Towards a Single Information Space in Europe for the Environment (SISE)
SISE vision: ICT research and deployment to build a Single Information Space in Europe for the Environment

Tools and systems enabling a collaborative “Information Space” on the Web

- Where users plug in their own use cases
- Requires a transparent backend system of systems
- Allowing ad hoc, on demand service chaining
- More than measurements and data exchange
Opportunities and synergies with GMES, GEOSS, INSPIRE and SEIS

SISE
ICT tools and systems for environmental collaboration
Towards a Single Information Space in Europe for the Environment...

• Several consultation workshops in 2006, 2007, 2008
Examples of technical research challenges

- **Dynamic composition of web services**
- **Open and generic SISE architecture**
  - Seamless interoperability & dependability at moderate costs
  - Complex backend system of systems with high heterogeneity
- **Controlled vocabularies and semantic web technologies**
  - Easy-to-use semantic integration framework
- **Uncertainty propagation and management**
- **Open access on the Web**
  - Integration and quality assurance of bottom-up (volunteered environmental information) with top-down (authoritative) services
- **Security and user access management**
- **Flexible, interactive, user-friendly interfaces (≥2D)**
- **Real-time dimension**

Points made during the SISE workshop - Towards a Single Information Space in Europe for the Environment  15/02/08, Brussels
# New projects of direct relevance to SISE

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<th>ICT Deployment and Policy Support</th>
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GENESIS: a flexible and generic solution to build collaboration information networks

A generic framework to set-up interoperable environmental information systems complying with European interoperability requirements

Proposed as a SISE building block

- A web-based, generic framework to set-up interoperable environmental information systems
- Composed of:
  - A suite of (thematic-neutral) service implementations
  - A web portal framework with modular components
  - An application toolkit to instantiate the generic components according to the information system users’ needs

GENESIS Information System set-up framework
Generic components
- Application Toolkit
- Embedded standards

GENESIS Thematic Information System
- Generic Components
- Integrating
  - Thematic components data & metadata

Component of
- Other collaborative systems
- SISE
NESIS Thematic Network

- Addresses the fundamental technical problems faced by public authorities in providing information related to monitoring and reporting environmental impacts and threats (reuse, timeliness, data sharing, semantics, connectivity...)

- A network of public authorities to enhance a Shared and Interoperable Environmental Information System in support to the implementation of the INSPIRE Directive

- Exchange of best practice and preparation of a roadmap for the uptake of robust ICT solutions
Initial partnership:

- 16 partners
- 14 Countries
- 12 EIONET NFPs

Advisory board includes:

EEA, JRC, BRGM
GIGAS: an Action in Support to the GEOSS, INSPIRE and GMES

- Coherent and interoperable development of these initiatives
- Concerted adoption of standards, protocols, and open architectures.

- Recommendations to increase architectural coherence
- Strengthened EU contribution to international standards
- Agenda for further strategic research
- www.thegigasforum.eu
• European platform in the field of “ICT for Environmental Sustainability Research”

• To better **network and structure** the various national and international environmental research programmes and communities

  • Thematic workshops
  • Research community building
  • Survey and web-based database & information system
  • Recommendations towards
    • a Single Information Space in Europe for the Environment
    • a European Research Area in the field of ICT for Environmental Sustainability
NETWORING SESSION
Technology and business perspectives towards an environmental information service economy

- What "killer applications" would benefit from/to SISE?
- What new sustainable business models could apply to SISE; How to survive and flourish in an open information space characterised by seamless data exchange and service chaining?
- What can we build upon today (architecture, re-usable services, specifications, standards)?
- Which major technical issues remain to be solved? How will SISE outlive the next technology cycle?
- Which role will emerging sensor technology (moving sensors, ad hoc networks, smart sensors, mass-deployed unexpensive sensors, etc.) play in this context?

Organised by the SANY consortium (www.sany-ip.eu)
Thank you for your attention!

Michel.Schouppe@ec.europa.eu

ICT for Sustainable Growth Unit