

Hydrology and Latest Current Affairs

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Abstract

Hydrology as a science of knowledge, management, and applying water resources, the cycling of water through different reservoirs (subsurface, surface, and atmosphere) and precipitations has a particular role to play in the modern age. This science with the comprehensive engagements in the various domains has a specific role to determine. Engineering and applied sciences, economy-social and environmental disciplines are the main aspects of this importance to discuss. Nowadays, the direction of hydrological science in current researches, needs, and future perspectives gets more attractions. Moreover, the interaction of hydrology and challenging worldwide issues including's environmental phenomena's: floods, droughts, unexpected rainfalls, snow melts, the disorder in water resources as the critical research subjects are raised. In this regard, climate change as a high impact factor in hydrology is considerable in environmental research subjects. Therefore, the focus of researchers is on this issue and its consequences, and how got involved with hydrological research subjects more than before.

Keywords: Hydrology; Precipitation; Underground waters; Sustainable development

Introduction

As a matter of fact, one of the high-attractive subject researches in all disciplines is generating energy, consumption, and various effects it on the economical state of societies. Therefore, the nation's according to their geographical situation, apply hydrology science to take advantage of their energy resources: water (precipitation, underground waters) forests, soil, and ice. Furthermore, most studies in the mentioned discipline are determined in sustainable development. Sustainable development with ecological-economic theories and backgrounds has a noticeable position in hydrology science and corresponding subjects. Urbanization is one of the respective subjects as a high-demand subject in current affairs. The position of this modern subject with hydrology is a high-potential matter to discuss. Urban hydrology and the role of urbanization in this matter get high notice of investigators and researchers in defining the new research subjects [1,2].

Discussion

To get involved with current mentioned affairs, hydrology researchers with the aim of modelling: experimental and numerical, have reached valuable findings in this matter. Going further in statistical domains and expanding mathematical ones as the fundamental aspects of hydrology is another valuable development for corresponding investigators. Therefore, the estimation of upcoming phenomena (by projecting the intensity, duration, and frequency) is considered as an underlying applied tool of hydrology in the current age. The close interaction of hydrology with other fields in civil engineering can clarify the importance of it. Mutual aspects with hydraulic sciences, river engineering, water resource management, water quality, and water treatment can highly make obvious the involvement of this discipline. To do this, numerous case studies, multi-scale project investigations have done or remained to discover. Current researches (according to the potential needs of modern mankind) more are emphasized the study on the climate change issue, its consequences on the hydrological phenomena. Also, water

resources as a reliable energy source to generate hydropower energy especially in developing countries with their high capacities and special demands. Hydrology with a specific orientation in the design of water and hydraulic structures (drainage and evacuation), dams, and lateral structures has a high-ranked position in hydropower energy as well.

Therefore, corresponding experts of hydrology investigate the current challenges and future perspectives to develop and manage water resources. By considering the mentioned orientations, the rank of hydrology knowledge based on the current affairs and future needs and perspectives is more clarified. In the future study regarding this abstract, the whole aspects will be investigated in necessary detail.

Conclusion

Moreover, the interaction of hydrology and challenging worldwide issues including's environmental phenomena's: floods, droughts, unexpected rainfalls, snow melts, the disorder in water resources as the critical research subjects are raised. Therefore, the focus of researchers is on this issue and its consequences, and how got involved with hydrological research subjects more than before. Mutual aspects with hydraulic sciences, river engineering, water resource management, water quality, and water treatment can highly make obvious the involvement of this discipline.

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