FENIX Platform

Overview

Regional Assessment for the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability Assessment in the Arab Region (RICCAR)

Regional Workshop on Moving from Climate Change Impact Assessment to Socio-Economic Vulnerability Assessment in the Arab Region

8-10 June 2015
Beirut, Lebanon

Michela Mattelli, Geospatial consultant, FAO and
Fabio Grita, System support officer, FAO

What is FENIX?

A collection of software tools, methods and standards to facilitate acquisition, management and analysis of large, diversified and distributed sets of data.
Common data issues

• Lack of data and metadata harmonization

• Poor data dissemination systems/mechanisms

• Restrictive or unclear data policy

• Poor communication and awareness

Consequences

• The power and potentials of the data are not exploited

• Data is not widely accessible/shared

• Systems work in isolation
What’s needed

• Avail data as “public good”
• Ensure interoperability between IT systems
• Consider expert-knowledge and users’ requirements in the IT system design
• Strengthen the international, regional and national institutional networks

FENIX key features

• Based on Open Source software; no licensing constraints and full redistribution rights
• Service-Oriented Architecture (SOA)
• Data sharing through web services (APIs)
• Diversified data collection/upload methods
• Ability to handle different type of data
• Data discovery system based on metadata
• Advanced analytical capacities with the embedded “R” statistical package
• Extensible: ability to plug-in new functionalities and applications
FENIX Metadata

**Metadata: Information about data (the ID of the data)**

**Metadata standards used in FENIX:**
- Statistical Data and Metadata eXchange (SDMX)
- ISO 19115
- Data Documentation Initiative (DDI)
- Dublin Core Metadata Initiative (DCMI)

**Key FENIX Metadata Concepts:**
- Metadata Element: Single metadata concept (e.g. title; data source; region)
- Metadata Entity: A folder containing related metadata elements
Open source technologies used by FENIX

- GitHub
- MongoDB
- Bootstrap
- Highcharts JS
- Leaflet
- Java
- Apache Tomcat
- JMeter
- PostgreSQL
- PostGIS
- rmarkdown
- R
- OGC Compliant
- GeoServer