

**Geosciences Information for Teachers (GIFT) Symposium
Vienna, April 23-25, 2012**

« Water! »

PRELIMINARY PROGRAM

The 2012-GIFT (Geosciences Information for Teachers) symposium will take place on April 23-25, 2012 during the general Assembly of EGU in Vienna Austria. The general theme of the workshop is « Water! » and will be dedicated to the study of the hydrological problems of our planet.

The water cycle, also known as the hydrologic cycle, describes the continuous movement of water on, above and below the surface of the Earth. It also involves the exchange of heat energy, which leads to temperature changes. The water cycle figures significantly in the maintenance of life, society and ecosystems on Earth. However, several problems threaten water resources today, which are related to the unsustainable overexploitation of water resources, the lack of adequate water supply systems in many parts of the world, pollution, and an increase in the population at risk to water hazards. Such problems are caused by an ever increasing population, consumerism, urbanization and agricultural expansion.

In addition, as the water cycle involves heat exchange, it has a two ways feedback with climate as well. In particular, the effects of global warming of the atmosphere on the water cycle are significant. Observed warming over several decades has been linked to changes in the large-scale hydrological cycle such as:

- increasing atmospheric water vapor content;
- changing precipitation patterns, intensity and extremes;
- reduced snow cover and widespread melting of ice;
- and changes in soil moisture and runoff.

as a consequence, water resources have already been deeply affected by global warming: sea levels have risen, glaciers have retreated. Sometimes water reservoirs are essential to the life in entire regions. In addition, the hydrological cycle is heavily affected by land use change which induces relevant variations of groundwater recharge. The above problems cause concerns in almost every sector of everyday life, and geo-engineers are seeking ways of mitigation. All water bodies are going to be affected by global warming, making knowledge of the water cycle essential for any kind of human activity. Entire regions on Earth would face extreme temperatures eventually associated with torrential rainfalls other regions would experience scarcity of water and droughts.

In the GIFT workshop “**Water!**” all the different aspects of the water cycle will be described and discussed. Talks will focus on global freshwater availability and distribution, overexploitation of water, strategies for sustainable use of water in the future and the threats by environmental change, with examples of particular regions where global warming will have a major impact, such as the regions depending on the water supply from the Himalayan, Alpine and Andes mountain glaciers. The use of naturally occurring isotopes to "fingerprint" sources of water in precipitation and rivers, and the presence of hundreds of thousands of years old water underneath the deserts and other areas, will also be discussed..

Focus will also be put on climate model simulations for the 21st century, mitigation measures to reduce the magnitude of impacts of global warming on water resources, and water resources management and its impacts on other policy areas.

As in every GIFT Symposium, contributions by the attending teachers on particular “off-the-program” activities that they may have had in their classrooms are particularly welcomed, either as poster or oral presentations, even if their subject is not directly related to the theme of the workshop.

Also, a first step will be a guided visit to the Vienna Museum of Natural Sciences, on Sunday April 22 afternoon, followed by a small reception as an ice-breaker event.

**Application to participate in the 2009 GIFT Teachers Symposium
EGU General Assembly April 19 – 22, 2009 Vienna Austria**

Grants are available to support teachers to participate in the 2009 Geosciences Information for Teachers (GIFT) Symposium at the 2009 European Geosciences Union (EGU) General Assembly in Vienna, Austria. Selected teachers will receive a travel /hotel stipend and free registration to the meeting.

Participating teachers will be selected based on their teaching experience and a supporting statement from their school administration. Selected teachers will be expected to attend the entire workshop and submit a statement within 1 year after the workshop on their impression of the workshop and how they plan to use this experience in their future teaching activities.

To apply please submit the following information:

- Applicant name, contact information, E-mail address
- School name and address
- List the subjects you teach, and the ages of students
- The workshop will be conducted in English. Please describe your capability to understand and speak English.
- A description of any leadership activities you have taken at your school or in national educational activities (examples: training new teachers, developing curriculum, etc.).
- A letter of recommendation from the senior administrator in your school supporting your application.
- (Optional) There will be opportunities for teachers to present any creative science activities they have developed for their classrooms to other teachers at the workshop. These presentations can be in the form of a talk, a poster or a demonstration. If you would like to present a science activity, please provide a title and description for inclusion in the program.

**Applications should be received as soon as possible and in any case no later than
November 30, 2011.**

Send your application via email to any of the members of the Committee on Education (listat : (<http://www.egu.eu/media-outreach/gift/committee-on-education.html>) preferentially the one in your country if there is one.