



"Gateway to Kumaun"



Established in 1834 AD



Population: 156,078 (2011, census)



Major Water Source: Gaula River, tube wells & Sheetlahat spring



Supply: 26.67 MLD (Million Liters/Day)



Demand: 34.5 MLD [The gap in demand and supply is 7.83%]

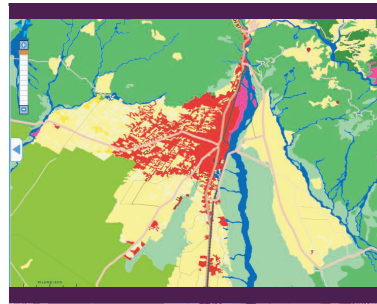
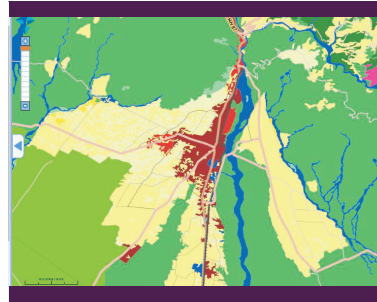
ABOUT HALDWANI

★ CAMPS (Climate Adaptive Water Management Practices & Strategies) provide solutions for Water Insecurity in urban areas based around climate adaptation.

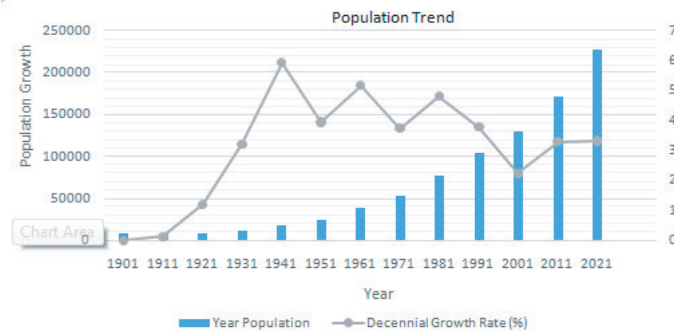
ABOUT CAMPS

★ It includes improvement of critical water zones, city-scale water management planning and identification of policy barriers to enhance water security in urban contexts.

# WATER STRESSES



Demand for water is increasing, with urbanization and high population growth. The factors producing such a high demand are also adversely affecting sources of water supply. Over 50% of the city population faces irregular and insufficient water supply.



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# Urban Water Security in Haldwani



Climate Adaptive Water Management Practices and Strategies (CAMPS)



Tata Institute of Social Sciences



## KEY ISSUES IDENTIFIED

- Low storage capacity of the treatment plant.
- Lack of a metering system. The intermittent supply system incentivizes the consumer to keep the taps open throughout the potential supply period - thus increasing peak demand and wastage of water.
- The pipelines are about 50-60 years old and are severely damaged . This causes sewage contamination in drinking water.
- Wastage of million liters of water in a day through breaking pipelines. Low level of awareness among citizens.
- Lack of institutional arrangement.

## IMPACTS ON RESIDENTS

- Women and children face increased manual labour.
- Rise in the prices of private water tankers in the lean season.
- Variable electricity supply can lead to the motors in tube wells slowing down or stopping completely.
- Some residents experience poor water quality.



## Government INITIATIVES

- Building bye-laws mention rain water harvesting.
- AMRUT has prepared a service level improvement plan for the water sector in Haldwani.
- Out of the total 33,206 households in Haldwani, 26,566 households have a tap connection.
- The target of the AMRUT project is to provide new connections for these remaining 6,640 households.

## SOLUTIONS

### WHAT CAN BE DONE

- Rain water harvesting at an institutional and individual level.
- Increase ground water recharge.
- Use of water efficient technologies.
- Increase water storage capacity Address water quality issues through the installation of bio-sand filters.



### POLICY SUGGESTIONS

- Incentivise Rain Water Harvesting.
- Install sewage lines and Sewage Treatment Plant in the city.
- Implement metering and differential water pricing system to curtail over consumption due to tourist influx.
- Develop a city specific management plan.