Groundwater Situation in India

What is the issue?

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- India is extensively exploiting its ground water resources, at a phase that is faster than any other country.
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- Irrational farming practices, improper drainage designs, and poor regulatory oversight are the main reasons for this state.
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What water use demography in India?

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- In India, about 90% of the rural water supply, 50% of the urban water supply, and 70% of the agricultural water supply is from ground reservoirs.
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- India is the highest user of groundwater, even ahead of the US and China, consuming over 70% of groundwater.
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- In this context, it is also interesting to note that only 8% of rainwater is actually captured in India.
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- One common reason for water over-exploitation is the geometrical increase in population and the uneven distribution of it.
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- Also, economic and social developments triggered by rapid urbanisation have led to lifestyle changes that impact water consumption patterns.
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Why are our ground water sources getting depleted?

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- **Destruction -** Ponds are vital water resources, but many of them have been degraded by human activity, rendering them useless over the years.
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- As ponds dry up, they become swamps and act as breeding ground for disease and sometimes they are even converted into waste dumping yards.
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- In the absence of these water resources, water supply crunches are inevitable, and they force habitations to seek supply from sources elsewhere.
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- **Irrational Farming -** Water-intensive crops have always been preferred by farmers, as they are more remunerative despite higher risks of crop failure.
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- Also, despite being water deficit, India is an exporter of water-intensive crops/produce, while it imports water prudent crops like pulses.
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- Sadly, our administrative responses to farmer stress have largely focused on “mass-tailored” solutions, without considering the implications.
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- For example, free electricity for agriculture has over the years led to over irrigation and water overuse, due to lack of proper awareness on optimum use.
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- This has in fact made soil alkaline in states like Punjab, straining farmers for want of more fertilizers to make up for the degradation.
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How have industries impacted water resources?

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- Industries are comparatively less intensive on water, and are inherently advantaged to recycle and reuse due to their organised nature.
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- Notably, there are success stories of industries that have created their own water sources and have had a positive impact on the environment.
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- But nonetheless, there are some industries in water surplus areas, which have polluted the ground water greatly, affecting nearby communities.
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What is the way ahead?

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- As we keep exploiting water resources, there is a need for a proportional recharge to avoid getting depleted.
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- Constructing recharge shafts/wells to benefit the water levels locally, through harvesting, collecting, and recharging will help replenish ground waters.
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- Minimising water drainage and directing it to the aquifer as in areas where there is less or no contamination of water is another approach to save water.
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- In urban areas, where land is scarce, parks can be constructed a level below the ground level to allow the direct rain water drainage into the ground.
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- Also, reducing water consumption through cost-effective methods, through timely and sustained implementation programs can be taken up.
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Source: The Hindu

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