Earth Observation Training and Education with ESA LearnEO!

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For society to benefit fully from its investment in Earth observation, EO data must be accessible and familiar to a global community of users who have the skills, knowledge and understanding to use the observations appropriately in their work. Achieving this requires considerable education effort. LearnEO! (www.learn-eo.org) is a new ESA education project that contributes towards making this a reality.

LearnEO! has two main aims: to develop new training resources that use data from sensors on ESA satellites to explore a variety of environmental topics, and to stimulate and support members of the EO and education communities who may be willing to develop and share new education resources in the future. The project builds on the UNESCO Bilko project, which currently supplies free software, tutorials, and example data to users in 175 countries. Most of these users are in academic education or research, but the training resources are also of interest to a growing number of professionals in government, NGOs and private enterprise. Typical users are not remote sensing experts, but see satellite data as one of many observational tools. They want an easy, low-cost means to process, display and analyse data from different satellite sensors as part of their work in environmental research, monitoring and policy development. Many of the software improvements and training materials developed in LearnEO! are in response to requests from this user community.

The LearnEO! tutorial and peer-reviewed lessons are designed to teach satellite data processing and analysis skills at different levels, from beginner to advanced - where advanced lessons requires some previous experience with Earth observation techniques. The materials are aimed at students and professionals in various branches of Earth sciences who have not yet specialised in specific EO technologies. The lessons are suitable for self-study, university courses at undergraduate to MSc level, or for continued professional development training. Each lesson comes complete with data, analysis tools and background information required to complete the suggested activities and answer the study questions. Model answers are supplied for users working on their own or with limited specialist support.

The web site also provides access to annotated data sets and a lesson developers resource library, both designed to support users who wish to develop their own lessons and tutorials and share these with others. Registered users are encouraged to become involved with the project by providing support for future software and lesson development, testing, and peer review.