G-REALM: A Lake/Reservoir Monitoring Tool for Water Resources and Regional Security Assessment

Charon Birkett (Earth System Science Interdisciplinary Center, University of Maryland, cmb@essi.umd.edu)
Martina Ricko (SGT, Inc.), Xu Yang (SGT, Inc.), Brian Beckley (SGT, Inc.)
Dr. Curt Reynolds (USDA/FAS), Dr. Elias Deeb (ERDC/USACE)

ABSTRACT

G-REALM is an interdisciplinary funded operational program offering web-based services in hydrology and sanitary engineering. The products are delivered in a web tool (G-REALM) which allows for a comprehensive analysis of water resources and regional security. The tool is designed to help decision makers in all levels of government and non-governmental organizations to better understand and manage water resources. It provides a comprehensive suite of products that can be used for operational decision-making, research, and education. The project has resulted in the development of a new web-based tool, G-REALM, which is a powerful and user-friendly tool for monitoring and managing water resources. The tool can be used for a wide range of applications, including flood forecasting, water quality monitoring, and drought management. The tool is also designed to be easily integrated with other data sources and to be easily updated with new data.

PRODUCTS and SERVICES

Global distribution of lakes and reservoirs for operational water level monitoring:
- Validation: <http://water-watch.sgt-inc.com>
- Altimeters: <http://water-watch.sgt-inc.com>

Two web-based portals for satellite-based lake and reservoir data products. Special focus on altimeters for surface water level variations.

1) The USDA/FAS CropExplorer G-REALM Web Portal
https://pad.fas.usda.gov/cropexplorer/global_reservoir/
2) and the new prototype WATER-WATCH web site
http://water-watch.sgt-inc.com