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EDITORIAL

Introductory editorial for 'Applied Water Science' special issue: "Groundwater contamination and risk assessment with an application of GIS"

Narsimha Adimalla[1,2] · **Ajay Kumar Taloor**[3]

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Call for manuscripts

Groundwater is one of the precious natural resources in the world, and it typically provides clean drinking water and also supply for irrigation purposes. However, rapid expanse of industrialization, urbanization, application of several fertilizers in the irrigation lands and even human pollutions have extremely created groundwater contamination in all over the world. Groundwater pollutants mainly include inorganic salts, toxic metals, cations [potassium (K^+), sodium (Na^+), calcium (Ca^{2+}), and magnesium (Mg^{2+})], and anions [chloride (Cl^-), nitrate (NO_3^-), fluoride (F^-), bicarbonate (HCO_3^-), carbonate (CO_3^{2-}), and sulfate (SO_4^{2-})]. Therefore, groundwater quality issues have become a major concern in the last several decades, and groundwater quality assessment along with health risk evaluation with an application of GIS has become the most effective tool to comprehend the quality of water and its suitability for various purposes. Therefore, this special issue on "Groundwater contamination and risk assessment with an application of GIS" will provide information about various sources of groundwater pollution such as geogenic and anthropogenic sources and their profound impact on human health.

Topics for this special issue

The purpose of this special issue "Groundwater contamination and risk assessment with an application of GIS" is to call for scientific original papers on the present state of the knowledge on the links between groundwater contamination and its associated human risk assessment and an application of GIS. Contributions in this special issue are related to the following topics include, but are not limited to:

- Groundwater contamination and GIS application
- Groundwater quality monitoring in arid and semiarid regions
- Fluoride, nitrate, and arsenic contamination in groundwater
- Risks of groundwater pollution to the environment and human health
- Geospatial distribution and also geospatial approaches to identify the groundwater contamination process
- Groundwater pollution and source identification via various methods
- Health risks assessment based on the consumption of contaminated groundwater
- Water quality monitoring in arid and semiarid regions
- Health risk assessment of heavy metals exposure through drinking water consumption
- Contamination zoning and health risk assessment of trace elements in groundwater
- Geochemical and environmental health threat evaluation of heavy metals in groundwater
- Decision making and health risk assessments
- Emerging contaminants and pollution of water resources
- Exposure of human to waterborne contaminants
- Hydrochemical processes regulating water quality variations

✉ Narsimha Adimalla
adimallanarsimha@gmail.com

[1] School of Water and Environment, Chang'an University, No. 126 Yanta Road, Xi'an 710054, China

[2] Key Laboratory of Subsurface Hydrology and Ecological Effects in Arid Region of the Ministry of Education, Chang'an University, No. 126 Yanta Road, Xi'an 710054, Shaanxi, China

[3] Department of Remote Sensing and GIS, University of Jammu, Jammu 180 006, India

Both research papers and review papers are welcomed. All manuscripts must be submitted through the Editorial Manager system of the journal. We strongly believe that this collection of papers will be of interest to a broad audience of readers of the "Applied Water Science" journal.

By:

Guest Editors

Dr. Narsimha Adimalla

Dr. Ajay Kumar Taloor

Editor-in-Chief

Dr. Enrico Drioli

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