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The GEOSS Interoperability Process Pilot Project

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GEOSS, the Global Earth Observing System of Systems, is being built from existing systems and initiatives, with an emphasis on the creation of synergies among GEOSS component that provide increased benefits to society. The goal is to leverage existing programs and established standards wherever possible, and to broaden convergence of systems based on agreed interoperability arrangements.

This talk will describe the specific approaches that GEOSS has proposed for achieving interoperability among its component systems and give an overview of the GEOSS Interoperability Process Pilot Project (IPPP). The IPPP was conceived as a way to exercise the process that has been defined for reaching interoperability arrangements. We describe the phases and status of the IPPP, beginning by identifying the system components, and the standards, interface protocols and interoperability agreements currently in use by these systems. This information is being captured in web-accessible catalogs and registries that will become part of the core GEOSS architecture.

Four systems/disciplines were initially identified as sources for the pilot project, covering weather, climate, seismology, and biodiversity. This selection was based on the desire to have participation from diverse disciplines and the commitments of representatives from the disciplines to actively support the process.

Systems contributed to GEOSS are built to serve particular needs, but those systems should also be designed or adapted so their inputs and outputs support interoperability with other systems. Consequently, we focus on interoperability situations that are surfaced by actual requirements to interface with other GEOSS- affiliated systems through what are termed GEOSS “interoperability arrangements.” Scenarios are being developed that require the exchange of data and information between disparate

systems which have not yet established a mechanism for such an exchange.

In designing interfaces to support interoperability among two or more component systems of GEOSS, the objective is to deploy a solution that not only solves the interoperability requirement, but does so by taking full advantage of existing international standards.