



Towards global environmental information and data management

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The Belmont Forum, a coalition of national science agencies from 13 countries, is supporting an 18-month effort to implement a 'Knowledge Hub' community-building and strategy development program as a first step to coordinate and streamline international efforts on community governance, interoperability and system architectures so that environmental data and information can be exchanged internationally and across subject domains easily and efficiently. This initiative represents a first step to build collaboratively an international capacity and e-infrastructure framework to address societally relevant global environmental change challenges. The project will deliver a community-owned strategy and implementation plan, which will prioritize international funding opportunities for Belmont Forum members to build pilots and exemplars in order to accelerate delivery of end-to-end global change decision support systems.

In 2012, the Belmont Forum held a series of public town hall meetings, and a two-day scoping meeting of scientists and program officers, which concluded that transformative approaches and innovative technologies are needed for heterogeneous data/information to be integrated and made interoperable for researchers in disparate fields and for myriad uses across international, institutional, disciplinary, spatial and temporal boundaries. Pooling Belmont Forum members' resources to bring communities together for further integration, cooperation, and leveraging of existing initiatives and resources has the potential to develop the e-infrastructure framework necessary to solve pressing environmental problems, and to support the aims of many international data sharing initiatives. The plan is expected to serve as the foundation of future Belmont Forum calls for proposals for e-Infrastructures and Data Management.

The Belmont Forum is uniquely able to align resources of major national funders to support global environmental change research on specific technical and governance challenges, and the development of focused pilot systems that could be complementary to other initiatives such as GEOSS, ICSU World Data System, and Global Framework for Climate Services (GFCS). The development of this Belmont Forum Knowledge Hub represents an extraordinary effort to bring together international leaders in interoperability, governance and other fields pertinent to decision-support systems in global environmental change research. It is also addressing related issues such as ensuring a cohort of environmental scientists who can use up-to-date computing techniques for data and information management, and investigating which legal issues need common international attention.