

Biological Reactions of Forests to Climate Change and Air Pollution

## EnvEurope Plenary Meeting

May 21<sup>st</sup>-24<sup>th</sup> 2012

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# Action 4

## Activity report and next steps

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- Verona -



Corpo Forestale dello Stato



Environmental quality and pressures assessment across Europe



# Subaction A4.3 SEIS and GMES

A dual strategy for A4.3:

- 1) At national level: contact with National responsible for GMES Initiative
- 2) At EnvEurope level: evaluation of parameters monitored at site level for in-situ validation and production

# A4 activities 2012

**Subaction:** A4.3 SEIS and GMES

**Action period:** 10/2011-12/2013

**Activity description:** Implementation of strategic actions  
(no deliverable)



**ISPRA**

Istituto Superiore per la Protezione  
e la Ricerca Ambientale

Institute for Environmental Protection and Research

ISPRA is the Italian national  
representative for the GMES  
user forum



**GISC**

GISC chooses stakeholders for in-situ data including those which have been assessed in terms of their capability to deliver in-situ data in the required quantity, quality, coverage and timeliness.



December 2011  
March 2012

2 meetings EnvEurope (A4, A6, A7) + ISPRA



- 1) We invited ISPRA to give a joint-talk (ISPRA+A4) during the national LTER-Italy meeting on GMES in Italy, the involvement of ISPRA, usability of GMES product for ecosystem monitoring and the potential use of LTER-Italy network for in-situ validation
- 2) We were invited to produce a document that we will published in "Window on GMES".

# Window on GMES

“Window on GMES” is a publication containing interviews with key stakeholders, GMES project status reports and a focus on the key role of Earth Observation as the world is faced with climate change.

We produced a paper focusing on LTER-Italy network and its potential activities as data provider for GMES.

We included a box on EnvEurope project:

“ EnvEurope began and is being developed within the LTER-Europe network, which represents more than 400 sites across Europe and Near East. The project contributes to the integration and coordination of long- term ecosystem research and monitoring initiatives in Europe. It is characterized by a broad-scale and cross-domain approach (terrestrial, freshwater and marine ecosystems), combining the efforts of over 65 LTER sites in 11 countries

....”

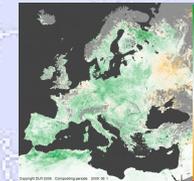


# Ecological research and Remote sensing

(EnvEurope scale approach)



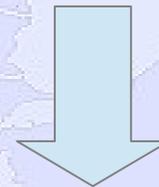
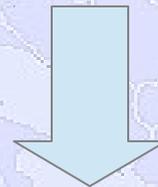
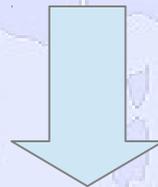
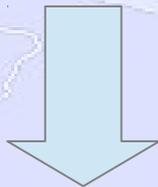
In situ observations for ground truth validation



Remote sensing products



**LTER sites**



**Downstream services**

# Downstream services

From the GMES web site:

“Downstream services correspond to those services that will be implemented outside the scope of the GMES governance and without EU public funding. They will be developed by public or private operators with the objective to meet specific needs (e.g. specific to a group of user, location-specific, etc.).

Downstream services will provide their users with added-value by combining the information provided by the GMES services with additional data (e.g. socio-economic data). Depending on the business model adopted by each service provider, these downstream services could be either free for the final user (e.g. funding through advertising) or associated to a fee (e.g. pay-per-use, recurrent fee, etc.)”

# The *Carta della Natura* project

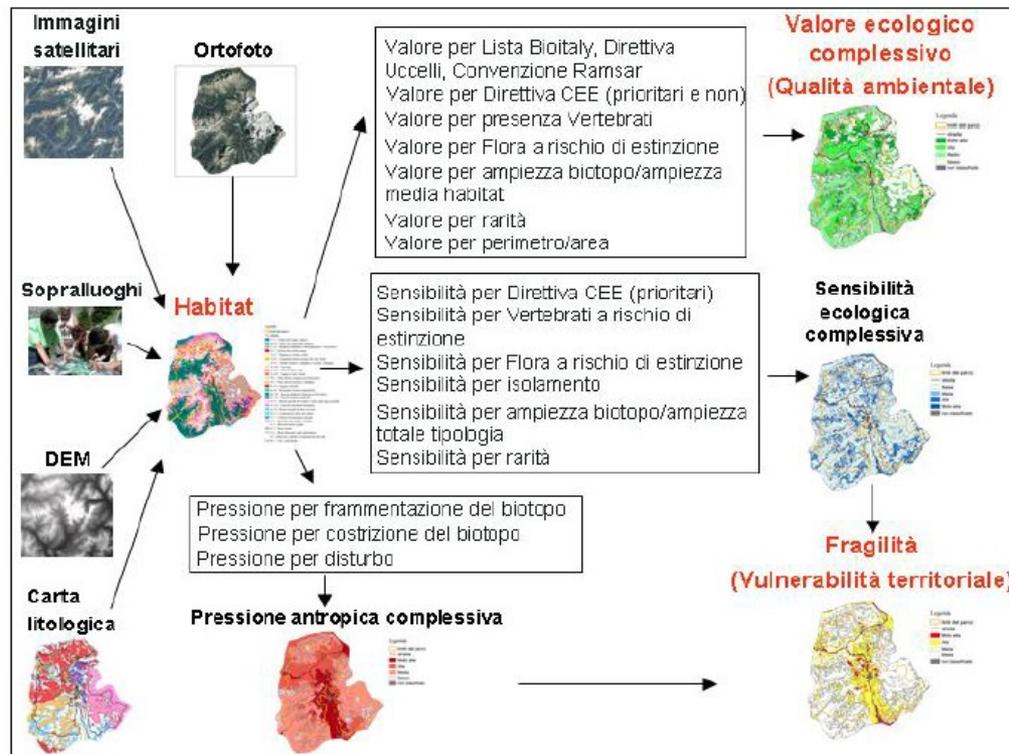


Figura 3- Schema concettuale per l'elaborazione delle cartografie tematiche del Parco Naturale Paneveggio – Pale di S.Martino (APAT, Rapporti 56/2005)

# GISC

GMES in-situ coordination



European Environment Agency



Deliverable 2.1

## Report on in-situ data requirements

Version 3.0

December 2011

GISC

GMES in-situ coordination

**Essential data** - data is used for product generation, validation or calibration.

**Desirable data** - data may be used for product generation, validation or calibration but only as a secondary source.

**Useful data** - additional in-situ data not directly linked to product generation, validation or calibration.

# A4+A6 technical meeting

**When and where: ????????**

**Aim:** evaluate the suitability of EnvEurope sites and parameters for GMES products, in-situ validation and for downstream services production.

**Expected outcome:** a strategic document that will be used to present EnvEurope (LTER) sites as potential data/product providers

# LTER/EnvEurope-GMES interaction

## Phenological variations in response to climate change

Promoter: Italian LTER network (A. Oggioni & A. Campanaro)

Identify critical phenological signals at LTER sites

Compare changes in these signals across sites and ecosystems.

Collect new parameter for spatialize ground truth information.

Obtain useful data for the implementation of the GMES initiative (in-situ validation).

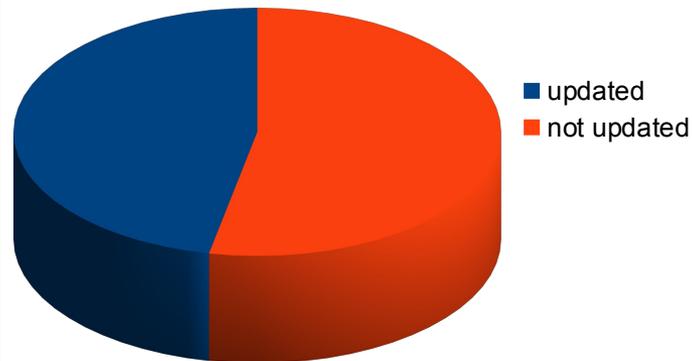
# Update status

July 2010 call for the update of metadata



Update status

10th of February 2012



would seem impossible to go more than 50%.

What we learn for the network design:

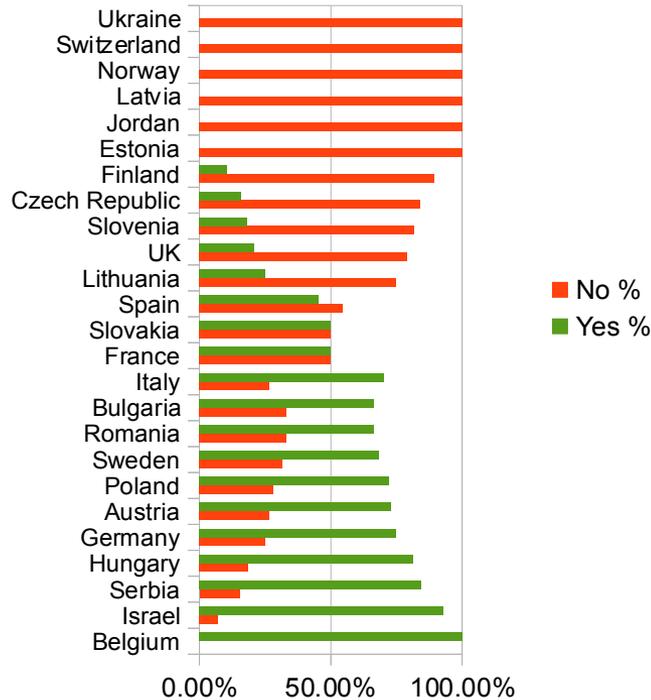
1) the LTER network is composed by ~400 sites but the “real” network by no more than 200 sites.

2) the communication procedure within LTER needs to be heavily restructured.

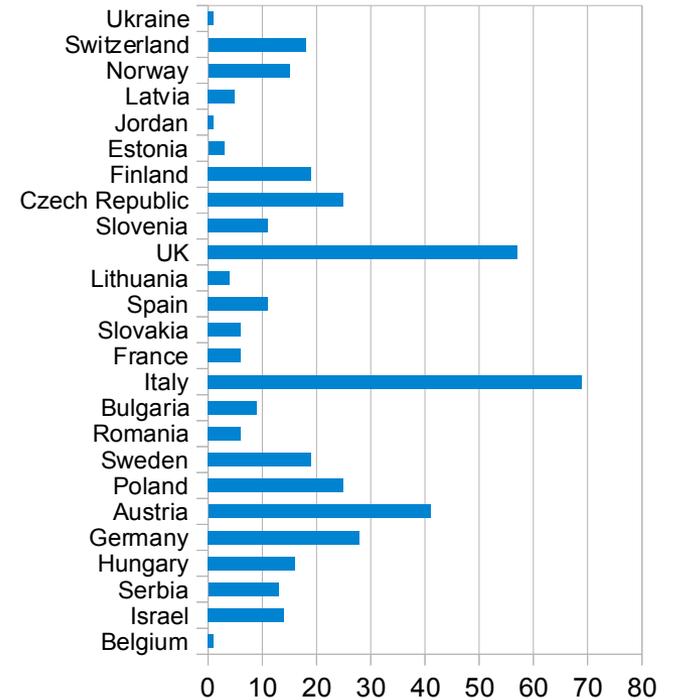
3) The factsheet, as it was done, is not the best tool to update metadata.

# Update status

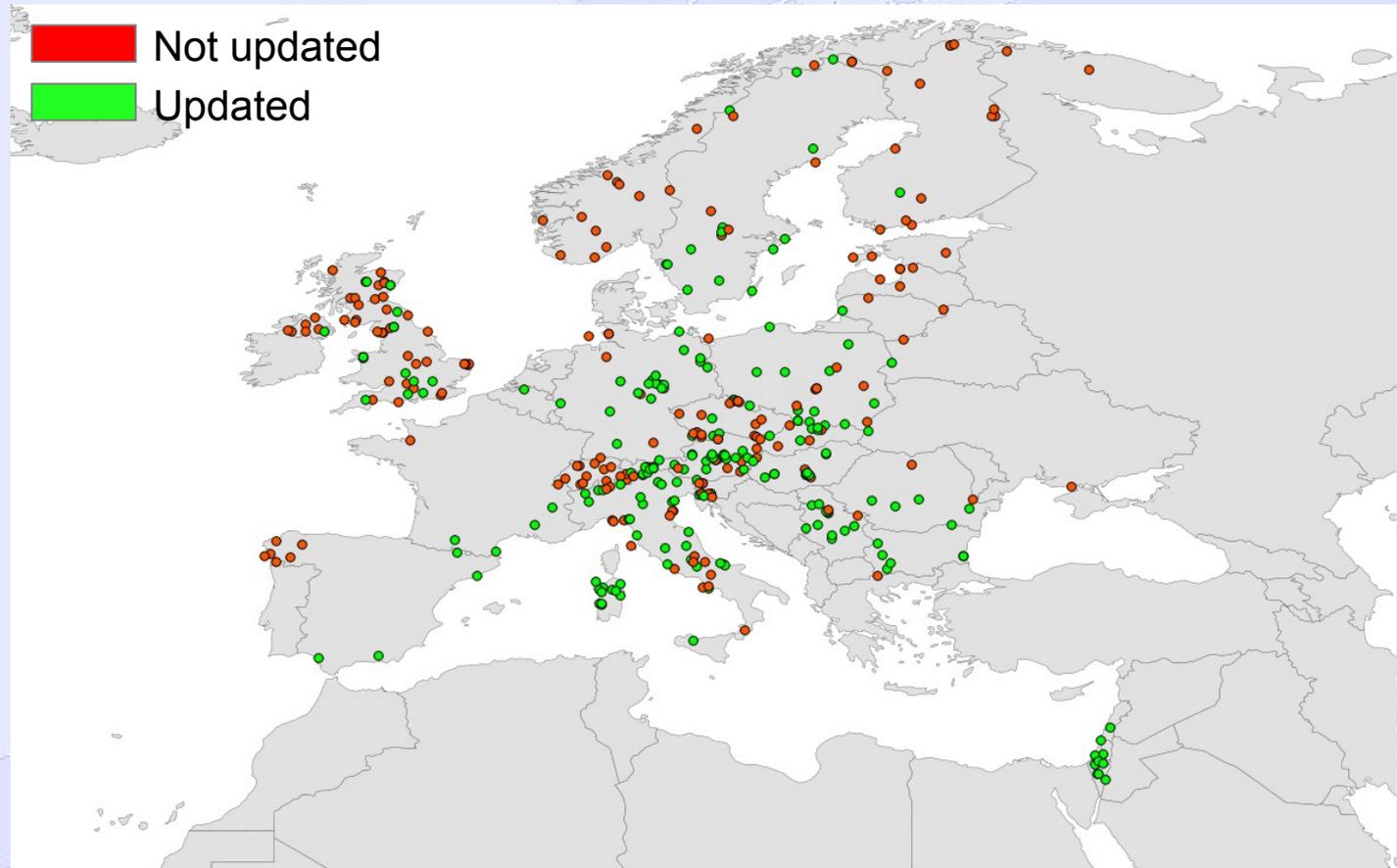
Answer rate by country



Number of formal LTER sites by country

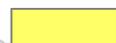
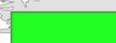


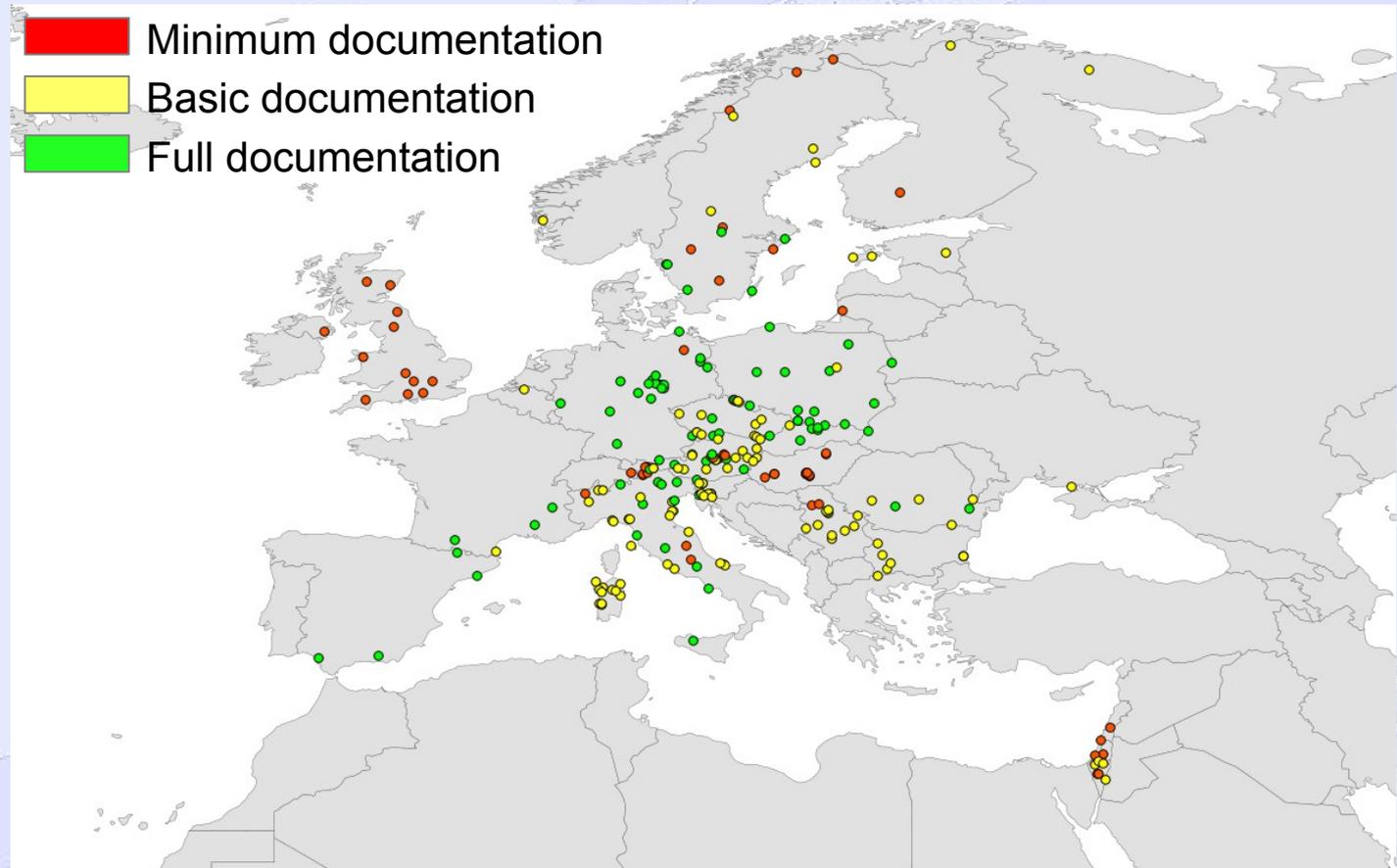
# Update status on the map



# Documentation status

(only updated site metadata)

-  Minimum documentation
-  Basic documentation
-  Full documentation



# and EnvEurope?

AUT	4	
BUL	4	
FIN	1	
GER	9	
HUN	4	
ITA	11	
LIT	1	-2
POL	7	
ROM	3	
SPA	5	
SWE	2	-2

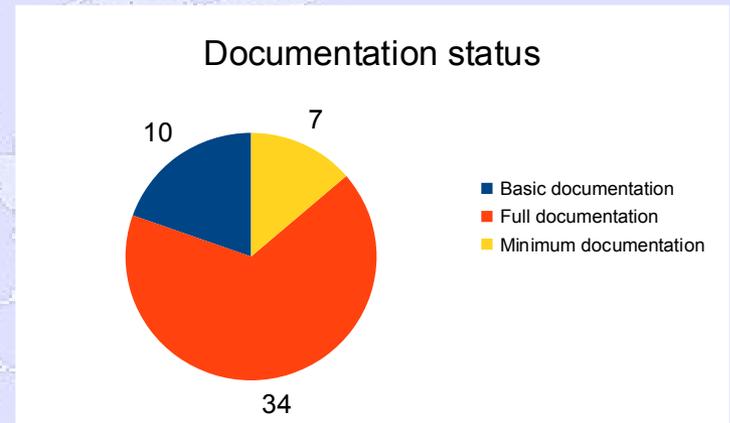
**64 sites** returned the updated factsheet (4 are missing from the list published on EnvEurope website).

The list need to be updated?

# and EnvEurope?

Data cleaning/validation needed. There are some incongruence in the filled factsheet that need to be addressed

Some additional information could be asked to sites that send only minimum documentation



**MINIMUM DOCUMENTATION** this level describes the basic information which is needed either for the level of the ILTER metadata base as well as for LTER Europe

**BASIC DOCUMENTATION** this level describes further details about the habitat characteristics, data management, research environment, research topics and the assigned networks.

**FULL DOCUMENTATION** this level describes further details about the observed parameters. This includes all information of the other two levels.