Title :- Shortage of Drinking Water in (Punjab) India

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ABSTRACT

Punjab, an agricultural state of India moreover is also known as the land of five waters, is facing a severe water crisis due to lesser annual rainfall than normal (700 mm) since 1998. Further, Punjab is not getting adequate amount of river water due to political reasons like damming and diversion of river water, water other states and central government. However, the irrigation water demand (4.45 m ham) is significantly more than total irrigation water availability (3.04 m ham). Hence, in most parts of the Punjab state, groundwater is being overexploited for irrigational purpose. Apart from this water scarcity or depletion problem, water quality is also being deteriorated and not suitable for drinking purpose. Basic groundwater parameters such as salinity, electrical conductivity (EC), chloride, and nitrate have surpassed the maximum permissible limit in most of the parts of this state. Even toxic heavy metals [like selenium, uranium and lead] and pesticides have also been reported in groundwater samples of several regions of Punjab. Intake of this heavy metals and pesticides contaminated water is affecting the health of native people. The condition of groundwater depletion and quality deterioration is most severe in Malwa region of Punjab. The ground water table in the past twenty years recorded a dangerous decline from 15– 20 feet to 150–200 feet, in some parts of the state.

This paper will explain why this is happening and give solutions based on the facts on the survey

Water crisis reasons

The excessive use of groundwater in our agricultural industries is leading to diminished yields and wasted water. Over 70% of our water is used to grow crops and most is wasted due to leaky pipes and poor watering techniques. The poor water quality and presence of toxic heavy metal may be linked with the prevailing health issues in this region. Government is taking several initiatives regarding this issue and passed the Punjab Preservation of Sub-Soil Water Act (2009). Government is also providing subsidy to individual farmer to lay down underground pipeline, drip and sprinklers systems for irrigation. Additionally, government is promoting and appreciating preventive measures like watershed management and rainwater harvesting.

So I try to relate this social problem with design thinking and I believe that there is need of some solutions. I would try to make some solutions about it in this project