

## Tutorial proposal for eKnow, Cancun

**Title:** Decision support for environmental analysis and planning with the EMDS system

**Presenters:**

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**Background:**

The Ecosystem Management Decision Support (EMDS) system is an application framework for knowledge-based decision support of ecological assessments at any geographic scale. EMDS integrates state-of-the-art geographic information system (GIS) as well as knowledge-based reasoning and decision modeling technologies in the Microsoft Windows® environment to provide decision support for a substantial portion of the adaptive management process of environmental management. A summary of recent applications of the system published in scientific literature is presented on Wikipedia at <http://en.wikipedia.org/wiki/EMDS> .

**Summary:**

The tutorial session will be organized as follows:

- 90 min In-depth description of the system, including features and related concepts and principles.
- 20 min Case study 1. Use in regional forest planning.
- 20 min Case study 2. Use in national forest fuels budget allocation.
- 20 min System demonstration.
- 30 min Question and answer sessions interspersed over session.

**Bio of lead presenter:**

**Keith Reynolds** is a research forester with the Pacific Northwest Research Station (USDA Forest Service) and is located at the Corvallis Forestry Sciences Laboratory in Corvallis, OR. His primary areas of expertise are statistics, biomathematics, and knowledge-based systems theory and application. He has been the team leader on the Ecosystem Management Decision Support project at the PNW Station since 1993, designing and implementing new decision support system technologies for integrated multi-scale landscape analysis and planning.

Dr. Reynolds currently is directing implementation of EMDS 4.0, supported by the USFS National Forest System as one of its primary tools for landscape analysis, and now under the stewardship of the University of Redlands (Redlands, CA). Since the late 1990s, he also has worked on various EMDS applications, including watershed analysis, forest ecosystem sustainability, landscape integrity, and forest fuels management.