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Uttarakhand, India**MESSAGE FROM EDITOR'S DESK**

Groundwater is vital to economic activity and growth, food security, socioeconomic development, and adapting to the impacts of climate change. But the sustainability of this critical resource is at risk in many regions, partly because it is not valued appropriately and is taken for granted. In the context of global pressures on food systems and water supply, policymakers need to act now to ensure groundwater is managed responsibly across sectors depending on this resource. Over the past two decades, more than 80 metropolitan cities across the world have faced severe water shortages due to droughts and unsustainable water use. Future projections are even more alarming, since urban water crises are expected to escalate and most heavily affect those who are socially, economically and politically disadvantaged. As climate change advances, policymakers need to understand better and manage both the surface and groundwater resources, which are critical assets for a nation's development.



In the present Volume 42, Number 03 & 04, July & October 2022, the journal broadly covers R&D studies related to saline water intrusion in coastal regions, submarine groundwater discharge, groundwater quality, water resources management in urban regions, and rainfall-runoff modeling. The first study investigates the implications of simultaneous pumping of fresh water and saline ground water, on flux dynamics of a saltwater intruded aquifer using SEAWAT model. The authors simulated pumping from the regional scale aquifer from three different scenarios of pumping. The second work analyzes the urbanization effects on submarine groundwater discharge and associated nutrient flux in the urbanized coastal aquifer considering a harbor environment inside Kozhikode city. The authors use the geochemical tracer radon to calculate the groundwater discharge and associated nutrient flux. The authors conclude that even a small amount of discharge can affect the marine environment through a considerable amount of solutes like nutrients, trace metals, and other pollutants that are transferred into the nearshore region. The third study investigates monthly water levels and well water quality in Centre for Water Resources Development and Management (CWRDM) at Kozhikode district campus, India for providing artificial recharge to augment groundwater resources. The authors find that concentration of all the dissolved species, in shallow wells falls within limits prescribed by drinking water standards (BIS) except pH, while Iron records higher concentrations in bore wells according to the prescribed standards. The fourth study derives urban design strategies based on urban morphology for water resource management and explains possibilities of interventions over the Palakkad District in Kerala. The strategies and recommendations in the study may be adopted to a next level of designing, especially at a time when the Government of India is planning to 100 smart cities across India with sustainable water resources management. The fifth study carries out extensive rainfall-runoff modelling using SCS-CN and GIS approach in the Tawa catchment of Madhya Pradesh, India. The CN number in the Tawa catchment is calculated to be 51 for AMC-I, 70 for AMC-II, and 85 for AMC-III. The authors conclude that the proposed SCS-CN-cum-GIS approach is an efficient method to model the inflow at the Tawa dam site, as well consumes less time and facility to handle large data sets.

Raj Deva Singh

(R.D. Singh)

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