

**WMO OMM**

World Meteorological Organization  
Organisation météorologique mondiale  
Organización Meteorológica Mundial  
Всемирная метеорологическая организация  
المنظمة العالمية للأرصاد الجوية  
世界气象组织

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22 March 2018

Subject: Global Groundwater Monitoring Network (GGMN)

Action required: Express interest in participating in the GGMN

Dear Sir/Madam,

This letter is to invite you to join the Global Groundwater Monitoring Network. If your organization is not directly in charge of hydrogeological measurements, we would appreciate it if you could liaise with the dedicated national authority.

As a specialized agency of the United Nations, the World Meteorological Organization (WMO) is dedicated to international cooperation and coordination on the state and behaviour of the Earth's atmosphere, its interaction with the land and oceans, the weather and climate it produces, and the resulting distribution of water resources. In the three domains of Weather, Climate and Water, WMO programmes facilitate and promote the establishment of networks of observational stations, support the establishment and maintenance of data management and exchange, adopt standards for observation and monitoring and foster research.

Pursuant to WMO Resolution 25 (Cg-XIII) (1999), Country Members are committed to broadening and enhancing, whenever possible, the free and unrestricted international exchange of hydrological data and products. This resolution is reinforced in the publication *Manual on the WMO Integrated Global Observing System* (WMO-No. 1160).

In this general context, WMO, together with UNESCO, supports the work of the International Groundwater Resources Assessment Centre (IGRAC). Since 2003, IGRAC facilitates and promotes international sharing of information and knowledge required for sustainable groundwater resources development and management worldwide.

In a view of increased climate variability, dependence on groundwater is growing fast. To assess a current state of this vital resource and to make reliable predictions, groundwater needs to be monitored regularly. Especially long monitoring records (decades) are necessary to properly analyse possible climate change impact. However, there is a general lack of information on groundwater change - particularly at regional and continental scale - to properly test and tune models used for climate change prediction.

Recognizing the importance of groundwater monitoring, IGRAC leads the implementation of the Global Groundwater Monitoring Network (GGMN) programme (<https://www.un-igrac.org/special-project/ggm-n-global-groundwater-monitoring-network>). GGMN was initiated a decade ago to improve the quality and accessibility of groundwater monitoring information and eventually, knowledge regarding the state of groundwater resources worldwide. The GGMN operates according to principles and resolutions of WMO and UNESCO with the aim of encouraging the widespread use of hydrological data for national, regional and global studies. The ultimate goal of GGMN is to provide a regular update on the

To: Hydrological Advisers to Permanent Representatives

cc: Mr Neno Kukurić, IGRAC

state of groundwater resources (i.e. groundwater levels/heads) at the regional (and eventually global) scale, serving also as a climate response network.

The new GGMN portal (<https://ggmn.un-igrac.org/>) supports an extensive temporal and spatial analysis of groundwater data also using various additional sources of information (e.g. precipitation, elevation, satellite imagery, etc.). Moreover, the portal is particularly suitable for regional scale studies that often entail working over distance and for interregional and international cooperation (which is vital, given that neither groundwater nor climate change stop at administrative boundaries). At the same time, the ownership of the data/information made available to the GGMN programme remains with the data provider.

The participation of your country in the global groundwater monitoring network will contribute to increase both the understanding of groundwater availability and climate change impacts. It will increase the visibility of your organization and leverage your monitoring efforts.

It is to be noted that WMO is starting an important project on Hydrological Status and Outlook System ([HydroSOS](#)) for which your data could be very useful.

Accordingly, you are kindly invited to become a part of the global groundwater monitoring network, your participation would be highly appreciated. IGRAC and WMO would be willing to answer any questions you may have, please feel free to contact Neno Kukurić at IGRAC ([neno.kukuric@un-igrac.org](mailto:neno.kukuric@un-igrac.org); +31 15 215 2325) or Dominique Bérod at WMO ([dberod@wmo.int](mailto:dberod@wmo.int); +41 22 730 8043).

Looking forward hearing from you,

Yours faithfully,

A handwritten signature in black ink, appearing to read 'J. Cullmann', followed by '(for)' in parentheses.

(J. Cullmann)  
Director  
Climate and Water Department