



## Department of Geography

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### M.Phil. PreThesis Submission Seminar

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Title of the Thesis: Integrated Urban Water Resources Management in Chandigarh Smart City  
Date and Time : 30.11.2021, 3:30 pm  
Venue : <https://meet.google.com/gmt-zerr-qjd>

#### **Abstract**

Water is a scarce resource with only 0.5% of the earth's water resource is available freshwater for consumption i.e. in 100 liters only 3ml which is half a teaspoon is directly consumable. The rapid increase in population and the shift towards resource-intensive consumption patterns in freshwater withdrawals recorded nearly six-fold since 1900 has worsened the situation. Globally BRICS countries use the largest share at approximately 45%, ROW at 30-33% while OECD nations use approximately 20-25 %. Globally as per 2017 statistics, India recorded the largest freshwater extraction with over 760 billion m<sup>3</sup> per year followed by China with over 600 billion m<sup>3</sup> and the United States consuming around 480 billion m<sup>3</sup> even with the low population. Countries in Northern Africa, South Asia & Middle East account for the lowest in per capita renewable freshwater resources yet these are the rapidly urbanising regions of the world. The 21st century marked the largest transition in history where half of the human population resides in urban areas worsening the water crisis (United Nations Population Fund, 2007). Predicting and managing urban water has grown complex over time due to diversifying uses and the coupled relationship between humans and natural systems. The Global Risks Report 2020 (WEF, 2020) ranks global warming related events such as extreme weather and biodiversity loss, as the top five risks in coming decades. Extreme precipitation events have surged by more than 50% over the last decade leading to floods (EASAC, 2018). To make urbanisation sustainable, water security, extreme climatic events and its implication must be at the center for any development projects on both micro and macro levels. We attempt to tackle this issue in Chandigarh by improving water efficiency, exploring alternate water sources, building flood resilience infrastructure and diverting it to rejuvenate the groundwater table.

**Keywords:** Water Management, Alternate Water, Resilience Societies, Urban Water, IUWM

*All are welcome!*