
<ul style="list-style-type: none"> - http://www.airqualityconference.org/ 	<ul style="list-style-type: none"> - Athens, Greece, 19 – 23rd March 2012.
Partner participant	Link to Publications / Presentation
<ul style="list-style-type: none"> - NILU 	
Short Event Description	
<ul style="list-style-type: none"> - This is one of the most prominent forums for discussing the latest scientific developments, applications and implications for policy and other users. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - ENVIROFI participated in the conference by presenting a poster as well as a short paper for inclusion in the conference findings. The paper focuses on agile development methods and how they can be applied best to a large multi-disciplinary project. Within this focus, the paper discusses the need for a practical approach to developing agile e-Environmental tools with special focus on ENVI-ROFI, which provides a case study for best practices on e-environmental services. The conference brought together scientists and other stakeholders from the air pollution, climate change, policy and health communities. 	

Table 28. International Conference on Air Quality 2012

Event	
- Oceanology International 2012 Exhibition	
URL Link	Location, Date
- http://www.oceanologyinternational.com/	- London, UK, from 13 to 15 March 2012
Partner participant	Link to Publications / Presentation
- MI, IT-Innovation	
Short Event Description	
<ul style="list-style-type: none"> The exhibition featured a range of marine technologies and software services provided by SMEs and associated research institutes from Ireland's rapidly expanding marine technology sector. Exhibitors represented a range of cross-sector interests within the Irish SmartOcean Cluster. A key goal of the cluster is to develop a new marine information and communications technology sector that brings together a strong and vibrant ICT sector with new and existing marine-related sectors 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> Marine Institute presented ENVIROFI literature at the pavilion, answering questions by interested visitors. Oceanology 2012 offered a significant opportunity to present the project to world leading industries in the global marine technology community and to broaden the current eco-system of collaboration through new and existing programmes of collaboration with other partners from both sides of the North Atlantic. 	

Table 29. Oceanology International 2012 Exhibition

Event	
- The 30th plenary and workshop of CEN/TC 287	
URL Link	Location, Date
- http://www.centc287.eu/	- Trento, Italy, from 5th to 9th March 2012
Partner participant	Link to Publications / Presentation
- EAA	
Short Event Description	
<ul style="list-style-type: none"> CEN/TC 287 creates a platform for better standards development in Europe. The focus of this event was on smart location. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> Katharina Schleidt from EAA, gave a presentation on "Location based environment" introducing ENVIROFI within the session on "Smart Surrounds". 	

Table 30. Plenary and workshop of CEN/TC 287

Event	
- EGU General Assembly 2012	
URL Link	Location, Date
- http://meetingorganizer.copernicus.org/EGU2012/session/10801	- Vienna, Austria, from 22nd to 27th April 2012
Partner participant	Link to Publications / Presentation
- AIT, IT Innovation, JRC, ATOS	
Short Event Description	
<ul style="list-style-type: none"> The EGU General Assembly brings together over geoscientists from all over the world into one meeting covering all disciplines of the Earth, planetary, and space sciences. The meeting's sessions cover a wide range of topics, including volcanology, planetary exploration, the Earth's internal structure and atmosphere, climate, and energy. The EGU General Assembly 2012 was again a great success with 4,436 oral and 9,092 poster presentations in 530 unique scientific sessions together with 157 Poster Summaries & Discussions sessions as well as 165 side events. At the conference 11,275 scientists from 95 countries participated, of which 28% were students, 15,000 copies of EGU Today distributed, keen media presence and reporting, and thousands of visits to the web streams as well as to the EGU blog GEOLOG.. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> The ENVIROFI session at the European Geosciences Union (EGU) General Assembly 2012 – was well visited (over 40 participants). The open format – a 10 minute overview about Future Internet related topics of this year's conference was followed by a demonstration of ENVIROFI Advisory Board member Arno Scharl and an open discussion of community visions and concerns, revealing several interesting insides. 	

Table 31. EGU 2012

Event	
- Future Internet Assembly (FIA) 2012	
URL Link	Location, Date
- http://www.fi-aalborg.eu	- Aalborg, Denmark, from 7th to 11th May 2012.
Partner participant	Link to Publications / Presentation
- ATOS, IT-Innovation	
Short Event Description	
<ul style="list-style-type: none"> The European Future Internet Assembly (FIA), is a collaboration between projects that have recognised the need to strengthen European activities on the Future Internet to maintain European competitiveness in the global marketplace. FIA is open to all researchers engaged in Future Internet research (be they at EU or not) to contribute and participate towards FIA's goals. FIA 2012 was held in Aalborg under the Presidency of Denmark in the EU Council 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> The assembly aimed to provide all information to potential proposers in order to prepare the call of the second phase. All Usage Areas from Phase 1 presented the projects and their achievements in the first year. ENVIROFI was represented by Antonio Oliván (Atos). In a parallel workshop Dr. Zoheir Sabeur (IT Innovation Centre) gave a presentation, entitled "Future Internet Smart Cities User behaviour driven innovation platforms" as part of the multidisciplinary workshop session dedicated to the "Societal View on Smart Cities". Dr. Sabeur addressed concepts of Community Observatories and the strategic incentives for citizens to participate in Future Internet localized environmental observations using exemplar mobile applications 	

Table 32. FIA 2012

Event	
- 'User-driven Open Innovation ecosystems go really local ...across borders' Conference	
URL Link	Location, Date
- N/A	- Mechelen, Belgium, On 23rd May 2012.
Partner participant	Link to Publications / Presentation
- N/A	
Short Event Description	
- It was the premier European event of the spring 2012 on Open Innovation for Future Internet in Smart Cities and communities. The conference offered public organisations, SMEs, corporations, academics, and creative citizens a unique chance to get involved in shaping Europe's user-driven open innovation ecosystems.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> - ENVIROFI had been invited as part of its stakeholder engagement activities and because of previous talks with the European Network of Living Labs (ENoLL) and the Living Lab of the Interdisciplinary Institute for Broadband Technology (IBBT). - This invitation included participation in a panel discussion in the session 'Exploring the role of Living Labs in the Future Internet PPP', chaired by Peter Fatelnig, the leader of the FI-PPP Task Force at DG INFSO. The ENVIROFI view on the transition of a technology focused phase 1 of the FI-PPP should be followed by a community-centric approach in phase 2 was widely acknowledged. Such intense user engagement should boost sustainability of the FI-PPP results by maturing business models and user acceptance. 	

Table 33. FIA (2011)

Event	
- Terra Futura 2012	
URL Link	Location, Date
- http://www.terrafutura.it	- Florence, Italy, May 25th 2012
Partner participant	Link to Publications / Presentation
- CNR	
Short Event Description	
- Terra Futura is a national event focused on awareness-rising and promotion of sustainable practices, and includes presentations and exhibitions on diverse environmental topics. The event has a section called "Words, world, web", which is specifically dedicated to information technology, where the ENVIROFI project was presented and the "Citizens in Tuscany" pilot was proposed to the public.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Terra Futura is targeted to a very open audience, so it was possible to present the pilot to all citizens. Furthermore, the Florence venue represented a practical location to meet various stakeholders based in the Florence area.	

Table 34. Terra Futura 2012

Event	
- Workshop on "Sharing and Processing of Environmental data on the Web" (ENVISION project)	
URL Link	Location, Date
- www.envision-project.eu	- Oslo, Norway 18th-19 June 2012
Partner participant	Link to Publications / Presentation
- NILU	
Short Event Description	
- Like ENVIROFI, ENVISION faces similar challenges in providing data online and making it available to be incorporated into new infrastructures. The ENVISION project provides an environmental services infrastructure with ontologies that aim to support non ICT-skilled users in the process of semantic discovery and adaptive chaining and composition of environmental services.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Mike Kobernus from the Norwegian Institute for Air Research (NILU) represented ENVIROFI at the workshop and gave a presentation about the project with focus on the Personal Environmental Information System (PEIS). He presented the various services planned for the PEIS, as well as a sneak preview of mock-ups demonstrating the functionality and presentation of data on a mobile device.	

Table 35. ENVISION project workshop

Event	
- INSPIRE Conference 2012	
URL Link	Location, Date
- http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2012/	- Istanbul, Turkey, on 23rd – Wednesday 27th June 2012
Partner participant	Link to Publications / Presentation
- JRC	
Short Event Description	
- The aim of this year's INSPIRE Conference was therefore to look at how innovations in the governance, content, and supporting technologies have further shaped the landscape of sharing environmental information.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- The theme of this year's edition was "Sharing environmental information, sharing innovation". Amongst several presentations, ENVIROFI was accepted for presenting their proposal of using Living Laboratories in order to boost innovation in the development, maintenance and implementation of INSPIRE	

Table 36. INSPIRE Conference 2012

Event	
- EPA STRIVE Conference 2012	
URL Link	Location, Date
- http://www.epa.ie/news/events/name,33420,en.html	- Trinity College Dublin on 28 June 2012.
Partner participant	Link to Publications / Presentation
- MI	
Short Event Description	
- As part of the of the Dublin City of Science 2012 activities the Irish Environmental Protection Agency (EPA) held a research conference at Trinity College Dublin. This is the premier environmental research conference in Ireland and it showcases the research that has been funded by the EPA.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Dr. Conor Delaney (MI) was invited to present a poster on his work on Climate Change impacts on the Middle Atmosphere. Furthermore a poster on the ENVIROFI project was presented. Interest in the ENVIROFI project was high, particularly from other researchers working with sensors and volunteered environmental observations. The Biodiversity Institute of Oxford University was particularly interested to hear of the progress of the biodiversity work package of ENVIROFI.	

Table 37. EPA STRIVE Conference 2012

Event	
- Smart Ocean Workshop and Innovation Exchange 2012	
URL Link	Location, Date
- http://smartocean.org/Workshop.aspx	- Galway, Ireland, on the 2nd and 3rd of July, 2012.
Partner participant	Link to Publications / Presentation
- MI	
Short Event Description	
- The Irish Marine Institute hosted the Smart Ocean Workshop and Innovation Exchange at the Marine Institute headquarters at Galway, Ireland. The theme of this year workshop was 'Getting more from our Marine Resources through Technology'. Discussion areas included Security & Logistics, Energy and Aquaculture	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- ENVIROFI has the opportunity to present two posters in a high-profile networking, showcase and innovation recognition event, open to companies (Irish and International) to demonstrate both their technology solutions and their ability to successfully exploit marine resources in a commercial & sustainable manner	

Table 38. Smart Ocean Workshop and Innovation Exchange 2012

Event	
- IEEE Geoscience and Remote Sensing Society, IGRSS 2012	
URL Link	Location, Date
- http://www.igarss2012.org/Papers/PublicSessionIndex3.asp?Sessionid=1013	- Munich, Germany, from 22nd to 27th July, 2012
Partner participant	Link to Publications / Presentation
- EC-JRC	
Short Event Description	
- The IEEE Geoscience and Remote Sensing Society (GRSS) organized the 32nd annual IGARSS symposium. This year, IGARSS' theme was "Remote Sensing for a Dynamic Earth". The technical program focused on the characterization of dynamic Earth processes, assimilation, integrated Earth observing systems and current as well as the next generation of satellite missions.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Sven Schade from EC-JRC presented a full paper entitled 'Why Linked Data should not lead to Next Generation SDI' for the special session 'Geospatial Semantic Web and Ontologies'. In this provoking contribution, the authors claimed that novel possibilities for knowledge integration in the Semantic Web should be used to open-up the current information silos, rather than for improving the internal re-organization of today's Spatial Data Infrastructures (SDIs). The Future Internet - Public Private Partnership (FI-PPP) program has been presented as an excellent tool for supporting the required transition processes on the technology, but also on the cultural level. The event was attended by world-class scientists, engineers and educators engaged in the fields of geoscience and remote sensing was continued.	

Table 39. IGRSS 2012

Event	
- EnviroInfo 2012	
URL Link	Location, Date
- http://www.enviroinfo2012.org/	- Dessau, Germany from 29th to 31st August 2012
Partner participant	Link to Publications / Presentation
- NILU, AIT, UBIMET	
Short Event Description	
- The focus of the conference is on thematic environmental applications, applications in support of environmental policies, science and technology and specialized workshops.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- The attendance at the conference was good and was well represented by ENVIROFI with several members of the project consortium participating in various sessions during the three day event: <ul style="list-style-type: none"> Mike Kobernus (NILU) presented the paper "A Quest for Affordable exposure Estimates" in the session on INSPIRE, GMES, GEOSS. Denis Havlik (AIT) presented the paper "Geospatial Service Interfaces and Encodings for Mobile Applications" in the session on Monitoring and Mobile Applications. Other members of the ENVIROFI consortium also attended, with Jasmin Pielorz (UBIMET) finding much of interest in the sessions on "Linking Open Data on the Environment." 	

Table 40. EnviroInfo 2012

Event	
- Festival della Biodiversità 2012	
URL Link	Location, Date
- http://www.festivalbiodiversita.it/dettaglio_evento.asp?catalogID=13&id=141	- Milano, Italy, on 16th September, 2012
Partner participant	Link to Publications / Presentation
- CNR	
Short Event Description	
- This was the sixth edition of an important initiative, which is held each year in the Parco Nord Milano, one of the main peri-urban parks in the Italian city, with two weeks of events, exhibitions and talks covering any aspect of biodiversity.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- A presentation of the project was by Andrea Giacomelli (CNR IIA), illustrating the progress made since on the biodiversity work package. Having such an opportunity outside of Tuscany was also an interesting test to evaluate the scalability of the pilot to new sites. In this respect, substantial interest was shown both by the organizers of the Biodiversity Festival (who are also the Parco Nord Milano managers), as well as by other organizations who are active in management of forestry assets in Northern Italy.	

Table 41. Festival della Biodiversità 2012

Event	
- Unicoop Tirreno Trekking	
URL Link	Location, Date
- n.a.	- Belagaio Forest (Roccastrada), Sep 30th 2012.
Partner participant	Link to Publications / Presentation
- CNR, EAA	
Short Event Description	
- Unicoop Tirreno is a supermarket chain part of the Unicoop group. Unicoop Tirreno also manages a yearly calendar of social events and activities for its fidelity members, mainly including outings in the Southern Tuscan area. One of these was scheduled in the Belagaio forest, which is one of the natural reserve sites covered by the ENVIROFI-BIO prototypes. It was thus possible to provide a short presentation to a rather large (over 100) and extremely open audience in a very peculiar rural setting.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- The trekking event was also attended by tourist guides and other biodiversity experts (e.g. staff from the national forestry agency), so it was possible to have interactions also with some specialists, in addition to the more general public.	

Table 42. Unicoop Tirreno Trekking

Event	
- Festa dei Saperi e Saperi Dell'Alta Val di Merse 2012	
URL Link	Location, Date
- http://www.provincia.siena.it/News/A-Monticiano-al-via-la-Festa-dei-saperi-e-dei-sapori-dell-Alta-Val-di-Merse	- Monticiano, Italy, 26-28 October 2012
Partner participant	Link to Publications / Presentation
- CNR	
Short Event Description	
- Monticiano is another village located in Southern Tuscany, in the southernmost part of the Province of Siena, bordering to the North the Farma Valley (where Torniella is located). In all of this area, forestry resources are an extremely important asset in local economy: there is a relevant timber production and more in general for the community, since the forests provide an ideal location for hunting and other outdoor activities throughout all of the year. At the end of October, two days of celebrations were organized, including a conference on the importance of forestry assets.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Andrea Giacomelli (CNR) was invited to provide a presentation of the project, with specific reference to the "Citizens in Tuscany" pilot. The presentation was in the context of a two-day conference on "The forest as a resource", with presentations by various professionals operating in the Tuscan area. Attendees to the conference were represented by local administrations, companies operating in maintenance of forest areas, researchers.	

Table 43. Festa dei Saperi e Saperi Dell'Alta Val di Merse 2012

Event	
- 4th Annual IoT conference, 2012	
URL Link	Location, Date
- http://www.eu-ems.com/summary.asp?event_id=124&page_id=991	- Brussels, Belgium, 12 - 13 November 2012
Partner participant	Link to Publications / Presentation
- IOSB	
Short Event Description	
- The 4th Annual Internet of Things Europe explored the co-existence of real and virtual worlds in everyday life within areas such as health, transport and retail. The event explored emerging key issues, including, privacy & security, ethics, technological developments, international cooperation and the various resources that are required for a fully integrated IoT.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Thomas Usländer (IOSB-Fraunhofer) showed a presentation on "IoT Business Models" on behalf of the OpenIoT project which is in close relationship with ENVIROFI and the FI-PPP. The FI-WARE platform, the FI-PPP generic enablers and the ENVIROFI specific enablers contribute to the IoT system architecture by integrating environmental sensors. The event facilitated debate among stakeholders.	

Table 44. IoT 2012

Event	
- GRASS – GFOSS user meeting	
URL Link	Location, Date
- http://geomorfolab.arch.unige.it/genova2013/	- Portofino, Italy, Feb 9th 2013
Partner participant	Link to Publications / Presentation
- CNR	
Short Event Description	
<ul style="list-style-type: none"> The GRASS User meeting is in Italy a renown opportunity for updates on research and development efforts in the geographic free/open source software world, including representatives from research, small medium enterprises, and public administrations. In 2013 the event, which was hosted in Genova, included one day on the field, in the area of the Portofino Park, for the showcase of different mobile applications related to field mapping. It was thus proposed to demonstrate the ENVIROFI biodiversity app in this context. A presentation of the project was provided. This was followed by a field visit along one of the park routes. 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> The aim of this presentation was to jointly reach citizens attracted by the parks as leisure areas, park staff, and software developers (given the connection to the GRASS meeting). 	

Table 45. GRASS – GFOSS user meeting

Event	
- European Geosciences Union (EGU), General Assembly 2013	
URL Link	Location, Date
- http://www.egu2013.eu	- Vienna, Austria, 07 – 12 April 2013
Partner participant	Link to Publications / Presentation
- AIT, IT Innovation	- Geophysical Research Abstracts, Vol. 15, EGU2013-6311-2, 2013, EGU General Assembly 2013
Short Event Description	
<ul style="list-style-type: none"> The EGU General Assembly 2013 was again a great success with 4,684 oral, 8,207 posters, and, for the very first time, 452 PICO presentations. 448 unique scientific sessions together with 96 Poster Summaries & Discussions as well as 143 side events created an interesting programme. At the conference 11,167 scientists from 95 countries participated, of which 28% were students, 15,000 copies of EGU Today distributed, keen media presence and reporting, and thousands of visits to the webstreams as well as to the EGU blog GEOLOG 	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
<ul style="list-style-type: none"> There were several presentations from ENVIROFI partners at the EGU2013, following the attendance from the previous 2 years, as well as papers published, like for example, the one on <i>Structured Multi-level Data Fusion and Modelling of Heterogeneous Environmental Data for Future Internet Applications</i>, by the IT Innovation team 	

Table 46. EGU 2013

Event	
- Terra Futura 2013	
URL Link	Location, Date
- http://www.terrafutura.it	- May 17th 2013, Florence
Partner participant	Link to Publications / Presentation
- JRC	
Short Event Description	
- This event was held one year after the launch of the “Citizens in Tuscany” app in the 2012 edition of this initiative. It was the opportunity to provide an update to some returning visitors, as well as to present the biodiversity application in a more mature stage to new contacts.	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
- Among other results documented, from the dissemination standpoint it should be mentioned that the ENVIROFI-BIO app was inserted in the app showcase from the Municipality of Florence (http://app.comune.firenze.it/), as a case of re-use of the city's open data assets.	

Table 47. Terra Futura 2013

6 Annex I – Dissemination Report Form

Due to the potential high impact, each dissemination activity and its results shall be planned and documented in a transparent manner to the Consortium and in accordance with the rules set out by the Quality Plan and Project Handbook.

To announce planned dissemination activities and to report on the results, this template should be used, uploading the information in the corresponding folder on the portal, notifying WP7.

Event	
-	
URL Link	Location, Date
- http://	-
Partner participant	Link to Publications / Presentation
-	-
Short Event Description	
-	
Relevance to ENVIROFI (e.g. Expected Impact Level, Targeted User Groups, ...)	
-	

Table 48. Dissemination Report form

7 Annex II – ENVIROFI Newsletters

Based on the news items published via the ENVIROFI website and on important event dates, the project will regularly publish a quarterly electronic newsletter starting from the third quarter of 2011.

This Annex compiles all 6 newsletters published during the project lifetime and also available at the project website (<http://www.envirofi.eu/Downloads/Newsletters/tabid/4872/Default.aspx>).

Editorial

Dear reader,

This is the first edition of ENVIROFI News, the newsletter of ENVIROFI, the environmental usage area project of the Future Internet Public Private Partnership programme. The current issue covers the period from April to early October 2011 and presents selected activities and results of the project. The next issues will be published quarterly. We hope that you find the information in our newsletter interesting and would appreciate your feedback.

Antonio Oliván Huerva & Milon Gupta
Editors

Project results & activities

EU Commissioners visit ENVIROFI partner



Máire Geoghegan-Quinn, Commissioner for Research, Innovation and Science (left), and Maria Damanaki, Commissioner for Maritime Affairs and Fisheries, at the Marine Institute in Galway. (photo: Andrew Downes)

On Friday 23rd September 2011, The Marine Institute in Galway, Ireland, ENVIROFI's partner leading the project's research activities on monitoring and protecting marine assets, received two important visitors. The Commissioner for Research, Innovation and Science, Máire Geoghegan-Quinn, and the Commissioner for Maritime Affairs and Fisheries Maria Damanaki, visited the institute to discuss key policy areas and priorities in marine

science and innovation, including the protection and management of marine assets. They also used the visit to get some first-hand information about the ongoing research in ENVIROFI.

The protection and management of marine resources is a central environmental task for the EU. Enabling technology platforms are currently deployed in Europe on national level across a range of marine related sectors including shipping, security and logistics, environmental monitoring as well as offshore energy.



Commissioner Geoghegan-Quinn (left) was briefed on ENVIROFI by Paul Gaughan from the Marine Institute. (photo: Graham Johnston)

The next generation monitoring and decision-based management tools for environmental assets need to function across the EU and national borders. They shall also address the technological challenges encountered in observation information management with the deployment of distributed sensing networks, using cable and wireless communications. ENVIROFI's research on a platform prototype will lay the basis for overcoming these challenges.

The Marine Institute has a key role in this, both nationally and in ENVIROFI. ENVIROFI forms an important part of Ireland's National 'SmartOcean' Strategy, which is focused on the area of Marine ICT and for which the Marine Institute has a central role in regard to the supporting science and innovation. The Marine Institute is the state agency responsible for marine research, development and innovation in Ireland.

In ENVIROFI, the Marine Institute leads the work package on 'Future Internet Collaborative Usage of Marine Environmental Assets'.

[Further information on the Commissioners' visit](#)

Past events

First Advisory Board meeting

The first ENVIROFI Advisory Board meeting was co-located with the EnviroInfo conference and the ENVIP workshop on October 6, 2011. Seven of the ten board members attended the ENVIROFI session of the conference and met project representatives for in depth discussions thereafter. Most notably, the general approach of the ENVIROFI project and possible future directions were discussed with representatives from the private sector (Statoil, AeroVision, 52° north and interactive instruments), the public sector (DG Environment) and standardization bodies (ISO and OGC). It was agreed to jointly work on a related white paper, additional Future Internet scenarios, and to meet again in conjunction with EGU 2012, in Vienna Austria.

ENVIROFI at EnviroInfo conference in Ispra



ENVIROFI partner JRC (Joint Research Center of the European Commission) hosted the 25th EnviroInfo conference at their premises in Ispra from 5 to 7 October 2011.

The conference covered the field of processing environmental information prepared and distributed with cutting edge ICT technologies. In particular, it comprised the field of Environmental Informatics, i.e. informatics applications for the environment. Special emphasis was put on innovative applications supporting the sharing of environmental observations, complex modelling processes and simulation techniques.

ENVIROFI organised a session on 'Environmental Information Services in the Future Internet', which was chaired by Sven Schade from the JRC. In this session ENVIROFI presented a paper on 'Leveraging the Future Internet - Public Private Partnership

for the Environmental Usage Area', which was written by Denis Havlik, Sven Schade, Wout van Wijk, Thomas Usländer, and Juanjo Hierro. The presentation was complemented by a round table on stakeholders' expectations towards a Future Internet and by a discussion of the FI-Ware Future Internet chapters.

In addition, Arne Berre from ENVIROFI partner SINTEF and Sven Schade chaired the ENVIP Workshop together with Gerald Schimak (representing the FP7 project TaToo) and Federico Prandi (representing the BRISEIDE project). This workshop was dedicated to community building among European funded projects that deal with environmental information services, infrastructures, and platforms.

[Further information](#)

ENVIROFI at INSPIRE 2011 in Edinburgh



The INSPIRE 2011 Conference took place in Edinburgh, UK, from 27th June to 1st July 2011.

This edition of the INSPIRE Conference offered an opportunity to explore INSPIRE's contribution to Europe's 2020 strategic goals and to root its further implementation and development in the EU 2020 follow-up programmes.

ENVIROFI contributed to the event with a poster session.

[Further information](#)

Best paper award for ENVIROFI at ISESS



At ISESS 2011, which was held in Brno, Czech Republic, from 27 to 29 June 2011, the ENVIROFI paper ['Environmental Information Systems on the](#)

[Internet'](#) received the Best Paper Award. Authors are Sven Schade, Barbara Fogarty, Michael Kobernus, Katharina Schleidt, Paul Gaughan, Paolo Mazzetti, and Arne J. Berre.

In addition, Arne Berre chaired a session on 'Environmental Information Systems and Services - Infrastructures and Platforms'.

[Further information](#)

ENVIROFI at IFIF 2011



Dr. Zoheir Sabeur from ENVIROFI partner IT Innovation was an invited speaker for presenting ENVIROFI on June 1st in Kilkenny Castle, Ireland at the Irish Future Internet Forum Conference 2011 (1st June) with the presence of Ireland Minister among the guests to open the forum.

This was a European event on Ireland Future internet where many representatives from Industry

ENVIROFI kick-off meeting in Vienna



The ENVIROFI kick-off meeting took place at the AIT premises in Vienna, Austria, from 7th to 8th of April 2011. The meeting coincided with the EGU conference.

stakeholders and research organisations across Europe presented their programmes.

[Further information](#)

ENVIROFI at EGU 2011 Conference



The EGU General Assembly 2011 was held in Vienna, Austria, from 3 to 8 April 2011. It comprised 4,333 oral presentations and 8,439 poster presentations in 707 sessions. At the conference 10,725 scientists from 96 countries participated

ENVIROFI participated with two presentations: 'Towards a Multi-Style Service-Oriented Architecture for Earth Observations' and 'Environmental Application Scenarios for the Future Internet'; and a "townhall" session for the Future Internet. The audience was quite interested.

[Further information](#)

Upcoming events

FI-PPP meetings in Poznan



The next meetings of the Future Internet Public Private Partnership Programme (FI-PPP) will take place within the Future Internet Week in Poznan, Poland, from 24th to 28th October 2011.

ENVIROFI will be involved in the following sessions: FI-PPP Steering Board meeting, FI-PPP Architecture Board meeting, Future Internet Assembly (FIA), FI-PPP session, and ServiceWave.

[Further information](#)

About



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- SMEs: UBIMET (Austria), InTune Networks (Ireland)

Further information is available on the ENVIROFI website at www.envirofi.eu

The research leading to the ENVIROFI results referred to in this document has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 284898.

Editorial

Dear reader,

An exciting year is coming to an end. In the nine months since ENVIROFI started in April, the project has already achieved quite a lot in defining use cases and specific enablers for the Future Internet in the environmental area. ENVIROFI partners have been very active in presenting the project results at major events. As a consequence of the good work, ENVIROFI scored very well in the first annual review.

This second edition of ENVIROFI News covers the period from October to early December 2011 and presents selected results and activities of the project to which ENVIROFI contributed. We hope you find the information in our newsletter interesting and would appreciate your feedback.

We wish you
a Merry Christmas and a Happy New Year!

Antonio Oliván Huerva & Milon Gupta
Editors



Project results & activities

ENVIROFI at GEO Plenary in Istanbul



The GEO Plenary 2011 took place in Istanbul, Turkey from 16th to 17th November 2011. Meetings and workshops related to GEO activities were organized throughout the entire week. The Group on Earth Observation (GEO) is a voluntary partnership of governments and international organizations that is coordinating efforts to build a Global Earth Observation System of Systems, or GEOSS. The GEO Plenary is the main body of designated representatives of the Members and Participating Organizations of the GEO and it is its primary decision-making body.

Members of the ENVIROFI consortium were attending the GEO plenary and side-events. It was an excellent opportunity to discuss about the interaction between ENVIROFI and GEO/GEOSS, and with GEO-related projects funded under the European Commission Framework Programme. ENVIROFI partner JRC (Joint Research Center of the European Commission) produced a new poster which was shown at the exhibition area.



<http://www.earthobservations.org/geo8.shtml>

ENVIROFI at the FIA in Poznan



ENVIROFI participated in the FIA session 'When Infrastructure meets the user', which was held at the Future Internet Week in Poznan, Poland, on 26th October 2011. The session aimed at the identification of the needs from the FI communities to be involved in research projects for sustainable businesses. It was chaired by Dr. Petra Turkama, coordinator of the CONCORD project, and Jarmo Eskelinen, vice-chair of the European Network of Living Labs (ENoLL).

Antonio Oliván from Atos (photo above: third from left) represented ENVIROFI in the panel. Further panel participants were representatives of the FI-PPP community, such as Jose Jimenez (FI-WARE), Dr. Federico Alvarez (INFINITY), and of other relevant communities such as Prof. Alvaro de Oliveira (ENoLL President), Prof. Dr. Pieter Ballon (ENoLL Secretary), Annika Sallstrom (representative of one of the ENoLL founder Living Labs from the Living Lab community), Mr. Nick Wainwright (HP, chairman of the Future Internet Roadmap working group), Joe Gorman (UNIVERSAAL), Juliusz Pukacki (pMedicine) and Dr. Cezary Mazurek, Technical Coordinator of the Wielkopolska Center for Telemedicine project.

The round table discussion pointed out some challenges that the FI-PPP and Living Lab community have to face in order to identify those relevant activities needed to encourage the different communities to work together for achieving fruitful results. With regards to the FI-PPP programme, it was emphasized the need of a platform to cover the whole value-chain from developers to end-users. Furthermore such a platform should be open, secure and scalable providing real benefits to the citizens.

The ensuing lively discussion with the audience focused on the interesting questions how to ap-

proach user-driven innovation, and who these users are.

[Further information on the FI Week website](#)

[Article on the FI Week by Milon Gupta in Eurescom mess@ge 3/2011](#)

ENVIROFI at IC3K in Paris



Results from ENVIROFI were presented at the International Conference on Knowledge Engineering and Ontology Development (KEOD), which was organized in Paris from 26th to 29th October 2011.

The KEOD 2011 was one of the three conferences which constitute the International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management (IC3K).

It was held in conjunction with the International Conference on Knowledge Discovery and Information Retrieval (KDIR) and the International Conference on Knowledge Management and Information Sharing (KMIS).

In the session on Sensor Networks at the Semantic Sensor Web (SSW) ENVIROFI consortium member Sven Schade promoted an alternative approach to classical logic-based solutions for semantic interoperability.

Due to the high number of events with similar topics, this year's SSW event focused on innovative and novel ideas for achieving the Semantic Sensor Web, instead of collecting position papers and presentations of common solutions.

As a result of the presentation, ENVIROFI has been invited to contribute to the upcoming special issue of the Future Internet Journal on Semantic Interoperability and Knowledge Building.

[Further information on the special issue of FIJ](#)

<http://www.ic3k.org/>

ENVIROFI at eChallenges 2011



The eChallenges 2011 conference took place in Florence, Italy, from 26th to 28th October 2011. eChallenges 2011 aimed to promote ICT knowledge sharing and innovation between commercial organisations, government agencies and the research community, exchange experiences about the current state of eAdoption at a sectorial, national or regional level and stimulate rapid take-up of Research and Technology Development (RTD) results by industry and in particular SMEs.

The ENVIROFI project and its strategies to address stakeholders were presented in the "Future Internet PPP Matchmaking Session" organized by the FI-PPP CONCORD Project.

<http://www.echallenges.org/e2011/>

ENVIROFI at ISWC in Bonn



At ISWC 2011, ENVIROFI partner JRC (Joint Research Center of the European Commission) contributed to a full paper and a demonstration on the application of Linked Data technologies within the Sensor Web. This was part of the 4th Semantic Sensor Network (SSN) Workshop which was held within the International Semantic Web Conference (ISWC) 2011 in Bonn, Germany, from 23rd to 27th October 2011.

The general conference aimed at presenting and discussing original work dealing with analytical, theoretical, empirical, and practical aspects of all areas of Semantic Web research. The SSN work-

shop was especially dedicated to provide an interdisciplinary forum to explore and promote the technologies related to a combination of semantic web and sensor networking.

<http://iswc2011.semanticweb.org/>

ENVIROFI at TDWG Biodiversity Information Standards

Biodiversity
Information
Standards
TDWG



The TDWG Biodiversity Information Standards 2011 Annual Conference took place in New Orleans, Louisiana, USA, from 16th to the 21st October 2011. The focus of this year's conference was Technologies and Standards for Biodiversity Collections. In addition, it covered digitization technologies for biodiversity specimens,

In this context, Katharina Schleidt presented the biodiversity information and survey applications planned within ENVIROFI. In addition, Nina Laurence presented the current status of the TaxMeOn Species ontology that will be providing the semantic backend for the ENVIROFI biodiversity pilot.

<http://www.tdwg.org/>

About



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- SMEs: UBIMET (Austria), InTune Networks (Ireland)

Further information is available on the ENVIROFI website at www.envirofi.eu

The research leading to the ENVIROFI results referred to in this document has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 284898.

Editorial

Dear reader,

ENVIROFI is about to enter its second and final year, before the start of phase two of the Future Internet PPP.

This third edition of ENVIROFI News covers the period from January to March 2012 and presents selected results and activities of the project. We hope you find the information in our newsletter interesting and would appreciate your feedback.

Antonio Oliván Huerva & Milon Gupta
Editors

Project results & activities

ENVIROFI at Air Quality 2012



Air quality continues to be a key issue for achieving sustainable development and to reduce health impacts. Its impact spans multiple scales from street level to global including interactions with climate change. The Air Quality 2012 conference in Athens from 19th to 23rd March 2012 was one of the most prominent forums for discussing the latest scientific developments, applications and implications for policy and other users. The conference brought together scientists and other stakeholders from the air pollution, climate change, policy and health communities.

ENVIROFI participated in the conference by presenting a poster as well as a short paper for inclusion in the conference findings. Dr. Bruce Denby from the Norwegian Institute for Air Research, NILU, presented the paper "Agile applications – a new paradigm, an old devil". The paper focuses on agile development methods and how they can be applied best to a large multi-disciplinary project. Within this focus, the paper discusses the need for a practical approach to developing agile e-Environmental tools with special focus on ENVI-

ROFI, which provides a case study for best practices on e-environmental services.



ENVIROFI poster presented at Air Quality 2012

Further information about the conference is available at:

<http://www.airqualityconference.org/>

ENVIROFI at the Oceanology International 2012 exhibition



The ENVIROFI project was represented by the Irish SmartOcean Pavilion at the exhibition of Oceanology International 2012, which took place in London from 13 to 15 March. The Irish Pavilion featured a range of marine technologies and software services provided by SMEs and associated research institutes from Ireland's rapidly expanding marine technology sector. Exhibitors represented a range of cross-sector interests within the Irish

SmartOcean Cluster. A key goal of the cluster is to develop a new marine information and communications technology sector that brings together a strong and vibrant ICT sector with new and existing marine-related sectors.

ENVIROFI partner Marine Institute presented ENVIROFI literature at the pavilion, and project participants Paul Gaughan and Dr. Barbara Fogarty were available to answer questions by interested visitors about ENVIROFI. Among the visitors was also Dr. Zoheir Sabeur from ENVIROFI partner IT Innovation.



Dr. Zoheir Sabeur (middle) from ENVIROFI partner IT Innovation, discussing the next steps of the ENVIROFI marine scenario pilot at the SmartBay stand with Dr. Barbara Fogarty (right) and Paul Gaughan (left).

Outputs of the ENVIROFI project will be trialled at the SmartBay facility in Ireland, which was recently established as an international test and demonstration platform for the marine ICT sector. The SmartBay platform facilitates a range of commercial and research-oriented activities, from the test-

ing of sensors in the ocean to the development of innovative decision-based management tools. Oceanology 2012 offered a significant opportunity to present the ENVIROFI FI-PPP project to world leading industries in the global marine technology community and to broaden the current eco-system of collaboration through new and existing programmes of collaboration with other partners from both sides of the North Atlantic.

Financial support for the cost of the event was provided via the Marine Research Sub-Programme of the Irish National Development Plan 2007-2013.

Further information about the event is available at <http://www.oceanologyinternational.com>

ENVIROFI at GEOProcessing conference



The Fourth GEOProcessing conference took place in Valencia, Spain, from 30th January to 4th February, 2012. The GEOProcessing 2012 conference was aimed to provide an interdisciplinary forum to address fundamental advances in geographic information systems and the emerging Web Service applications related to geographical sensors and huge volumes of spatial data.

ENVIROFI partner JRC (Joint Research Centre of the European Commission) contributed to a full paper on the applicability of web service interfaces for supporting the Model Web vision for integrated environmental models.

The identified needs of integrated environmental modelling in respect to Internet technology, especially Web technology, will be integrated into the FI-PPP as particular requirements of the environmental usage area.

Further information is available at: <http://www.iaria.org/conferences2012/GEOProcessing12.html>

ENVIROFI at CEN/TC 287 meeting in Trento



The 30th plenary and workshop of CEN/TC 287, the Technical Committee of the European Committee for Standardization on geographic information, took place in Trento, Italy, from 5th to 9th March 2012. The focus of the event was on "smart location".



Katharina Schleidt from UBA, the Austrian environmental protection agency, represented ENVIROFI at the meeting. In the session on "Smart Surrounds" she gave a presentation on "Location based environment".

Further information on CEN/TC 287 and the event is available at:

<http://www.centc287.eu/>

ENVIROFI at Use Case Meeting in Brussels



ENVIROFI participated in a general meeting in Brussels on 25th January 2012, which brought together all FI-PPP use case projects. The focus was on business-related aspects. The meeting was held prior to the regular Steering Board meeting which was organized on the following day.



The objective of the meeting was to better understand the go-to-market plans of the projects, map synergies between the various use cases, and identify support needs, target groups and other stakeholders of the projects. Each usage area presented their exploitation strategy by using a common structure.

After the presentations the participants had a discussion which aimed to identify the commonalities among the usage areas.

ENVIROFI at Coalition for Action workshop



European Union Regional Policy

ENVIROFI was present in the workshop Coalition for Action on ICT in regional programmes, organised in Brussels on 19th – 20th January 2012.

DG INFSO organized the workshop focused on the way ICT could be part of the strategy of DG REGIO. The aim was to increase the impact of the FI-PPP results on Europe through an efficient use of available regional and rural European funds.

The expected outcomes from the FI-PPP Use Cases have a high potential impact on citizens if they are deployed throughout Europe.

Members of all projects in the Future Internet PPP programme were present in the workshop.

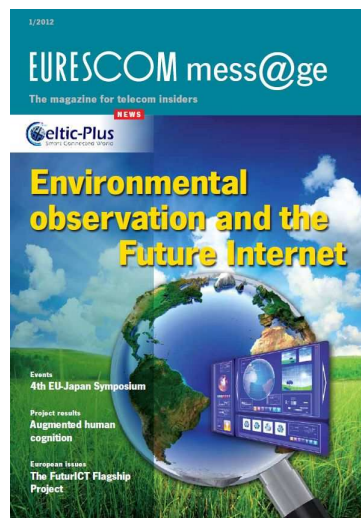
Further information on the EU Regional Policy is available at:

<http://www.ictregio.eu/>

ENVIROFI in Eurescom mess@ge 1/2012

ENVIROFI is prominently featured in the March issue of the R&D magazine Eurescom mess@ge.

The cover theme on “Environmental Observation and the Future Internet” contains four articles by ENVIROFI partners: “Global Earth observation and the Internet - An overview” by Milon Gupta, Eurescom; “Towards an environmental observation Web” – an article on ENVIROFI by project coordinator José Lorenzo; “Next-generation decision support tools for the global marine sector” by Dr. Conor Delaney and Paul Gaughan from the Marine Institute, and “EuroGEOSS contribution to the Global Earth Observation System of Systems” by Sven Schade from the JRC.



The online edition, including a PDF version for download, is available at:

<http://www.eurescom.eu/news-and-events/eurescommessage/issue-1-2012.html>

Upcoming Events

ENVIROFI at EGU General Assembly 2012



European Geosciences Union General Assembly 2012

Vienna | Austria | 22 – 27 April 2012

ENVIROFI will be present at the EGU General Assembly 2012 that will take place in Vienna, Austria, from 22nd to 27th April 2012. At the event, geoscientists from all over the world will meet to present and discuss the latest results across multiple disciplines, including Earth science, planetary and space sciences.

In addition, ENVIROFI will organize a townhall session on 25th April focussed on the opportunities and challenges for the community within the Future Internet.

Further information on the EGU conference and townhall session is available at:

<http://meetingorganizer.copernicus.org/EGU2012/session/10801>

2nd Advisory Board meeting of ENVIROFI

Coinciding with the EGU General Assembly 2012, ENVIROFI will organize on the 26th April 2012 the second meeting with the Advisory Board with top representatives of industry, governance and academia.

The participation is limited to the ENVIROFI and Advisory Board members.

ENVIROFI at FI Week in Aalborg



The next Future Internet Week will take place in Aalborg, Denmark, from 7th to 11th May 2011.



ENVIROFI will participate in the event by contributing to a jointly organised workshop with SafeCity and Instant Mobility.

Further information on the Future Internet Week is available at <http://www.fi-aalborg.eu>

About



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Further information is available on the ENVIROFI website at:

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Editorial

Dear reader,

After a successful EC review, ENVIROFI is now moving on towards laying the foundations for an environmental observation web. The articles in this issue give you an idea of ENVIROFI's achievements in the last quarter.

This fourth edition of ENVIROFI News covers the period from April to June 2012 and presents selected results and activities of the project. We hope you find the information in our newsletter interesting and would appreciate your feedback.

Antonio Oliván Huerva & Milon Gupta
Editors

Project results

Biodiversity pilot app 'Citizens in Tuscany'

The first application prototype for the biodiversity pilot, "Citizens in Tuscany", was publicly announced at the end of May. The prototype will be tested between June 2012 and the end of February 2013. The prototype application will be made available to all interested citizens, who may browse existing observations on flora or fauna, or upload new observations to the system, thus allowing to test various ENVIROFI enablers.

The pilot application is initially using data about trees from the Municipality of Florence (released earlier this year under the city's open data initiative), and will also include data on monumental trees provided by the Tuscan regional administration. This content should provide a basic level of starting information, also intended to entice testers both in urban and rural areas. More species may be added to the existing subset of species considered for the pilot activities, also depending on requests of the more motivated stakeholders.

While the core of the pilot testing is planned to take place starting from October, the possibility of engaging end users in an early stage of the prototype development is providing important feedback in

terms of expectations, and a refinement of requirements in relation to some of the use cases.

The prototype was demonstrated in Florence within the "Words, World, Web" section of Terra Futura. This is one of the main public events in Italy (with over 80,000 visitors in three days) focused on the promotion of practices for a sustainable future.

The presentation was given by Andrea Giacomelli, who coordinates for CNR citizen science activities in the Tuscan scenario.

Further information:

<http://www.envirofi.eu/citizens.aspx>

Project activities

Past Events

Second Advisory Board meeting in Vienna



Sven Schade (JRC), Jose Lorenzo (Atos) and Denis Havlik (AIT) chaired the second ENVIROFI Advisory Board meeting that was co-located with the European Geosciences Union (EGU) General Assembly in Vienna on 24th April 2012. Six of the thirteen board members attended. Most notably, the first results and challenges of the ENVIROFI project and possible future directions were discussed with representatives from the private sector (Statoil, AeroVision, 52° north), academia (Modul University of Vienna), the governmental sector (Eu-

European Environmental Agency), and standardization bodies (OGC). The upcoming need to intensify stakeholder engagement across the value network as well as the required transition to multidisciplinary and exploratory applications have been highlighted. It was agreed to continue the many initiated discussions over the summer in bi-literal meetings and to jointly work on a related white paper. The next meeting is planned in conjunction with the major FI-PPP event, which is planned to be held in Dublin, Ireland, in February 2013.

ENVIROFI at conference on User-driven Open Innovation

On 23rd May 2012, the conference “User-driven Open Innovation ecosystems go really local ...across borders” was held in Mechelen, Belgium. It was the premier European event of this spring on Open Innovation for Future Internet in Smart Cities and communities. The conference offered public organisations, SMEs, corporations, academics, and creative citizens a unique chance to get involved in shaping Europe's user-driven open innovation ecosystems.



ENVIROFI had been invited as part of its stakeholder engagement activities and because of previous talks with the European Network of Living Labs (ENoLL) and the Living Lab of the Interdisciplinary Institute for Broadband Technology (IBBT).

This invitation included a panel discussion in the session ‘Exploring the role of Living Labs in the

Future Internet PPP’, chaired by Peter Fatelnig, the leader of the FI-PPP Task Force at DG INFSO. The ENVIROFI view on the transition of a technology focused phase 1 of the FI-PPP should be followed by a community-centric approach in phase 2 was widely acknowledged. At this stage, Living Laboratories are seen as a promising tool for preparing large scale testing on cross-domain trials in phase 2 of the FI-PPP, and for further networking with SMEs in phase 3. Co-creation processes should be facilitated in order to develop innovative Future Internet applications.

In the end, such intense user engagement should boost sustainability of the FI-PPP results by maturing business models and user acceptance. Discussions should be continued and intensified during the upcoming FI-PPP Usage Area meeting on June 19th and 20th in Brussels, Belgium.

ENVIROFI at FI Week in Aalborg



This year's Future Internet Week took place in Aalborg, Denmark, from 7th to 11th May 2011 under the Presidency of Denmark in the EU Council.

The open information day (9th May) aimed to provide all information to potential proposers in order to prepare the call of the second phase. All Usage Areas from Phase 1 presented the projects and their achievements in the first year. ENVIROFI was represented by Antonio Oliván (Atos).

Furthermore, ENVIROFI was invited in one of the parallel workshops of the event where Dr. Zoheir Sabeur (IT Innovation Centre) gave a presentation, entitled “Future Internet Smart Cities User behaviour driven innovation platforms” as part of the multidisciplinary workshop session dedicated to the “Societal View on Smart Cities”. Dr. Sabeur addressed concepts of Community Observatories and the strategic incentives for citizens to partici-

pate in Future Internet localized environmental observations using exemplar mobile applications.



Further information on the Future Internet Week is available at <http://www.fi-aalborg.eu>

ENVIROFI at ENVISION workshop on environmental data



On 18 June 2012 FP7 project ENVISION held a workshop on "Sharing and Processing of Environmental data on the Web" (Oslo, Norway 18th-19 June 2012).

Like ENVIROFI, ENVISION faces similar challenges in providing data online and making it available to be incorporated into new infrastructures. The ENVISION project provides an environmental services infrastructure with ontologies that aim to support non ICT-skilled users in the process of semantic discovery and adaptive chaining and composition of environmental services.

ENVISION's main objective is to provide a collaborative platform for sharing environmental models and services. Its corresponding pilot cases are used to test the benefits of the technologies developed in the project, but also to prove the useful-

ness of the platform in real situations and adjust it according to potential users' necessities.



Mike Kobernus from the Norwegian Institute for Air Research (NILU) represented ENVIROFI at the workshop and gave a presentation about the project with focus on the Personal Environmental Information System (PEIS). He presented the various services planned for the PEIS, as well as a sneak preview of mock-ups demonstrating the functionality and presentation of data on a mobile device.

For information on the ENVISION project, see www.envision-project.eu

INSPIRE Conference 2012



With the introduction of the INSPIRE Directive 2007/2, the policy landscape for sharing environmental information has changed drastically. The Commission Communication on the Shared Environmental Information System (SEIS 2008) and

follow-up activities at national and European levels have further helped to cultivate a new vision for a coordinated framework for the implementation and monitoring of environmental policies. The governance, content, and supporting technologies are the three pillars with which this vision can be consolidated and implemented.

The aim of this year's INSPIRE Conference was therefore to look at how innovations in these three areas have further shaped the landscape of sharing environmental information. The INSPIRE Conference 2012 took place from Saturday 23rd – Wednesday 27th June 2012 in Istanbul, Turkey. The theme of this year's edition was "Sharing environmental information, sharing innovation". Amongst several presentations, ENVIROFI was accepted for presenting their proposal of using Living Laboratories in order to boost innovation in the development, maintenance and implementation of INSPIRE.

Further information is available at:

http://inspire.jrc.ec.europa.eu/events/conferences/inspire_2012/

Upcoming Events

EnviroInfo Conference 2012



ENVIROFI will be present at EnviroInfo 2012, the 26th International Conference on Informatics for Environmental Protection. The event is going to take place in Dessau, Germany from 29th to 31st August 2012.

The EnviroInfo 2012 is the international and interdisciplinary conference on leading environmental IC Technologies.

Further information is available at:

<http://www.enviroinfo2012.org/>

About



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- SMEs: UBIMET (Austria), InTune Networks (Ireland)

Further information is available on the ENVIROFI website at:

www.envirofi.eu

The research leading to the ENVIROFI results referred to in this document has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n°284898.

Editorial

Dear reader,

ENVIROFI is now entering the final six months of its duration. Thus, our technical results are at this time already much more mature. As proof of this statement, we are proud to present in this issue the first prototype of ENVIROFI's Personal Environmental Information System.

In addition, this fifth edition of ENVIROFI News provides reports on many other activities of the project, which the project partners performed in the period from July to September 2012. We hope you find the information in our newsletter interesting and would appreciate your feedback.

Antonio Oliván Huerva & Milon Gupta
Editors

their own particular perspective. Core to this is the understanding that sensitivity to airborne pollutants is very different from one person to another and in many cases highly dependent on the individual's patterns of behaviour. Yet, while each individual has a unique relationship to the environment, the information on the state of atmosphere and related hazards available today is entirely generic, and by no means personalised.

Consequently, ENVIROFI set out to develop a suite of services that give the user total control over what data are presented and how. The PEIS was conceived to provide a potentially unique experience for every user by enabling complete customisation in what pollutants to track, setting threshold levels for these and enabling alerts and notifications for them.



Project results & activities

First prototype of Personal Environmental Information System



ENVIROFI has developed a first prototype of the Personal Environmental Information System, or PEIS, a tool designed to work on mobile devices enabling users to monitor environmental data from

An example of how this works could be a user who is interested in outdoor sports, but wants to avoid high incidences of particulate matter, e.g. dust, while she exercises. So she tracks PM10, PM2.5 and possibly other factors such as wind speed, temperature or humidity. Another user is allergic to certain types of pollen, so she tracks PM10, PM2.5 and pollen types to which she is allergic. She might set threshold values for pollen to 'low', and the threshold value of particulate matter to 'moderate'. Other allergy sufferers could configure the thresholds in different ways, even though they track the same components. Because of the configurability of the user's profile, the PEIS offers unparalleled customisation for the tracking of environmental stressors.

The visualisation of environmental data to users is a key factor to understanding the data. PEIS provides several ways to inform our users of the current environmental conditions in their area. This includes simple textual descriptions as well as GIS

maps with overlays showing the current Air Quality Index, or AQI, at measurements stations in his vicinity, or even tracked pollutants, such as NO₂, below.



The user can toggle this, and other overlays, showing different views of pollution in his current area. The user's location is represented by an icon and is updated as he moves about the city. The area of high pollution is displayed in an intuitive manner via colours - red areas are worse than green. Thus, the user has the opportunity to make choices which directly affect his long-term health and well-being. These are just a few of the functions available to the user through the PEIS.

Past Events

ENVIROFI at EPA STRIVE Conference 2012



As part of the of the Dublin City of Science 2012 activities the Irish Environmental Protection Agency (EPA) held on June 28th a research conference at Trinity College Dublin. This is the premier environmental research conference in Ireland and it showcases the research that has been funded by the EPA.

This year Dr. Conor Delaney (MI) was invited to present a poster on his work on Climate Change impacts on the Middle Atmosphere. The EPA kindly accepted a poster presentation on the ENVI-

ROFI project. Interest in the ENVIROFI project was high, particularly from other researchers working with sensors and volunteered environmental observations. The Biodiversity Institute of Oxford University was particularly interested to hear of the progress of the biodiversity work package of ENVIROFI.

More information:

<http://www.epa.ie/news/events/name,33420,en.html>

ENVIROFI at 3rd Annual Smart Ocean Workshop and Innovation Exchange 2012



ENVIROFI presented two posters at the 2nd and 3rd of July the Irish Marine Institute hosted the Smart Ocean Workshop and Innovation Exchange at the Marine Institute headquarters at Galway, Ireland. The theme of this year workshop was 'Getting more from our Marine Resources through Technology'. Discussion areas included Security & Logistics, Energy and Aquaculture.

The inaugural SmartOcean Innovation Exchange, a high-profile networking, showcase and innovation recognition event took place on the 3rd July in the Ocean Wealth Showcase at the Volvo Global Village. The Innovation Exchange was open to companies (Irish and International) to demonstrate both their technology solutions and their ability to successfully exploit marine resources in a commercial & sustainable manner

More information:

<http://smartocean.org/Workshop.aspx>

ENVIROFI at IGARSS 2012



From 22nd to 27th July, the IEEE Geoscience and Remote Sensing Society (GRSS) organized the 32nd annual IGARSS symposium in Munich, Germany, at which the excellent tradition of gathering world-class scientists, engineers and educators engaged in the fields of geoscience and remote sensing was continued. This year, IGARSS' theme was "Remote Sensing for a Dynamic Earth". In an ever-changing and dynamic world, high-resolution and timely geospatial information with global access and coverage becomes increasingly important for our society's needs. We believe that the additional scientific themes of this event, focusing on the characterization of dynamic Earth processes, assimilation, integrated Earth observing systems and current as well as the next generation of satellite missions, has led to the formation of a very interesting technical program.

For the special session 'Geospatial Semantic Web and Ontologies', ENVIROFI member Sven Schade from EC-JRC contributed to the full paper entitled 'Why Linked Data should not lead to Next Generation SDI'. In this provoking contribution, the authors claimed that novel possibilities for knowledge integration in the Semantic Web should be used to open-up the current information silos, rather than for improving the internal re-organization of today's Spatial Data Infrastructures (SDIs). The Future Internet - Public Private Partnership (FI-PPP) program has been presented as an excellent tool for supporting the required transition processes on the technology, but also on the cultural level.

More details are available from:

<http://www.igarss2012.org/Papers/PublicSessionIndex3.asp?Sessionid=1013>

ENVIROFI at ENVIROINFO 2012



The 26th International Conference for Environmental Informatics was well represented by ENVIROFI this year with several members of the project consortium participating in various sessions during the three day event (29-31 August, Dessau, Germany).



Mike Kobernus (NILU) Work Package Leader for the development of the Personal Environmental Information System presented the paper "A Quest for Affordable exposure Estimates" in the session on INSPIRE, GMES, GEOSS.



Denis Havlik (AIT) the ENVIROFI Technical Coordinator presented the paper "Geospatial Service Interfaces and Encodings for Mobile Applications" in the session on Monitoring and Mobile Applications.

Attendance at the conference was good, with the historic city of Dessau providing an interesting backdrop to the discussions on Environmental In-

formation Systems. Other members of the ENVIROFI consortium also attended, with Jasmin Pielorz (UBIMET) finding much of interest in the sessions on "Linking Open Data on the Environment."

Further information:

<http://www.enviroinfo2012.org/>

ENVIROFI at Festival della Biodiversità 2012



A presentation of the project was given on 16th September, 2012, at the Biodiversity Festival in Milano.

This was the sixth edition of an important initiative, which is held each year in the Parco Nord Milano, one of the main peri-urban parks in the Italian city, with two weeks of events, exhibitions and talks covering any aspect of biodiversity.

The talk was given by Andrea Giacomelli (CNR IIA), illustrating the progress made since May on the biodiversity work package, when the first public Italian presentation was held at Terra Futura, in the "Citizens in Tuscany" pilot scenario.

Having such an opportunity outside of Tuscany was also an interesting test to evaluate the scalability of the pilot to new sites. In this respect, substantial interest was shown both by the organizers of the Biodiversity Festival (who are also the Parco Nord Milano managers), as well as by other organizations who are active in management of forestry assets in Northern Italy.

Last but not least, citizens with no specific background on biodiversity were enticed by the "ENVIROFI" name: one of them entered the presentation hall to inquire about the meaning of "ENVIROFI" and then attended over an hour of talk.

Further information:

http://www.festivalbiodiversita.it/dettaglio_evento.asp?catalogID=13&id=141

Upcoming Events

ENVIROFI at ECOSUMMIT



WP leader, Mike Kobernus recently worked with members of an FP7 funded project, COMETLA, in order to provide input on project steering methods. This led to a collaboration on a poster for the EcoSummit Conference 2012, one of the world's largest gatherings of ecological scientists, with 1500-1600 participants expected in Ohio, USA this year from 30th September to 5th October.

COMETLA identifies sustainable community-based governance models for the management of natural resources that could be used in different social-ecological systems in a context of climate change and increasing competition. The poster was developed jointly under the ENVIROFI and COMETLA projects and discusses the suitability and adoption of Agile based methodologies over traditional waterfall methods for project management in large Projects.

More details:

<http://www.ecosummit2012.org>

Publications

ENVIROFI contribution to IEEE Intelligent Systems



Government data provides authoritative and valuable information about our society. Still, public access to government data remains challenging mostly due to the heterogeneity and complexity of the information ecosystem. Linked Data principles and technology have been adopted to overcome these challenges. In this context, IEEE Intelligent

Systems dedicated their May/June 2012 issue to 'Linked Open Government Data' and provided insides into the scenery from most parts of the world.

The ENVIROFI team of EC-JRC provided input to the European contribution of this special issue. The article resulting - 'Harmonization and Interoperability of EU Environmental Information and Services' – reflects on the latest achievements relating to the cultural, historic, and natural diversity in the European Union. The article provides a better understanding of the issues related to semantic interoperability in the context of environmental-data management in the European Union, and of measures and activities that address these problems. The authors provide the policy context and highlight activities and best practices of selected EU-funded research projects and activities, especially in relation to Linked Open Data principles.

More details are available from:

<http://www.computer.org/csdl/mags/ex/2012/03/index.html>

ENVIROFI contribution to the 'The Future of Integrated Modelling Science and Technology' special issue of the Environmental Modelling and Software journal

Understanding and managing environmental systems is becoming more and more critical for a planet facing increasing pressures and, a more holistic understanding is needed to better represent the various components of environmental systems and their interactions in integrated modeling. The ENVIROFI team of EC-JRC contributed to a special issue on 'The Future of Integrated Modelling Science and Technology' to be published in the Environmental Modelling and Software journal. This special issue was aimed to identify current issues and shortcomings in integrated modeling from the environmental community to then outline a future research and technology roadmap to meet future challenges and requirements. The paper entitled 'Enhancing integrated environmental modelling by designing resource-oriented interfaces' presented a set of design practices for creating resource-oriented interfaces in support of integrated modeling activities, driven by an RESTful inter-

action protocol built on the combination of valid linkages to enhance resource integration, accompanied by some associated recommendations for implementation.

More details are available from:

<http://dx.doi.org/10.1016/j.envsoft.2012.04.013>

ENVIROFI contribution to the 'Semantic Interoperability and Knowledge Building' special issue of the Future Internet journal

The Semantic Web would be an evolving extension of current Web model (referred as Syntactic Web) that introduces a semantic layer in which semantics, or meaning of information, are formally defined. Semantics should integrate web-centric standard information infrastructures improving several aspects of interaction among heterogeneous systems. Semantic interoperability would improve common interoperability models (basic and functional interoperability) introducing the interpretation of means of data. Work on shared approaching continuously raises novel challenging research topics. The special issue of the Future Internet journal offered the authors of outstanding contributions of the International Workshop on Semantic Interoperability (see also ENVIROFI newsletter 2-2011) an opportunity to present extended versions of their initial manuscripts.

ENVIROFI used this occasion to suggest a radically new way of integrating observation and measurement data in the Semantic Web. In contrast to common logic-based semantic descriptions, we presented a formal system using algebraic specifications to unambiguously describe the processing steps from natural phenomena to value-added information. The generic approach was illustrated using a forest fire case, in which information from earth observing satellites was integrated with information that has been extracted from user contributed content. This pioneering work might in the longer term provide scalable solutions to challenges, which can hardly be addressed by logic-based attempts.

More details are available from:

<http://www.mdpi.com/1999-5903/4/3/807>

About



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Editorial

Dear reader,

We are now entering the final phase of ENVIROFI. In early March 2013, the last month of its duration, ENVIROFI will present the major results from two intense years of research at the ENVIROFI Day in Dublin. Prior to this event, ENVIROFI will already contribute to the large FI-PPP event at the Mobile World Congress in Barcelona. See more details on both in the Upcoming Events section.

Two of the major results to be presented at these events are the ENVIROFI-Bio Biodiversity Survey App and the Marine Asset decision Support Tool (MAST), which we feature in this issue.

In addition, this edition of ENVIROFI News provides reports on past events in October and November, at which consortium partners presented results of the project.

We hope you find the information in our newsletter interesting and would appreciate your feedback.

Jorge López & Milon Gupta
Editors

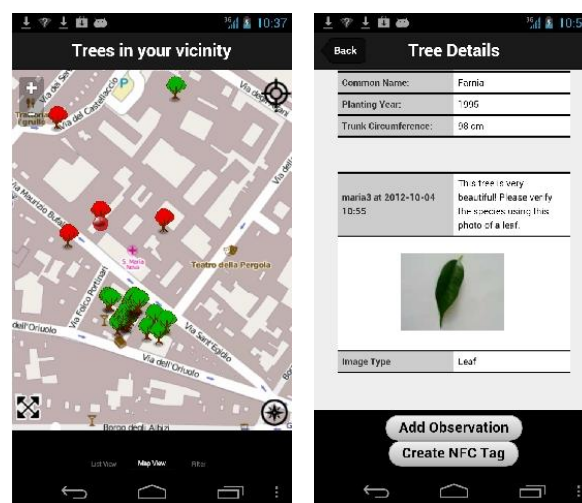
Project results & activities

Prototype of the ENVIROFI Biodiversity Survey Application

ENVIROFI has developed an app in support of the preservation of biodiversity. It focuses on the use of Future Internet technology for survey, analysis, quality assurance, persistence and dissemination of biodiversity data. This enables users from a wide variety of backgrounds to:

- obtain information on interesting biodiversity occurrences recorded directly at their current location
- provide information on biodiversity occurrences they are currently observing
- provide feedback on the correctness of existing biodiversity occurrence records in the system.

As an example of the first aspect of the ENVIROFI-Bio Biodiversity Survey App, a user going on a hike may query the system as to interesting aspects of biodiversity in their immediate surrounds. The system provides the user with a map of their current location with all individual occurrence records available for this area displayed.



Figures 1 and 2: ENVIROFI-Bio app shows trees in the vicinity and details of the records.

The user may obtain detailed information on the individual plant or animal occurrence records by clicking on the symbols for the individuals on the map. This includes information on the species of the individual plant or animal, various further observations as well as measurements and an image of each specimen.

The screenshot shows a mobile application interface for uploading tree data. It features a form with the following fields: Tree Number (12345), Species Name (Quercus petraea), Common Name (Famia), Latitude (43.774289044853646), Longitude (11.259779526405428), Altitude (50.47855377197265), Street (Via del Castellaccio, 28, 501), Area (Florence), Height (7), Crown Diameter (5), Trunk Circumference (98), and Planting Year (1995). At the bottom, there is an 'Upload Tree' button and a navigation bar with back, home, and menu icons.

Figure 3: Form to upload data

In order to allow data provisioning by users, they may either add information to existing entries on individual plants or animals, or provide information on specimen currently not contained within the system.

By engaging interested citizens in the biodiversity survey process, we can not only utilise the users' interest in nature to glean new relevant data about the state of biodiversity in the world around us, but we can also improve the users' understanding of biodiversity as well as fostering their interest by providing a way to make a change.

Marine Asset decision Support Tool (MAST)

ENVIROFI has released the first prototype of the Marine Asset decision Support Tool (MAST). The MAST portal is being hosted by the Marine Institute, Ireland, (www.marine.ie) and is available at <http://apps.marine.ie/envirofi-fi>

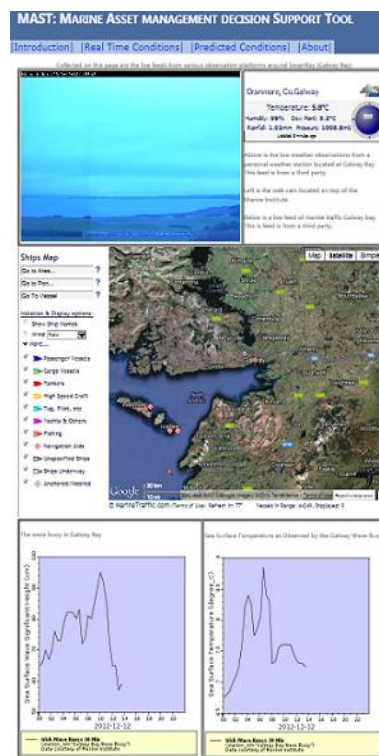


Figure 4: The Real Time Conditions tab of the MAST portal

MAST meshes together a number of freely available information and data feeds to provide information on operational conditions within Galway Bay. This information is useful to citizens with recreational and professional interest in the bay. These include:

- Surfers and sailors
- The fishing industry, both aquaculture and wild harvesting
- The marine research community
- The Galway Port harbour master.

The figure above shows the Real Time Conditions tab of the MAST portal containing real time information on wave height coming from the wave buoy situated in Galway bay and from the ocean weather buoy located 200 km west of Galway in the Atlantic Ocean.

By clicking on the Predicted Conditions tab the user can see the Wave Forecast for the west coast of Ireland.

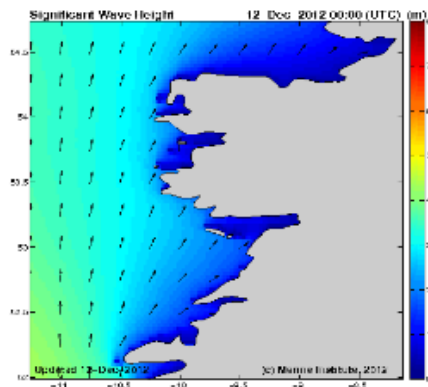


Figure 5: Forecast of wave conditions for the west coast of Ireland

The data for the wave forecast comes from the Marine Institute's operational ocean forecast models. These models are run once a day on the Marine Institute's high performance computer (HPC). Boundary conditions for the model come from a number of sources such as deployed sensors and global weather models.

The following sensor feeds are being displayed in the MAST prototype at the moment:

- Galway Port Tide Gauge
- Water Height
- Galway Wave Buoy
- Wave Height
- Sea Temperature
- Deep Sea Weather Buoy
- Atmospheric Pressure
- Air Temperature

- Wind Speed and Direction
- Wave Height
- Sea Temperature

Additional data comes from third party data aggregators of freely available data. The output from a personal weather station in Galway is available on the website via a private weather forecasting service called the Weather Underground™. Data on ship traffic is relayed via a plug-in made available by through a commercial website, MarineTraffic.com™.

The forecasts from various models run in the Marine Institute that are displayed on MAST include:

- Astronomical Tide Prediction: In this case MAST is getting the prediction for Galway Port. The user will be able to get the prediction for a number of years in advance.
- Wave Forecast: This is a forecast of the significant wave height and wave period up to five days in advance.
- Wind Forecast: This is a forecast of the wind speed and direction up to five days in advance.

The launch of the portal has been low key. An awareness campaign among potential users will be started in January. The chief tool for this campaign will be Twitter, and a Twitter account has been set up for MAST. However, information about the existence of the portal has reached some members of marine user community via word of mouth. The kite surfing community of Galway Bay have already requested a more representative weather station be used for MAST.

The personal weather station that we are using is located in a sheltered area and therefore does not give accurate wind speed and direction data. To remedy this the Marine Institute have purchased a new weather station that will be placed at the Marine Institute, and the data feed from it will replace the one from the personal weather station.

Please feel free to interact with the MAST system and make suggestions on how we can make it better. For the next version of the portal we intend to:

- Improve the look and feel of the website.
- Merge some of the data feeds into dynamic charts, for example the tide gauge and tide forecast.
- Include feedback page for users.
- Include at least one Generic and Specific Enabler.

Past Events

ENVIROFI Workshop at Torniella, Italy



Various researchers from the Biodiversity work package of the ENVIROFI project convened in the Farma Valley, Southern Tuscany, as a part of their periodic interactions (1-2 October 2012).

In addition to the typical agenda of discussions and elaborations on various project tasks and issues, the meeting was extended with a two-hour open event in the community centre of Torniella (one of the villages in the Valley, which represented the starting point of the idea for the Tuscan pilot on biodiversity).

The event was attended by citizens of various categories, including environmental guides, managers from the Grosset tourism board, administrators from the local municipality (Roccamare).

The Workshop in Southern Tuscany was also the opportunity to bring ENVIROFI researchers out of their traditional "work and meet" seating, and put them in contact with stakeholders, and test sites, of peculiar interest.



Participants to the Farma Valley trekking event, which hosted one of the public ENVIROFI presentations workshop.

ENVIROFI at Festa dei Saperi e Sapori Dell'Alta Val di Merse



Andrea Giacomelli (CNR) was invited to provide a presentation of the project, with specific reference to the "Citizens in Tuscany" pilot (26-28 October 2012, Monticiano, Italy).

The presentation was in the context of a two-day conference on "The forest as a resource", with presentations by various professionals operating in the Tuscan area.

More information:

<http://www.provincia.siena.it/News/A-Monticiano-al-via-la-Festa-dei-saperi-e-dei-sapori-dell-Alta-Val-di-Merse>

ENVIROFI at 4th Annual IoT conference



Thomas Usländer (IOSB-Fraunhofer) showed a presentation on "IoT Business Models" in the 4th Annual Internet of Things conference (12 - 13 November 2012, Brussels) on behalf of the OpenIoT project (<http://openiot.eu/>) which is in close relationship with ENVIROFI and the FI-PPP.

There is a need to overcome the gap between the FI-PPP and the Internet of Things community. Major aspects addressed were:

- business environment and market preparedness
- privacy and data protection concerns
- IoT system architecture

The FI-WARE platform, the FI-PPP generic enablers and the ENVIROFI specific enablers contribute to the IoT system architecture by integrating environmental sensors.

More information:

http://www.eu-ems.com/summary.asp?event_id=124&page_id=991

Upcoming Events

ENVIROFI at European Geosciences Union, General Assembly 2013 (EGU 2013). Vienna, Austria, 07 – 12 April 2013

Specific session on **Intelligent geo-Information Management in the Future Internet**

More details:

<http://meetingorganizer.copernicus.org/EGU2013/session/11657>

FI-PPP large event in Barcelona on 28 February – 1 March

All FI-PPP projects, including ENVIROFI; will jointly present their results co-located with the Mobile World Congress in Barcelona.

Further information is available on the [FI-PPP website](http://fi-ppp.eu)

ENVIROFI Day in Dublin on 6 March 2013



The "ENVIROFI Day" event is scheduled on 6 March 2013, as part of a whole week of related activities, also including the *1st User Conference on Eye on Earth* (4-6 March 2013) and the *EU-ROGI Imagine Conference: Unlocking the Power of Geographic Information Today and Tomorrow* (7-8 March 2013) at the Dublin National Convention Centre in Ireland. The Conference has been added to the list of the Irish Presidency Associated Events.

The ENVIROFI Day will present the results and lessons learned from ENVIROFI, the environmental usage area project within the Future Internet PPP programme of FP7.

The focus of the event is on the interplay between environmental and geospatial informatics and Future Internet technology, including demonstrations of results in the areas of biodiversity, air quality, and marine assets.

In the afternoon session, we will discuss innovation opportunities for SMEs and stakeholders in the area of environmental and geospatial information, services, and applications.

For further information and the opportunity to register see <http://eurogi.org/2013-dublin-conferences.html>. ENVIROFI Day specific programme will be available in January on the [ENVIROFI website](http://envirofi.eu)

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