

DECLARATION

Towards a Service for the Water Cycle

Noticing that

one billion people are currently without sufficient access to clean drinking water;

according to the 2nd UN Water Assessment Report, this deficit is a result of governance problems and poorly informed decision making;

demand for water resources is rising due to increased water usage for potable consumption, energy production, irrigation for agriculture purposes, industrial and urban uses, while climate change is locally to regionally impacting water resources through increased frequencies and magnitudes of droughts and floods;

a better understanding of the water cycle on regional to global scales is critical for managing water resources in a sustainable manner;

and recognizing that

the GRACE satellite gravity mission has demonstrated the ability to measure mass redistribution in the water cycle, exemplified most recently by the detection of a decline in the water table in northwestern India between 2002 and 2008 of about 33 cm/yr due to groundwater withdrawals for irrigation; also exemplified by measurement of net decreases in the masses of ice stored in Greenland, certain regions of Antarctica, and Alaskan glaciers over the same time period;

the Participants of the Workshop on a Roadmap for Future Satellite Gravity Missions declare that

a long and uninterrupted series of satellite gravity missions with accuracies and resolutions at least as good as GRACE's is a crucial element of an observation system to adequately monitor the global water cycle and to improve our understanding of the processes and consequences of change;

such a series of satellite gravity missions would provide the basis for a global service to inform decision makers in a timely manner about ongoing and forecasted changes in the water cycle related to droughts, groundwater depletion, sea level changes, and other potential impacts of climate change.

Furthermore, the Participants of the Workshop have agreed on a roadmap towards future satellite gravity missions and, with this declaration, bring this roadmap to the attention of the GEO Plenary, the governments of the GEO Member Countries, and the Participating Organizations in GEO in an effort to initiate international action for the implementation of this roadmap, for the benefit of science and society in support of a sustainable and peaceful development. The participants declare their support for this action.



Towards a Roadmap for Future Satellite Gravity Missions
September 30 - October 2, 2009, Graz, Austria



**GROUP ON
EARTH OBSERVATIONS**

<http://www.iag-ggos.org/workshops/Graz>

