



RAIN WATER HARVESTING & RECYCLING

– Experience in Jaipur

JAIPUR DEVELOPMENT AUTHORITY



WATER CRISIS – A GENERAL SCENARIO



- About a billion people in the world live without access to clean water.
- The sustainability of human development is being threatened by the growing scarcity of water. Climate change is likely to worsen the situation.
- Water will increasingly dominate national and international politics and power.
- How we manage this valuable resource is therefore crucial for future of mankind.



WATER CRISIS – A GENERAL SCENARIO



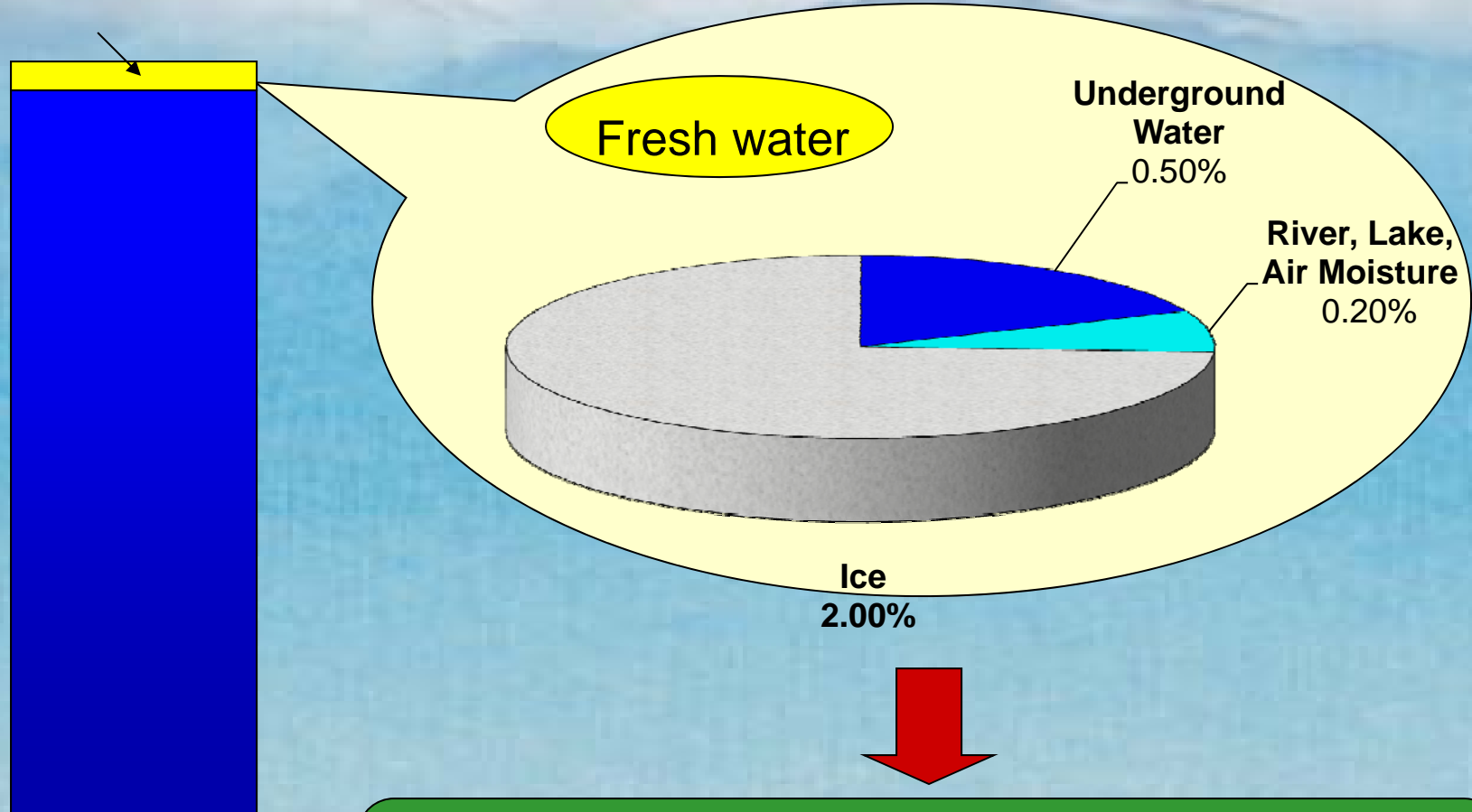
- There is an emerging gap between safe fresh water availability and water demand in many developing and fast growing economies around the world. The gap between water supply and demand is projected to be of 40% in 2030.
- Asia will also need on average 65% more freshwater withdrawals for their industry and energy sectors by 2030 for their national economies to grow as per forecast.
- “ It may well be true that the bitterest conflict in the next fifty years will not be over oil but water”.



WATER DISTRIBUTION ON EARTH



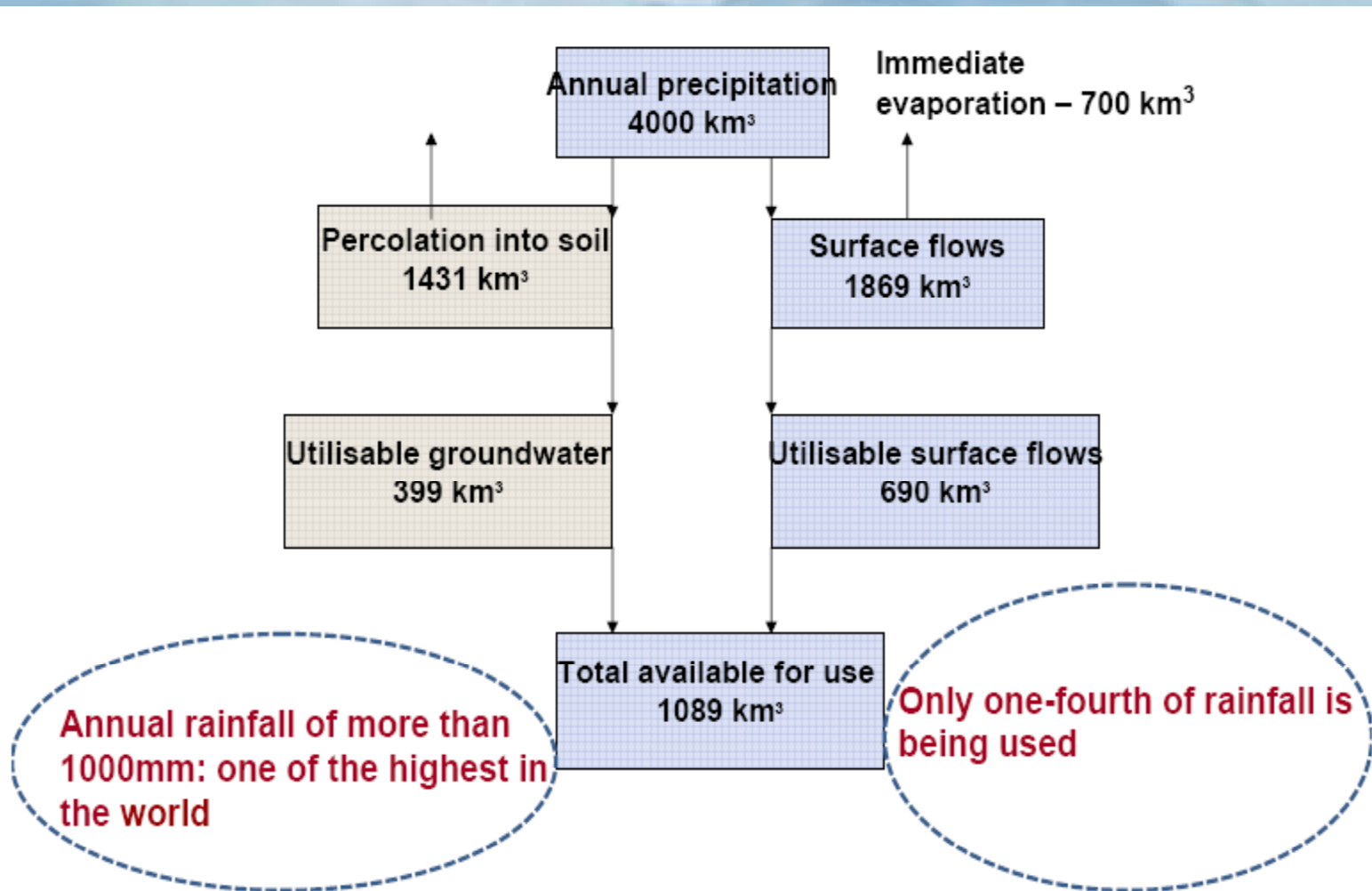
2.7 % Fresh water



Our all water requirement needs are fulfilled by just
0.50 % + 0.20% of water part



WATER POSITION IN INDIA





RAJASTHAN- WATER SCENARIO



- Always been a water deficit area.
- More than 10.4 % of the country's geographical area.
- 2/3 of the area is than desert which aggravates the water crisis.
- Has only 1.16% of the total surface water available in the country.
- Ground water is also depleting @ 125%
- Out of 237 blocks in the state, only 32 are in the safe category regarding water availability
- Average annual rainfall is 531 mm.
- Per capita water availability is 780 cum, minimum requirement is 1000 cum.



ROLE OF JAIPUR DEVELOPMENT AUTHORITY



- Jaipur Development Authority has the objective of providing planned development and required infrastructure in Jaipur.
- Looking to the depleting water table and foreseeing the future scenario, JDA took up necessary steps towards “Rain water Harvesting” & “Water treatment & recycling” in capacity of an urban authority.



JDA INITIATIVES IN WATER HARVESTING



- Provisions made in building bylaws for all plot sizes measuring 300 Sqm or more to have rain water harvesting structures (RWHS) in their plot.
- JDA constructed RWH structures in all its building viz office buildings, residential buildings, community centers etc - 52 such structures were constructed to set an example.
- JDA initiated and called meetings and seminars with concerned Govt. departments, NGO, Private Institutes, Builders, Colonizers etc related to city development to bring awareness and enforce the bylaws.



JDA INITIATIVES IN WATER HARVESTING



- To facilitate common people to construct RWHS in their houses, using latest technology, JDA registered a panel of 28 'Jaldoots' (Technical Consultants whose list was widely publicized and is on website www.jaipurjda.org) These consultants were provided drawings, designs and estimates of these RWHS for different sizes of plots. These consultants counsel and undertake construction of RWH structures.
- JDA took up construction of RWH structures to tap the flood water flowing on roads. 154 structures have been constructed on road sides, in parks, parking areas etc.



JDA ACHIEVEMENTS IN WATER HARVESTING

Years	Roof Top RWH Structure (in nos.)	Storm Water Structures (in nos.)	Qty. of recharge water (in lacs liters per day)	Amount Spent (Rs. In lacs)
2010-11	52	31	50.00	210.00
2011-12	-	61	31.00	199.92
2012-13	-	54 (WIP)	-	(W.I.P) 121.00



JDA efforts in water treatment & recycling



A. Major sewage treatment plants (STPs)

1. STP at Gajadharpara (Kalwar road) - 30 MLD
2. STP at Ralawata (Goner) - 30 MLD

B. Mini STPs

1. STP at Jawahar circle - 1MLD
2. STP at Ram niwas bagh - 1MLD

Each 1 MLD STP is saving water that can serve 20000 souls everyday.

C. STPs in pipeline

1. STP at Kartarpura - 2 MLD



STRATEGIES AHEAD



- To create required awareness through all possible ways, among all concerned.
- To enact stringent rules on Chennai lines and implementation thereof.
- To take up community water harvesting structures in residential colonies where individual WHSs are difficult at JDA cost.
- To make more number of mini STPs and recycle treated water for all horticulture & arboriculture in Jaipur.
- To ban water consuming sanitary fixtures and introduce/enlist water saving ones.



STRATEGIES AHEAD



- To frame policy for water supply in coming up 'High rise construction'
- To identify 'High rise zone' and develop water infrastructure accordingly with PHED
- To frame policy for uncovered colonies
- To frame policy for recycling of grey water in industrial, institutional, office zones



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