WELCOME

RAJSTHAN

OVERVIEW OF DRINKING WATER SITUATION

BY

MEMBERS OF

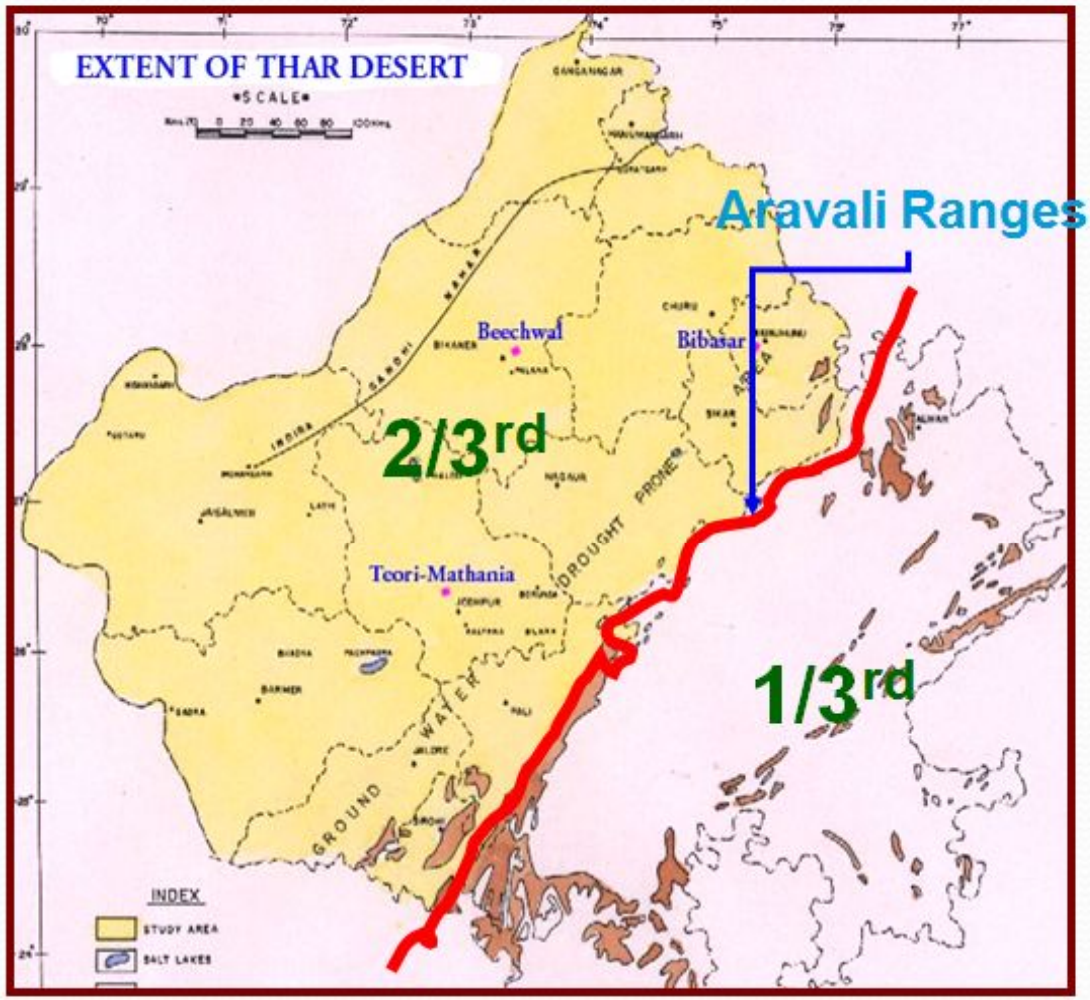
PUBLIC HEALTH ENGEERING DEPARTMENT

RAJASTHAN

The Unkind Nature & Handicaps

2/3rd part of the state is desert- (this part is bigger than all states except UP, MP, AP & Maharashtra)

- Recurring Droughts
- Large Tribal Population
- Wide Seasonal Variation in Temperature
  (more than 50° to below 0 °)



Scanty & Erratic Rainfall

- Jaisalmer :138 mm
- Cherapunji :11000 mm

Average Annual Precipitation : 531 mm
Western part : 318 mm
Eastern Part : 688 mm

Water sector scenario

Area in desert	66%
Total no. of basins	13
Basins with surplus water during rainy season	3
No perennial river except Chambal	
Total no. of blocks	238
Saline blocks	31
Over exploited blocks	166
Critical	25

Magnitude of the Problem

Water transportation is being done in 32 Towns and is expected to increase up to 150 next year.
30% of peripheral population in urban areas uncovered.
Out of 121133 habitations 57269 are still uncovered/partially covered/ quality affected
26729 habitations have water quality problem.
Water has been transported in 10150 habitations this summer and expected to increase up to 20000 next year.

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Supply Interval in Hours	**No of Towns**
120	**1**
90	**5**
72	**18**
48	**55**
daily	**143**
Total	**222**

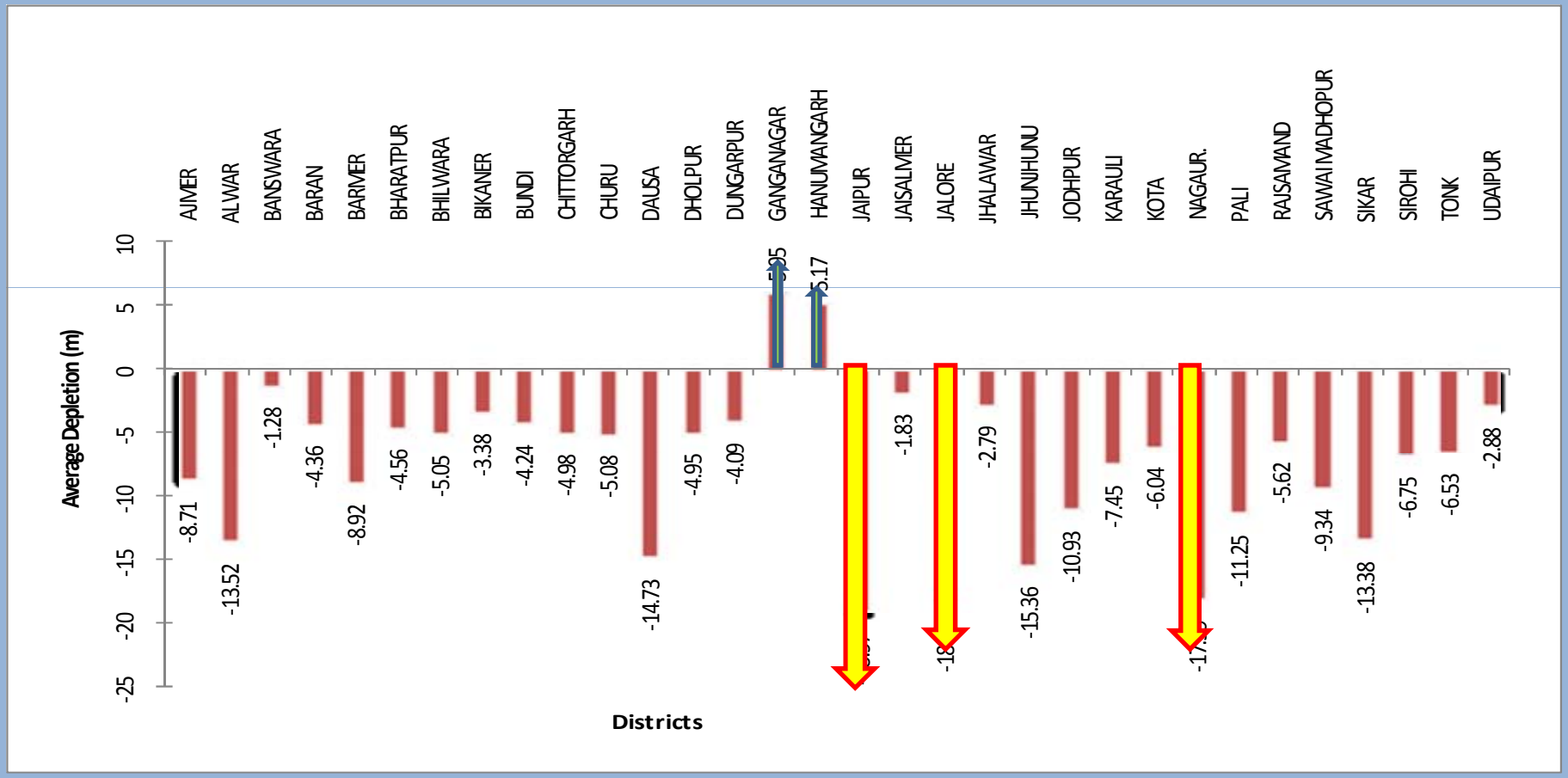
Status of Ground Water

Category	Number of blocks in the assessment year					
	1984	1998	2001	2002	2004	2009
Safe	203	135	54	49	32	31
Semi Critical	10	34	32	21	14	16
Critical	11	26	65	80	50	25
Over exploitation	12	41	85	86	140	166

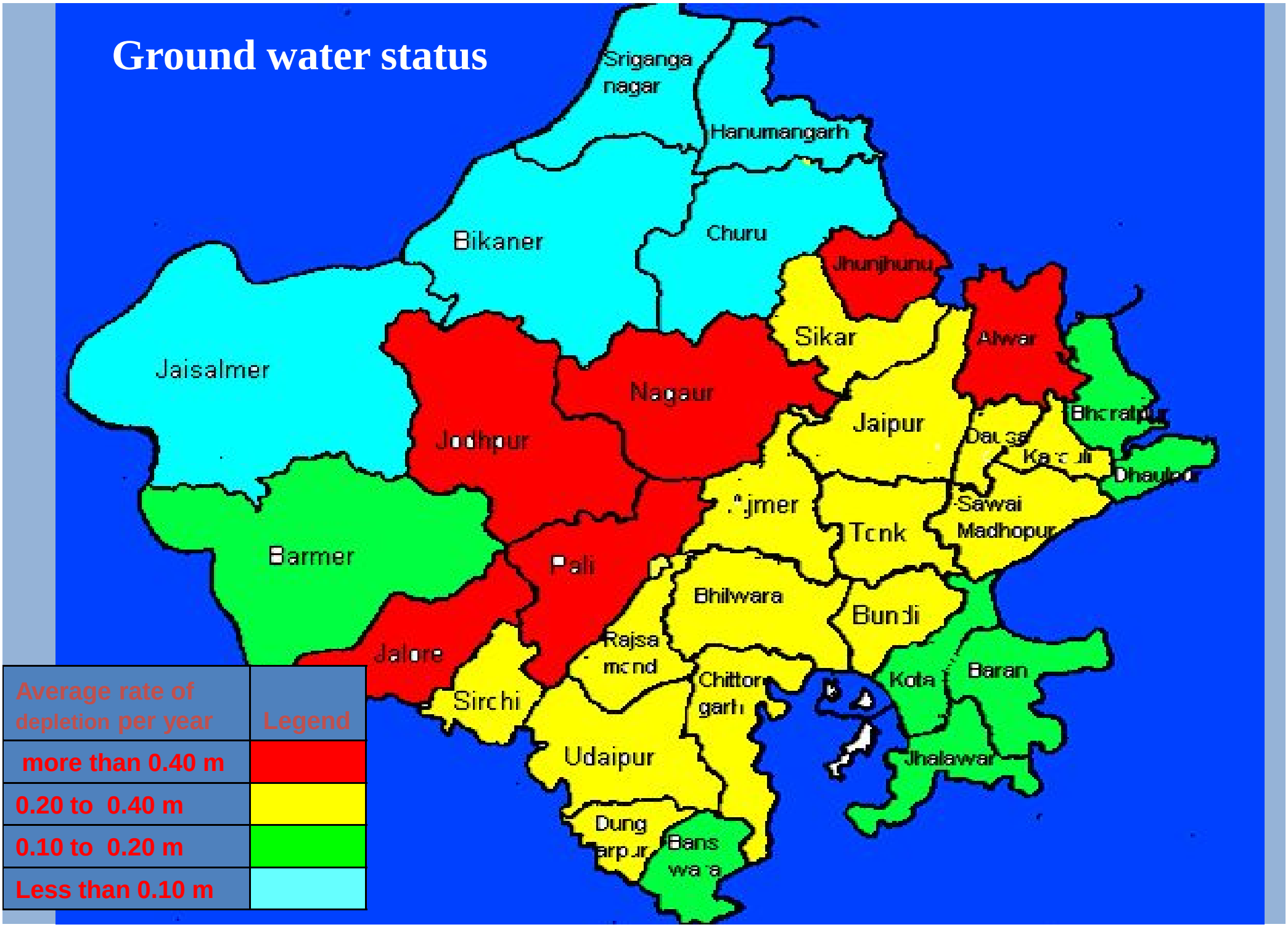
Ground Water Resource Position in State

Year	Stage of Ground water Development (Drawl) (%)	Number of Blocks in Category				
		Safe	Semi Critical	Critical	Over exploited	Total
1984	**35.73**	**203**	**10**	**11**	**12**	**236**
1990	53.89	148	31	13	44	236
1992	47.87	149	19	15	53	236
1995	58.88	127	35	14	60	236
1998	69.10	135	34	26	41	236
2001	104.26	49	21	80	86	236
2004	125.13	32	14	50	140	236
2007	132.09	31	13	39	153	236
2008	137.94	30	8	34	164	236
2009	**134.54**	**31**	**16**	**25**	**166**	**238**
2012	**125**	**34**	**14**	**50**	**140**	**238**

GROUND WATER LEVEL CHANGES IN RAJASTHAN (25 years : 1984-2009)

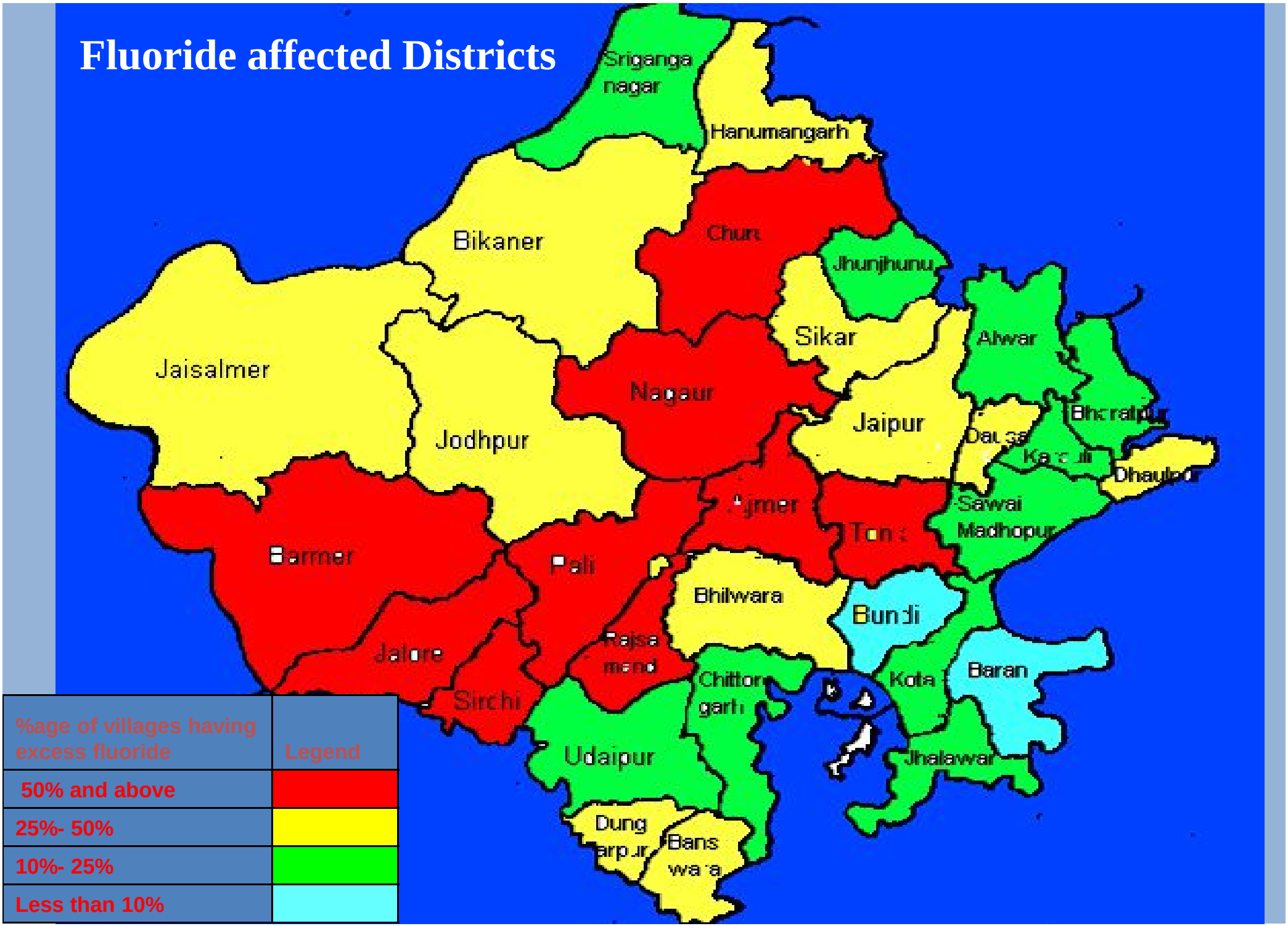


Ground water status



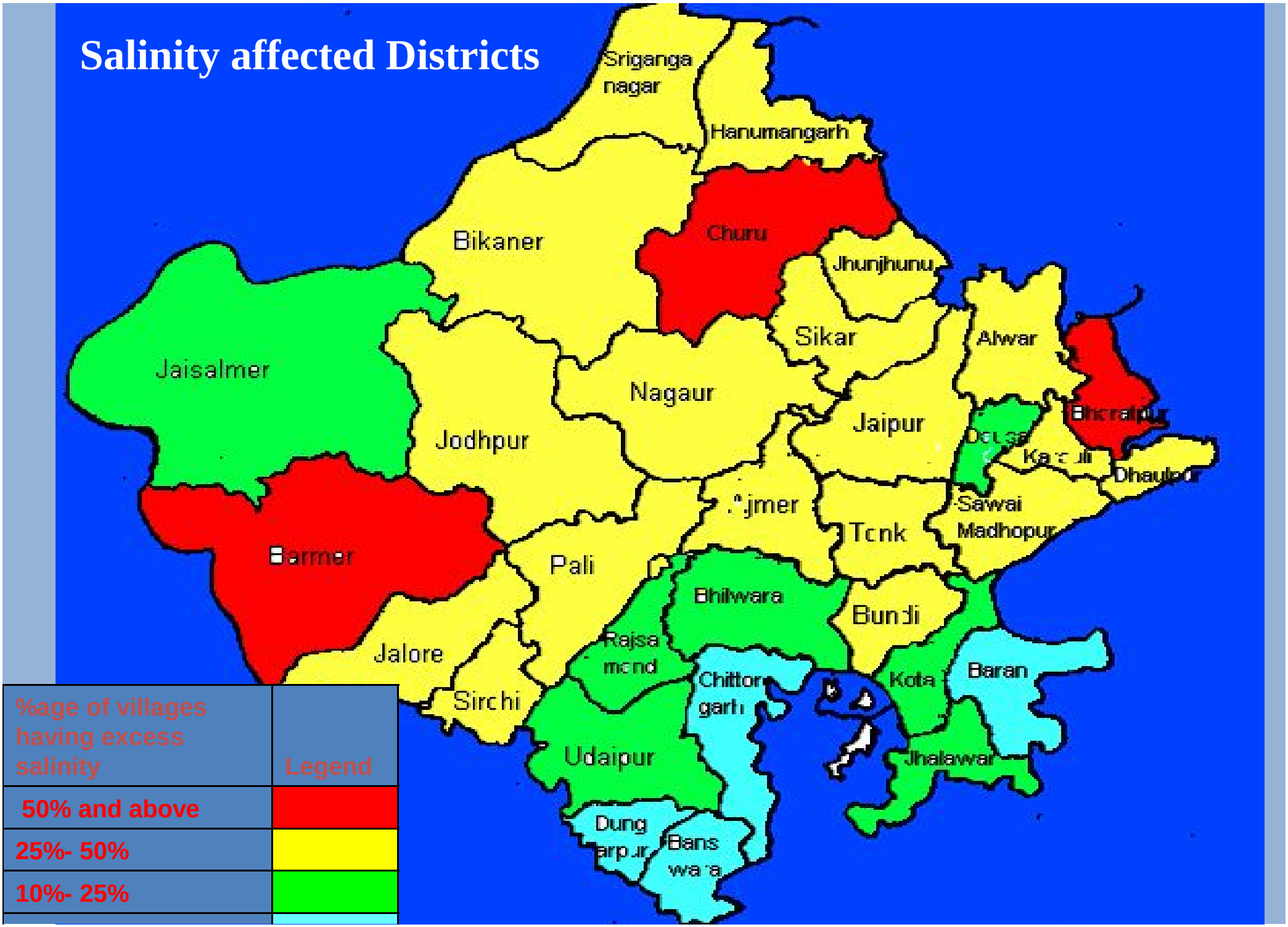
Average rate of depletion per year	Legend
more than 0.40 m	
0.20 to 0.40 m	
0.10 to 0.20 m	
Less than 0.10 m	

Fluoride affected Districts



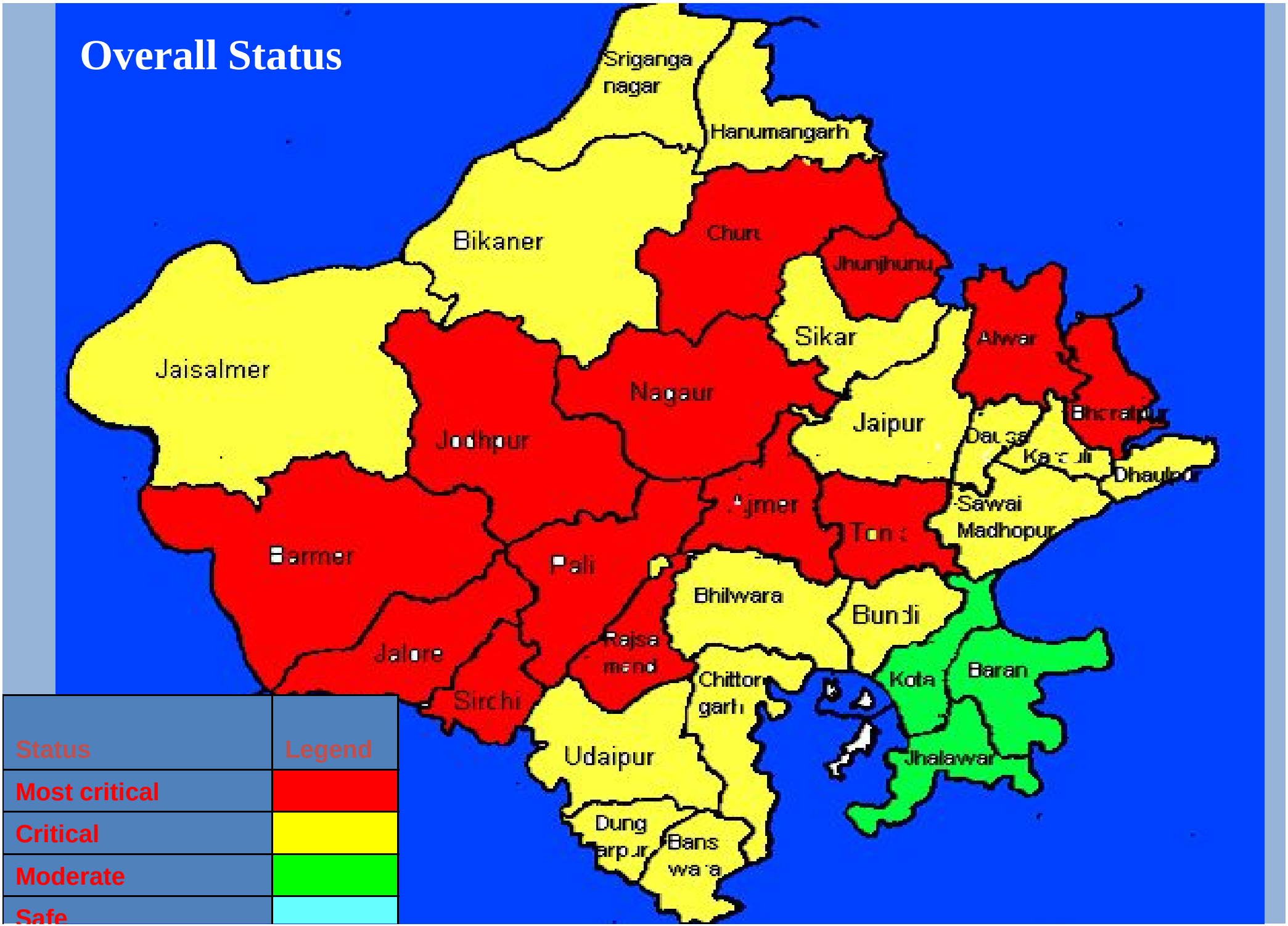
%age of villages having excess fluoride	Legend
50% and above	
25%- 50%	
10%- 25%	
Less than 10%	

Salinity affected Districts



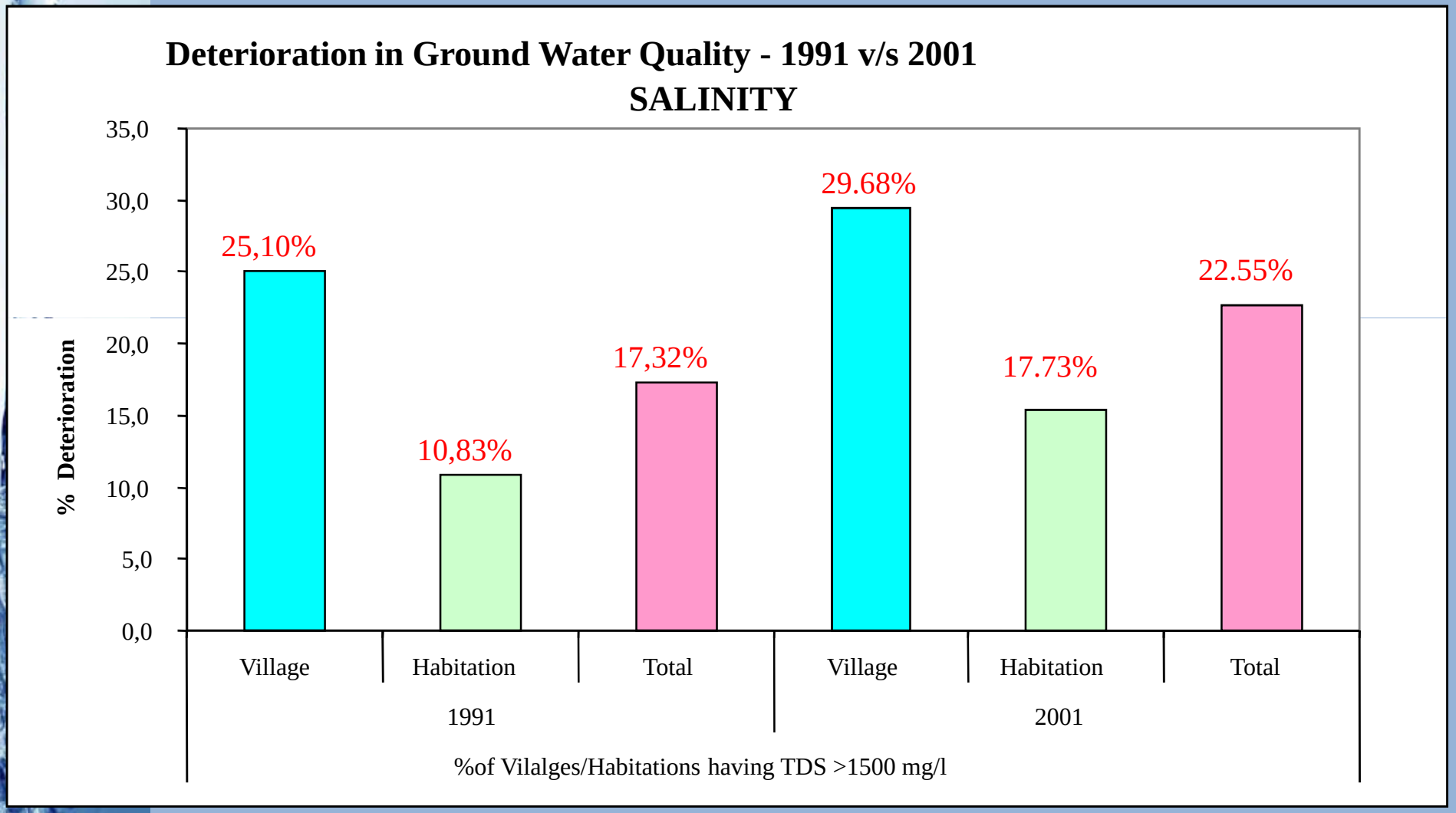
%age of villages having excess salinity	Legend
50% and above	
25%- 50%	
10%- 25%	

Overall Status

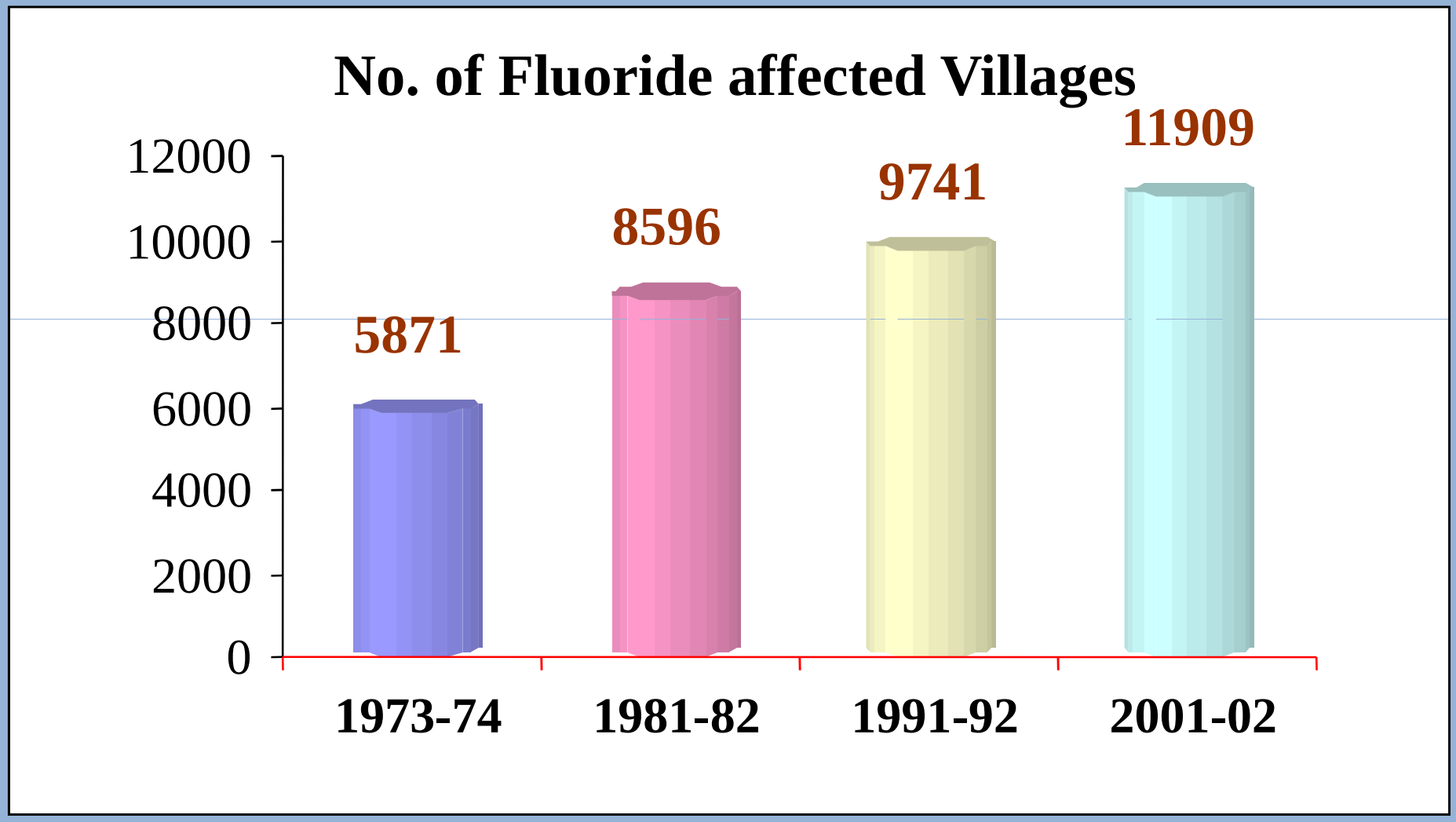


Status	Legend
Most critical	
Critical	
Moderate	
Safe	

No. of Salinity affected Villages/Habitations increased by 5 % in the state



Fluoride is gradually increasing in ground water




Rainwater
Harvesting

TOI June 3, 2003

Reuters

eople gather to draw water from a well in Natwarghad village in Gujarat on Sunday. Dams, wells and ponds have gone dry cross the western and northern parts of the state as temperatures soared above 44 degrees Celsius.

Why?

Economics

- Reduces water bills
- Reduced water demand - water supply utility saves money on treatment and pumping
- Reduces cost of infrastructure necessary for water supply

Environment

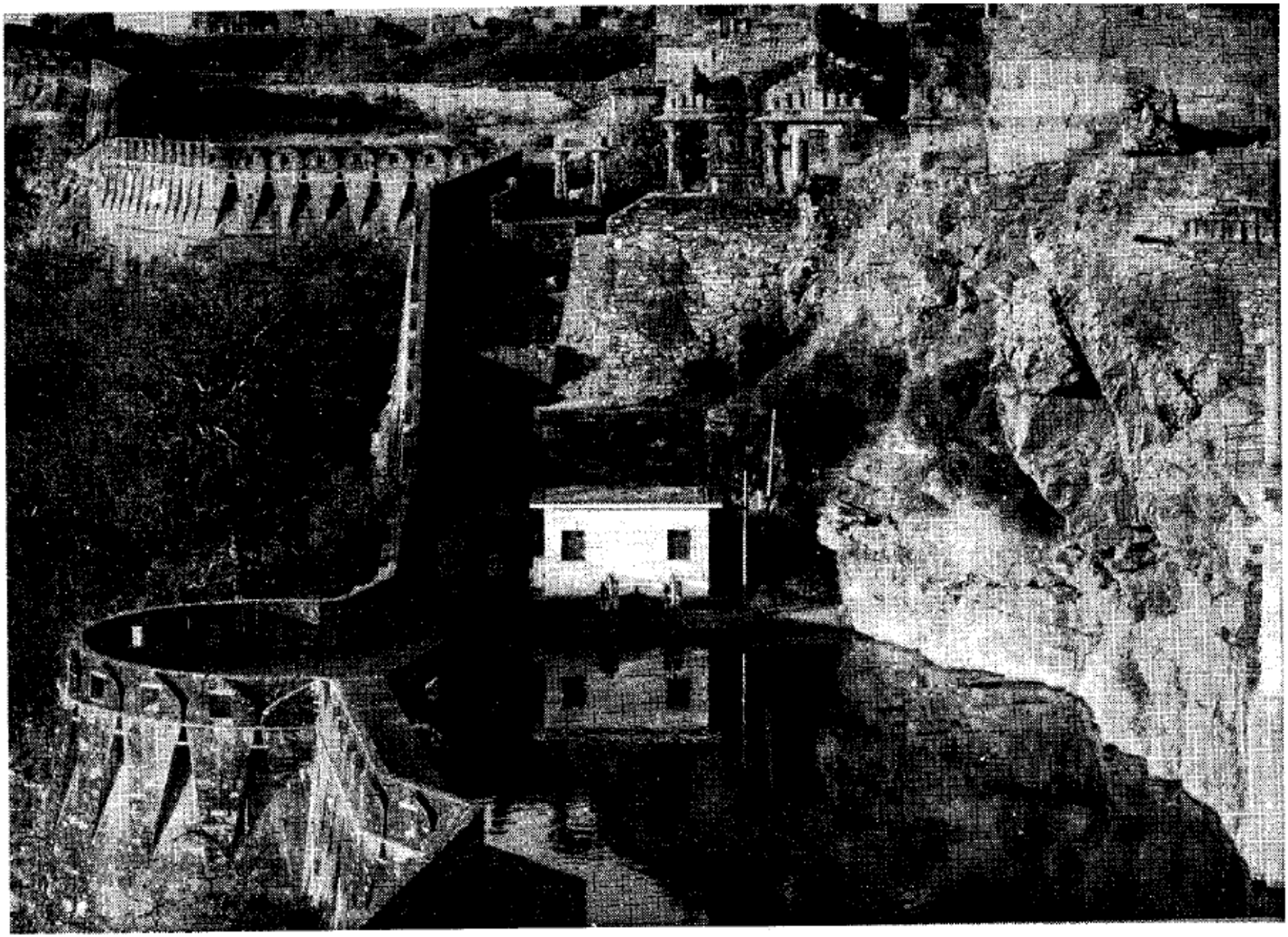
- Energy saved – no pumping of water to our homes
- If water is hard, adding soft rainwater improves water quality
- Improves groundwater situation
- Reduces demand for water at city / village level

Other

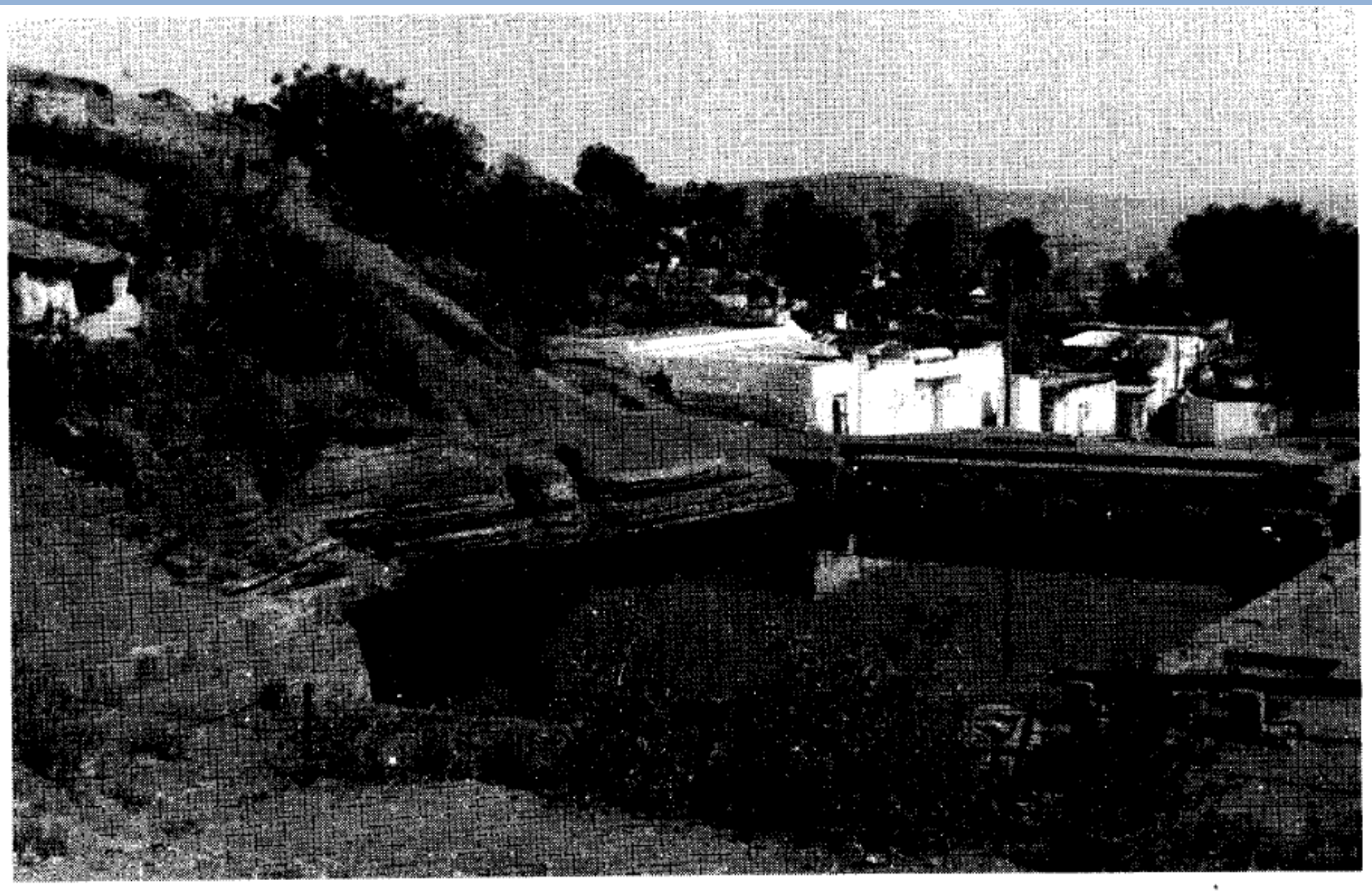
- Simple, cost-effective, easy to construct and maintain
- Viable in urban and rural areas, slums, low income housing, apartments..
- Can offset the need for multipurpose river projects

Not new to India

Rainwater storage reservoir at Dholavira (Rann of Kutch) – Harappan civilization **(2500-1900 BC)**



Spring Water Harvesting in Fort of Chittor



Baori Constructed in the Fort of Raisen

Khadins of Jaisalmer

(harvesting structures for agricultural fields)


Johads of Rajasthan
(provide water for domestic use)

Kunds
Constructed in
Marwar Region

Tankas of Bikaner, Barmer, Phalodi - Rajasthan

Traditional Tanka with Treated Catchment in Churu District

کہا میں نے ذرا پانی پلا دے
کنویں سے بھی یہی آواز آئی

कहा मैने ज़रा पानी पिला दे, कुयें से भी यही आवाज आई।

فہمی بدایونی

Good Luck and Thank you for your kind attention.