

Lyon - September 2011

HUC Sustainability Workshop

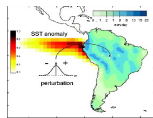
Community: Earth Science Grid

- Fundamental topic
 - Understanding of the Sun-Earth system – Observations & Models
 - Societal needs:
 - Civil protection
 - Risk assessment / Disaster forewarning / Impact studies
 - Mitigation of natural hazards
 - Natural resources identification / exploration
 - Reaction to natural and human-induced changes
 - Long-term Climatology- observations and modelling
- Multi-disciplines: several disciplines to observe and interpret one event
- Cross scientific domains: Physics, chemistry, fluid mechanics.....
- International societies and programs
 - United Nations Environment Program, UN Platform for Space-based Information for Disaster Management and Emergency Response; International Union of Geology and geosciences, Global Monitoring for Environment and Security programme, Intergovernmental Panel on Climate Change, European Geosciences Union,

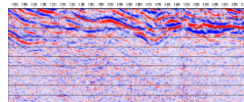
Climate - GReIC
 CMCC (Italy), IPSL (France), Univ Cantabria (Spain), SCAI (Germany)



Climate - El Niño
 Univ. Cantabria – EELA2

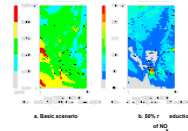


Geosciences- Geocluster
 CGGVeritas (France), DSI-HRD, Geoazur, IPGP, IPGS, ISTEP, Sisyphé, UBO

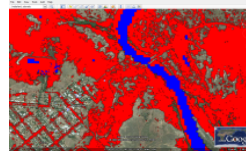


Pollution

IPP-BAS (Bulgaria), IASA (Greece), EnvVO-SEEGRID

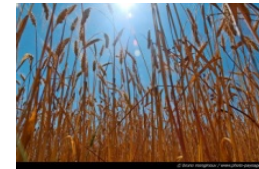


Flood
 EMA (France), IISAS (Slovakia), SRI (Ukraine)

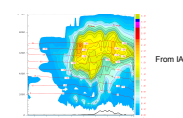


Flood map for Normanton area, Queensland, Australia derived from RADARSAT-2 14-17 Feb 2009 (SRI)

Biodiversity
 BRGM (France), Footways(France),JKI (Germany)
 Scenarios climatological

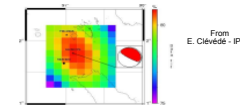


Meteorology
 Greece: AUTH, IASA, NOA; SRI (Ukraine), GCRAS (Russia)



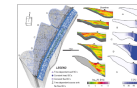
From IASA

Seismology
 AUTH (Greece), IPGP (France), AUTH (Greece), Tubitak Ulakbim (Turkey), Univ. patras (Greece), INFP (Romania)

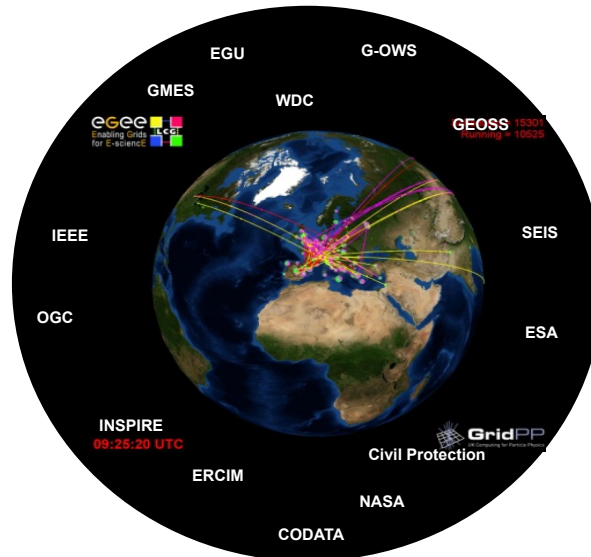


From E. Cilevès - IPGP

Hydrology
 CRS4 (Italy), Univ. Genève, Univ. Neuchâtel, INHGA (Romania), Institute for Water Resources "Jaroslav Cerni", Belgrade and CSASA at University of Kragujevac, Serbia



Forecasting seawater intrusion in a coastal aquifer From J. Kerou Univ. Neuchâtel

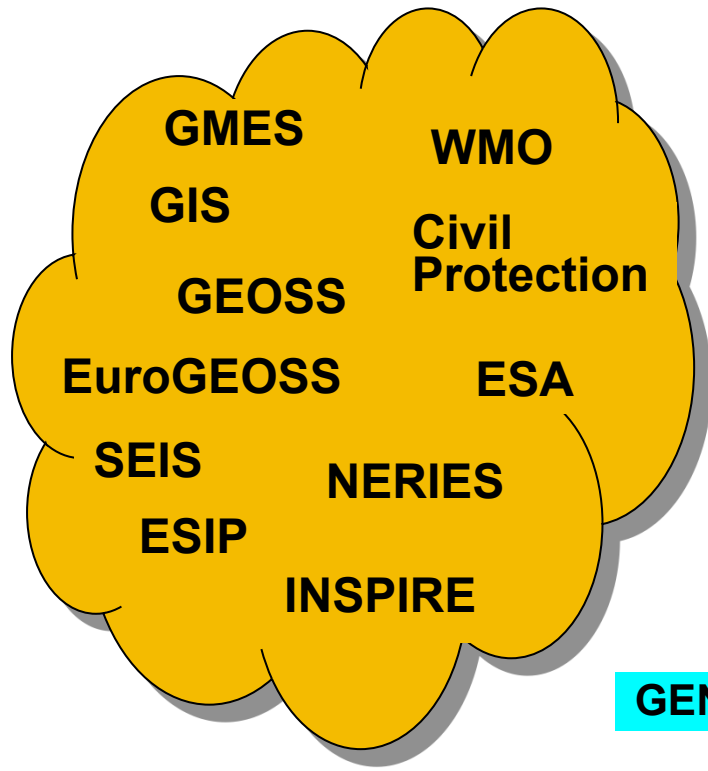


Each ES discipline has been organized since several decades or more

- Data format, Data exchange, standards, web services, data centres, computing resources, architecture

Open Geospatial Consortium

Open Grid Forum



EGI-Inspire HUC

VERCE

DEGREE

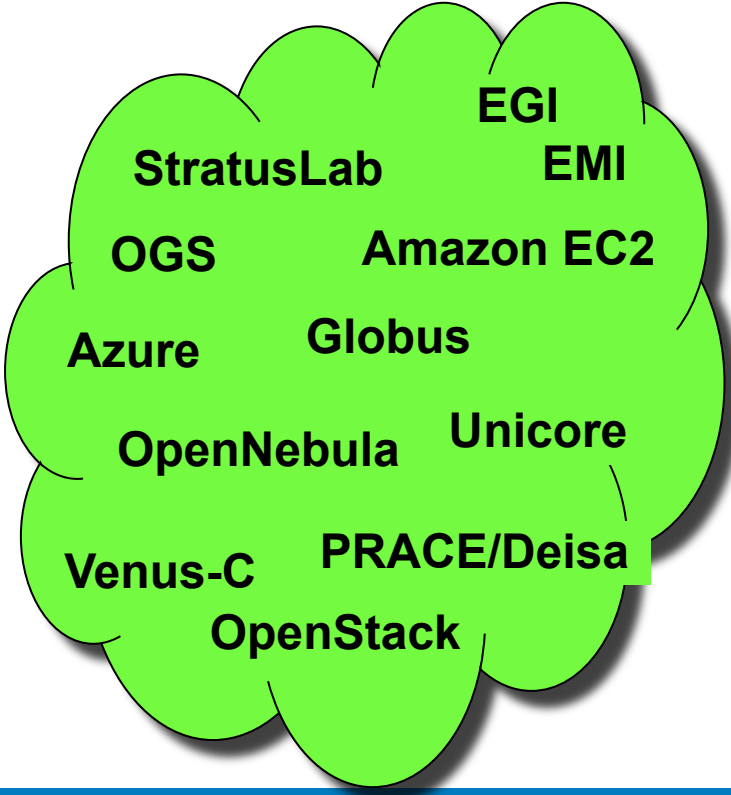
IS-ENES

GeoCloud

ENVIROGRID

GENESI-DEC

...



Sustainability of the associated Grid/DCI community

- Resources:
 - Resources from ES related sides directly → NGIs
 - Resources are not only by EGI
- Support
 - The partners of the VRC are engaged in different projects or have institutional funding; large variety of funding and person-power conditions
 - Business model: support is given as marketing
- Community building
 - COST action, other proposals to support the existing ES “Grid” community
 - Participation in new projects e.g. Verce, Climate
- Community tools
 - Web presence, collaboration tools, portal
 - Committed by core VRC members for at least the next few years
- Publications: see actual papers from e.g. climate, hydrology, satellite data exploitation

- Services
 - Organisational: achieved collaboration, e.g. with GENESI-DR or ESGF –on going applications
- Software
 - Small self-contained open-source tools
 - No central maintenance foreseen
 - Organization of software exchange and knowledge between ES projects and/or researchers (e.g. 8 different ports of WRF to gLite based grids, lots of complementary hydrological codes)
- Generic VO and services
 - depends on the evolution of usage mode