

Dg.O 2004 **Eco-Informatics** Birds of a Feather Session  
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*You can't trust optics, but can always depend on appetite.*

Wallace Stegner

Solving environmental challenges such as global climate change, emerging diseases, decreasing biodiversity, waning resources, will require better informatics tools. These tools are being researched and developed under the rubric of Eco-Informatics. At Dg.O 2004, sixteen people<sup>1</sup> participated in a lively ninety-minute conversation on future directions of that field. Their objective was to determine whether to continue the work of two prior workshops sponsored by the National Science Foundation (NSF), National Aeronautics and Space Administration (NASA) and U. S. Geologic Survey Agency (USGS)<sup>2</sup>. Those workshops focused on articulating information technology research that will be needed to support future biodiversity and ecosystem research, and focused primarily on the informatics needs of ecology researchers. Discussion extended ideas covered in previous workshops in four ways:

1. In addition to the NSF (program directors and research principal investigators), and USGS agency representatives, **the Environmental Protection Agency was an active participant in the planning and convening of the discussion.** NASA agency participants continue to be interested and kept aware of the work.
2. Large agencies (in particular EPA) are no longer the sole sources of data sets critical to their mission. Mechanisms must be put in place so that data providers such as Tribal, local and state governments can easily publish and extend key data sets and metadata.
3. Using the term “information providers”, rather than “data providers”, emphasizes that not only raw data sets, but also aggregate data products (e.g., results of statistical analysis) and the output of models are valuable eco-information resources.
4. Stakeholders for ecosystem information products include not only scientific researchers, but also decision makers and the public, and these customers should be included at the outset of the discussion process to ensure proper direction of efforts. Eco-informatics researchers and infrastructure developers generally have little understanding of how decision makers might use information products (if they were readily available), or what uses the public might make of information products. In particular, we do not understand their metadata needs.

We therefore propose a third workshop on eco-informatics whose primary focus is identifying the customers of ecosystem information products (decision makers and the public, in particular) and articulating their information needs. Eco-informatics researchers, the EPA and possibly the BLM, as well as NSF, USGS and NASA, should be active participants, as well as a representative cross-section of customers – included at the outset to articulate their concern for information needs. Outlining characteristics of sample projects that turn existing data products and information management tools into useful information products for these stakeholders would be another desired outcome of this workshop, along with a call for better understanding how all stakeholders and ecosystem information technology actually use metadata.

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<sup>1</sup> Chaitan Baru, Judy Cushing, Stefan Falke, Mike Frame, Bill Hodgkiss, Eric Landis, Maria Matevosyan, Peter McCartney, G.P. Patil, Jon Schweiss, Sharon Shin, Sylvia Spengler Charles Taillie, Bill Waltman, Jessie Wilbur, Tyrone P. Wilson. Bruce Bargmeyer, Val Gregg, and Bill Sonntag contributed to formulation of this BoF's agenda.

<sup>2</sup> See [www.evergreen.edu/bdeipi](http://www.evergreen.edu/bdeipi).