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Earth Science community support in the EGI-Inspire Project

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The Earth Science Grid community is following its strategy of propagating Grid technology to the ES disciplines, setting up interactive collaboration among the members of the community and stimulating the interest of stakeholders on the political level since ten years already. This strategy was described in a roadmap published in an Earth Science Informatics journal. It was applied through different European Grid projects and led to a large Grid Earth Science VRC that covers a variety of ES disciplines; in the end, all of them were facing the same kind of ICT problems. .. The penetration of Grid in the ES community is indicated by the variety of applications, the number of countries in which ES applications are ported, the number of papers in international journals and the number of related PhDs. Among the six virtual organisations belonging to ES, one, ESR, is generic. Three others -env.see-grid-sci.eu, meteo.see-grid-sci.eu and seismo.see-grid-sci.eu- are thematic and regional (South Eastern Europe) for environment, meteorology and seismology. The sixth VO, EGEODE, is for the users of the Geocluster software. There are also ES users in national VOs or VOs related to projects.
The services for the ES task in EGI-Inspire concerns the data that are a key part of any ES application. The ES community requires several interfaces to access data and metadata outside of the EGI infrastructure, e.g. by using grid-enabled database interfaces. The data centres have also developed service tools for basic research activities such as searching, browsing and downloading these datasets, but these are not accessible from applications executed on the Grid. The ES task in EGI-Inspire aims to make these tools accessible from the Grid. In collaboration with GENESI-DR (Ground European Network for Earth Science Interoperations - Digital Repositories) this task is maintaining and evolving an interface in response to new requirements that will allow data in the GENESI-DR infrastructure to be accessed from EGI resources to enable future research activities by this HUC.
The international climate community for IPCC has created the Earth System Grid (ESG) to store and share climate data. There is a need to interface ESG with EGI for climate studies – parametric, regional and impact aspects. Critical points concern the interoperability of security mechanism between both "organisations", data protection policy, data transfer, data storage and data caching.

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