

Peri-Urban Water Security: A Case of Hyderabad

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Growth of Hyderabad

- **Hyderabad**- Located in the southern part of India -**capital** of the state of Andhra Pradesh.
- The city started growing since the inauguration of the **HITEC city in 1998** following the SAP
- 64 hectares of land acquired by the Government of Andhra Pradesh
- 6th largest Urban Agglomeration in the count



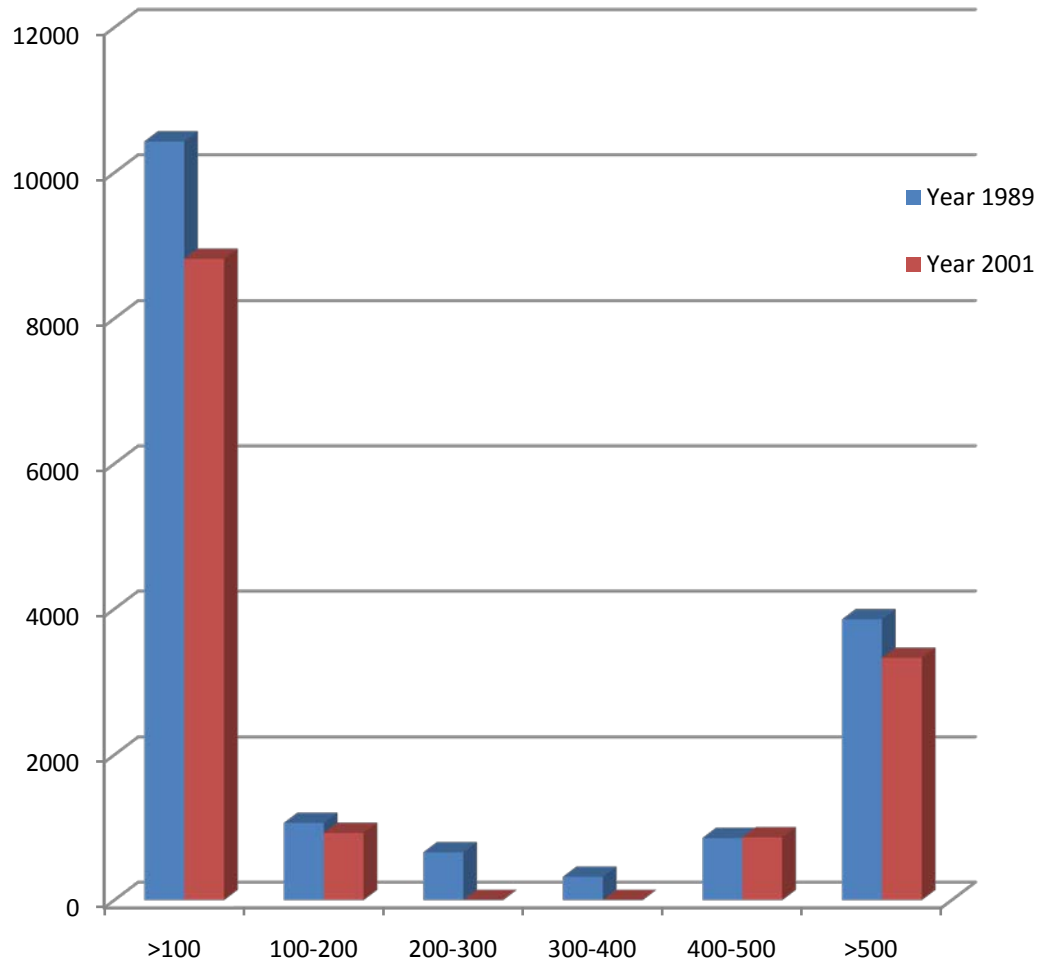
Water Insecurity in Hyderabad

- Population 5.3 mn (2001) to 7.7 mn (2011) – growth rate 48%
- Massive development in real estate-heavy demand for water
- Severely stressed peri-urban zones-sharing a common aquifer with high-end users
- Surface water bodies usurped for development



The Real estate Project (Lanco Hills) towering upto 33 floors in Manikonda, a sought after peri-urban location for real estate growth

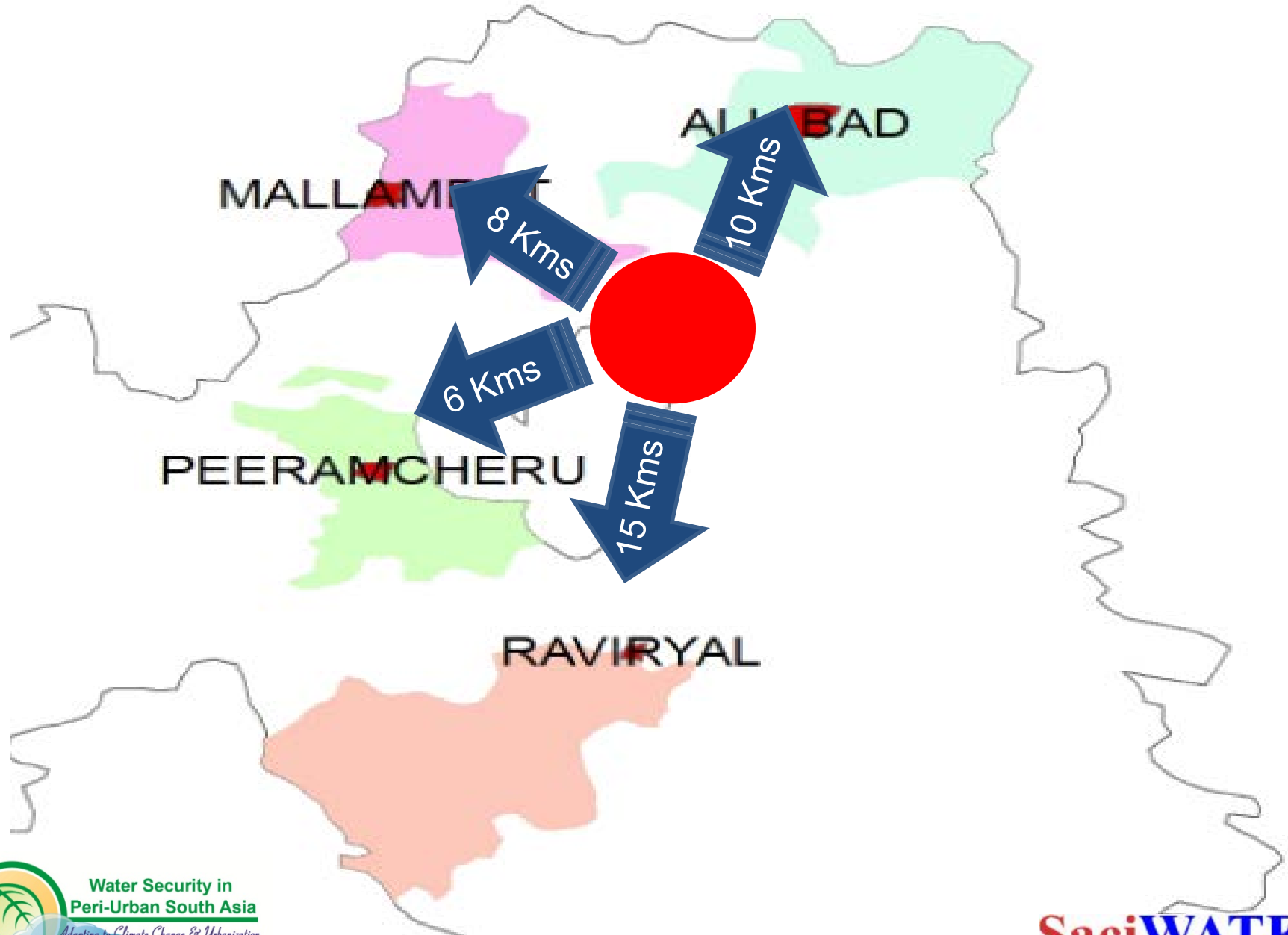
Shrinking Waterscapes in Hyderabad



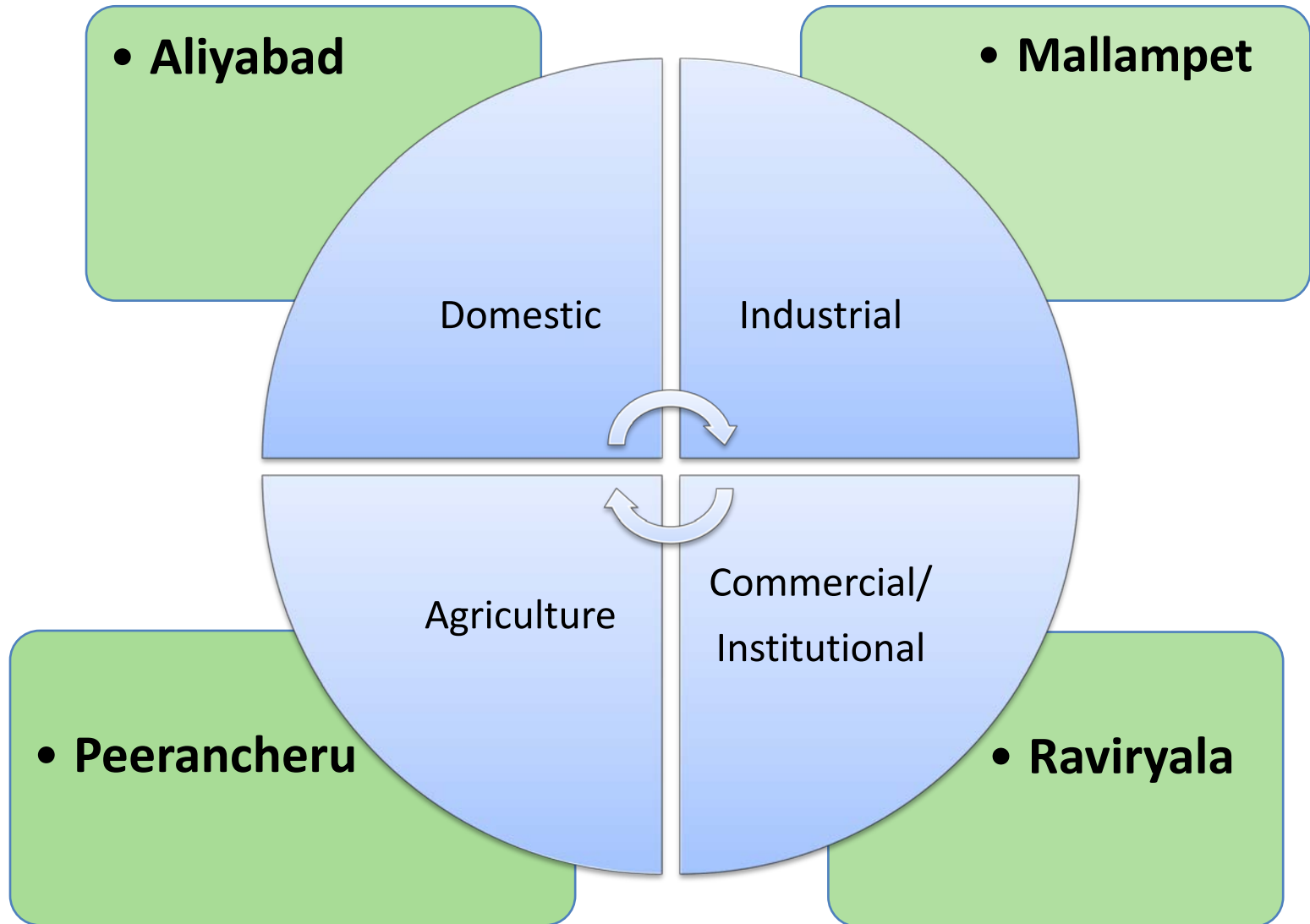
Source: Prasad et al, 2009)

- Cascade of tanks built 400 years ago by Nizam rulers
- About 3500 water bodies/lakes in the HMDA.
- From 1989- 2001, about 3245 ha of water bodies disappeared (constituting 19 lakes) in 50 Sq Km area

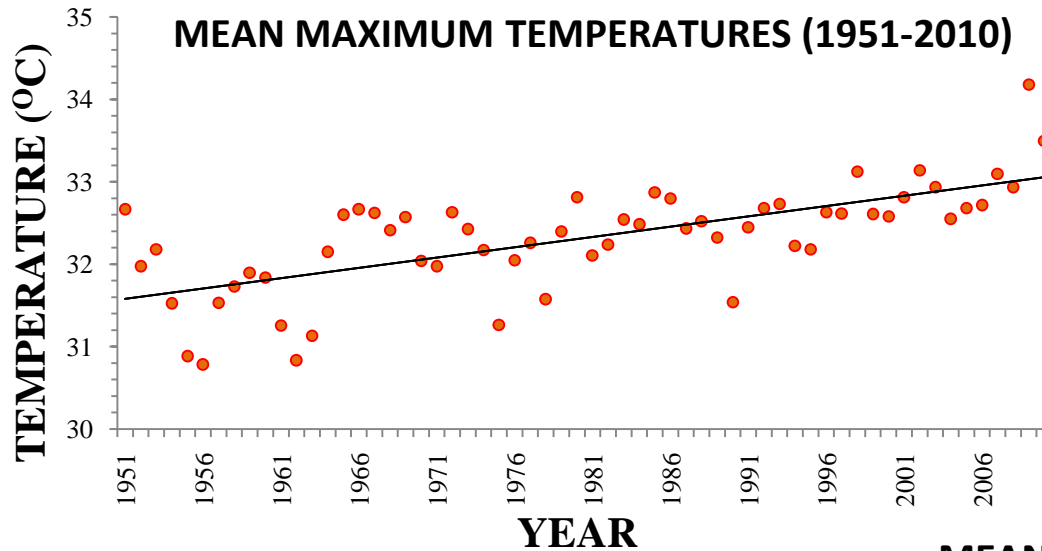
Location of study sites



Water users and uses

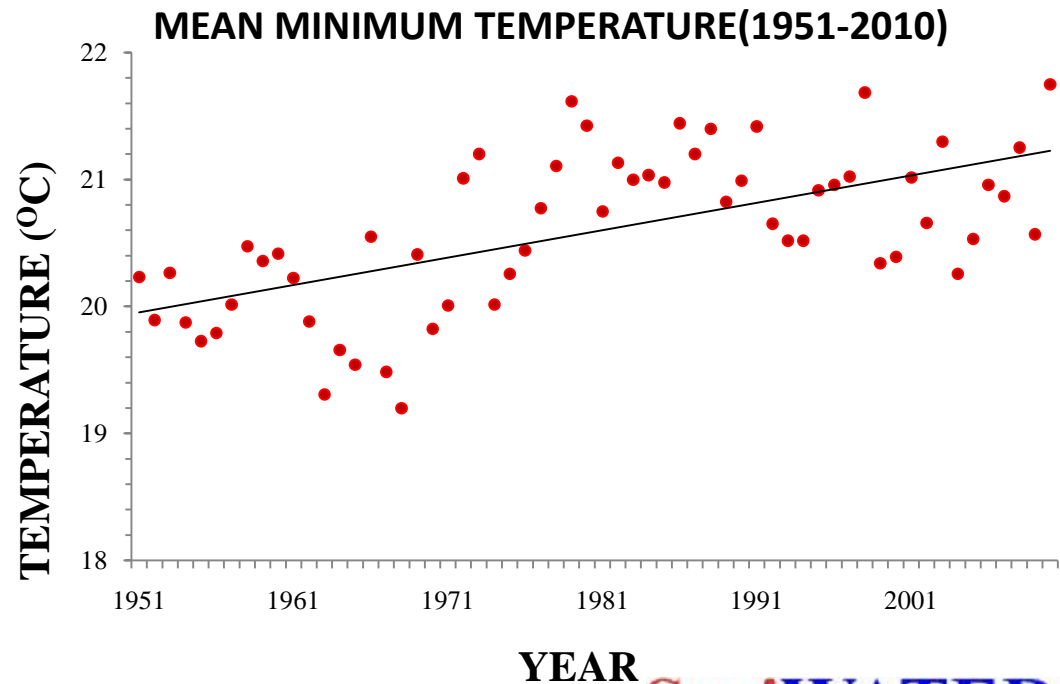


Climate Change: Looking at Key Numbers



In the last six decades, an overall increase of **1.5 °C** in the mean maximum temperatures is recorded

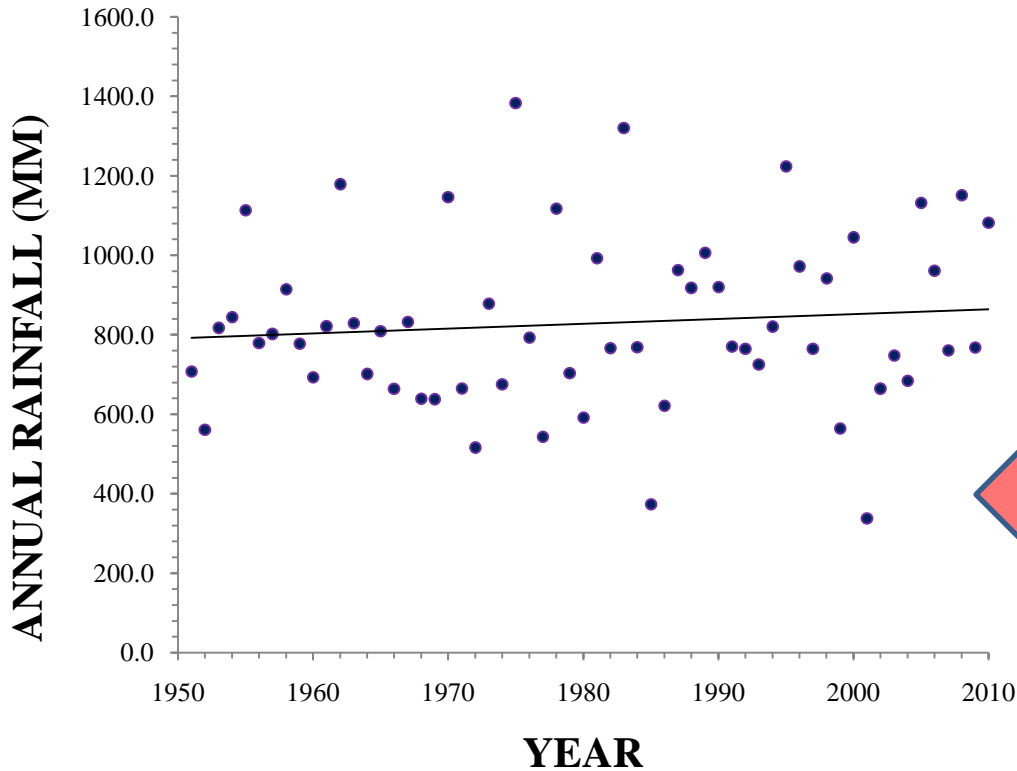
The mean minimum temperatures over the years have been slowly increasing at a rate of **0.022 °C** per year.



YEAR

SaciWATERS

Rainfall Trends 1951-2010



PEOPLE'S PERCEPTION

No heavy rains over the last few years, only slight drizzles

1970- heavy rainfall year

2001- drought conditions were reported by people

We have enough sunshine to wash clothes but not sufficient water to wash them

The cheruvu has not filled up in the last 10 years

Water Insecurity

ALIYABAD



Water level of the Shamirpet lake has reduced-high gw use



Water Users Associations are defunct



Biological contamination of in SC colony/erratic supply –poor infrastructure



MALLAMPET



Industrial Pollution-Bollarum Industrial Area



ORR construction-blocking channels



Water Markets through tankers meeting industries and urban demands

Water Insecurity

PEERANCHERU

Groundwater pollution by local hospital

Households depend solely on bottled water for drinking (largest proportion)

Gated communities receive supply by Water Board



RAVIRYALA

Lowering groundwater levels-drying up of the surface storage

Outer Ring Road –blocked inlets to feed the lake with rainwater- affecting washerfolk/farmers

Insufficient number of water points (SC colony)-erratic water supply

Impact on women

In **Aliyabad, Padmashali** women suffer from joint pains due to flouride contamination.

In **Mallampet**, women(lower economic group) living higher terrain face problems carrying water uphill

In **Raviryala**, women travel longer distances to bring water, since the number of common water stand posts are limited-leading to conflicts

Adaptation/Responses

Dependency on RO plants-Aliyabad, Mallampet and Peerancheru



Manjeera water bought from neighboring urban colonies for selling

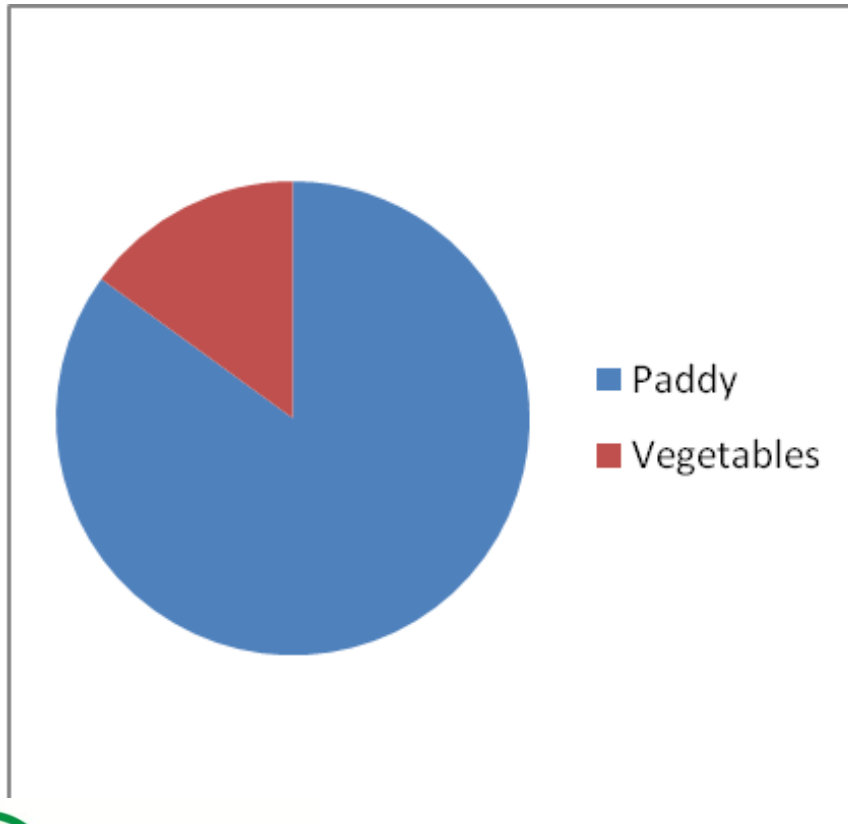


Washerfolk in Raviryala have drilled their own borewells to manage water crisis in the event of the lake drying up

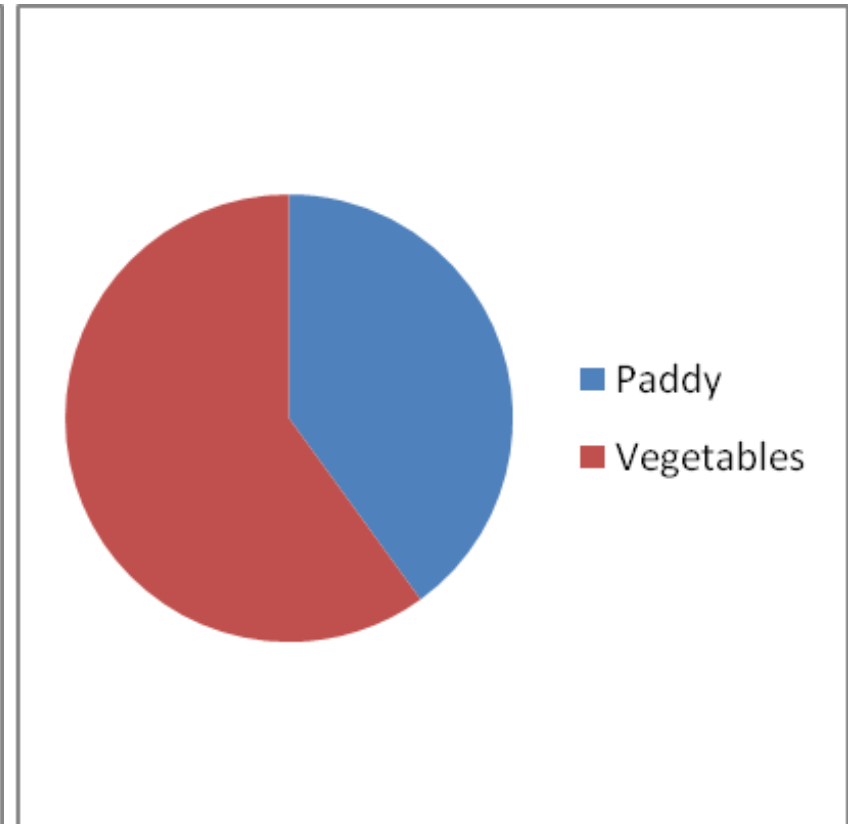
AGRICULTURE

ALIYABAD (LAND ALLOCATION FOR CROPS)

BEFORE 2000

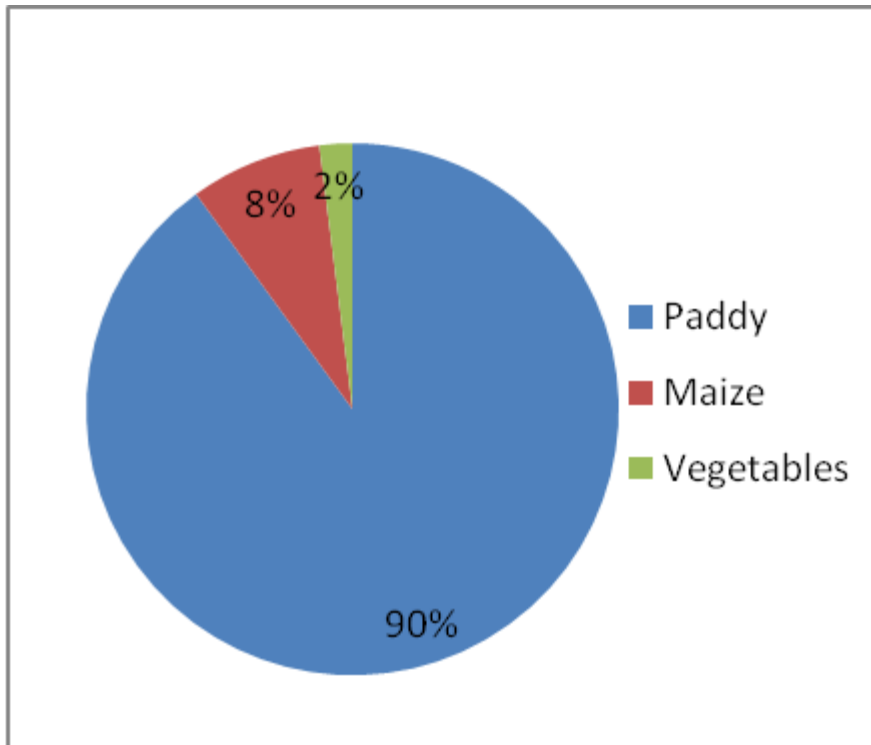


AFTER 2000

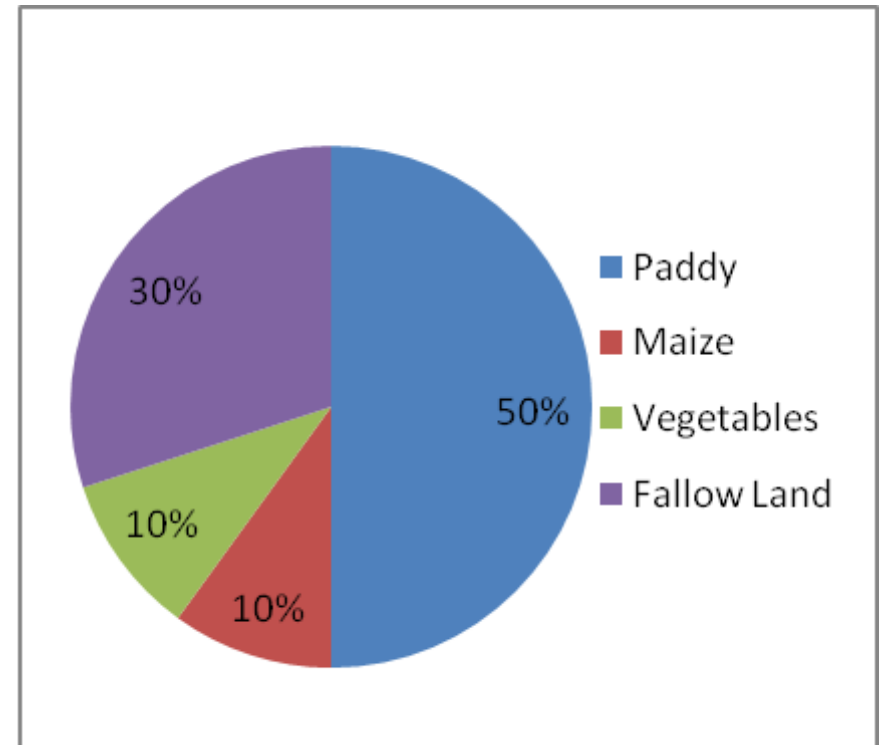


RAVIRYALA (LAND ALLOCATION FOR CROPS)

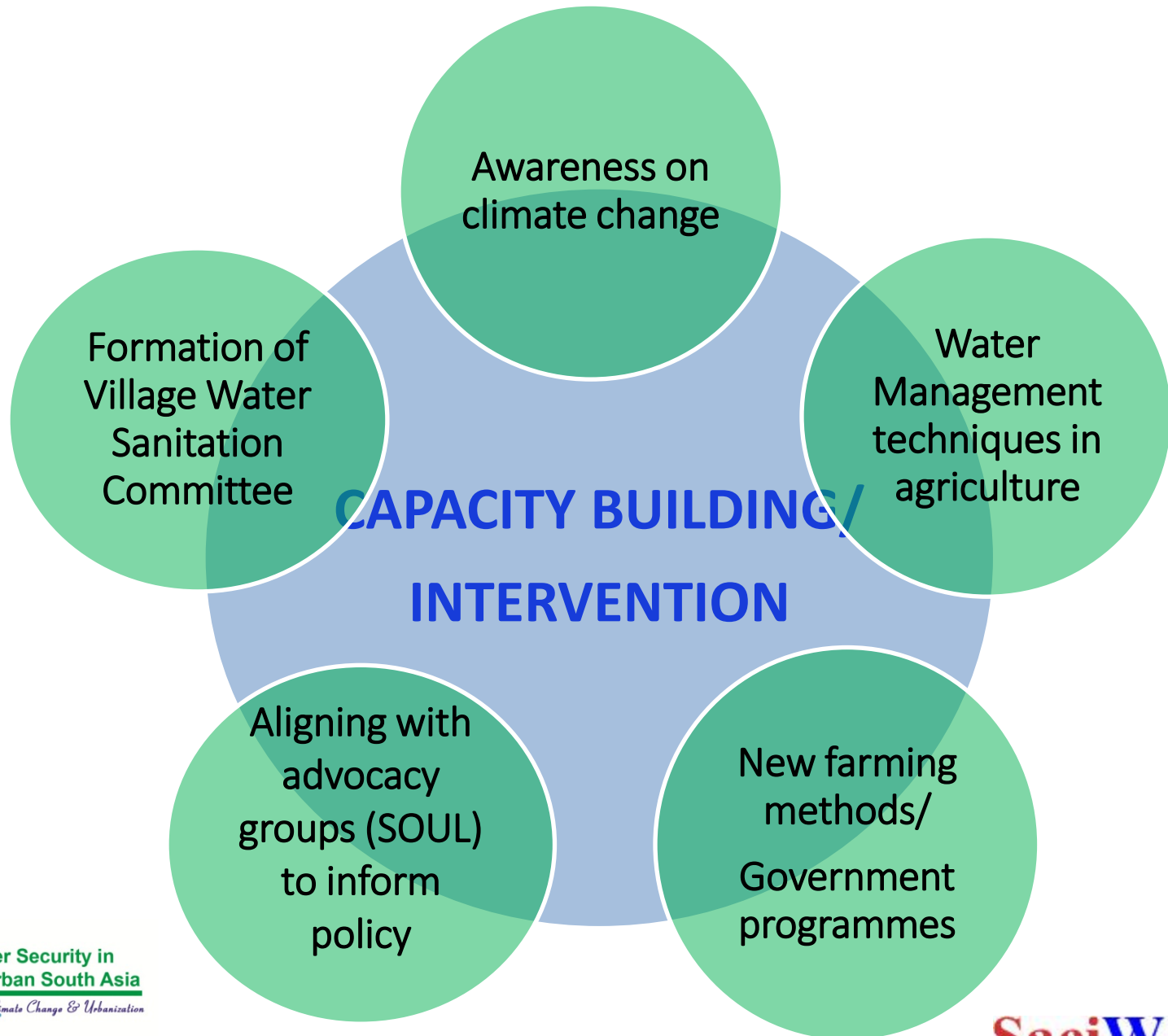
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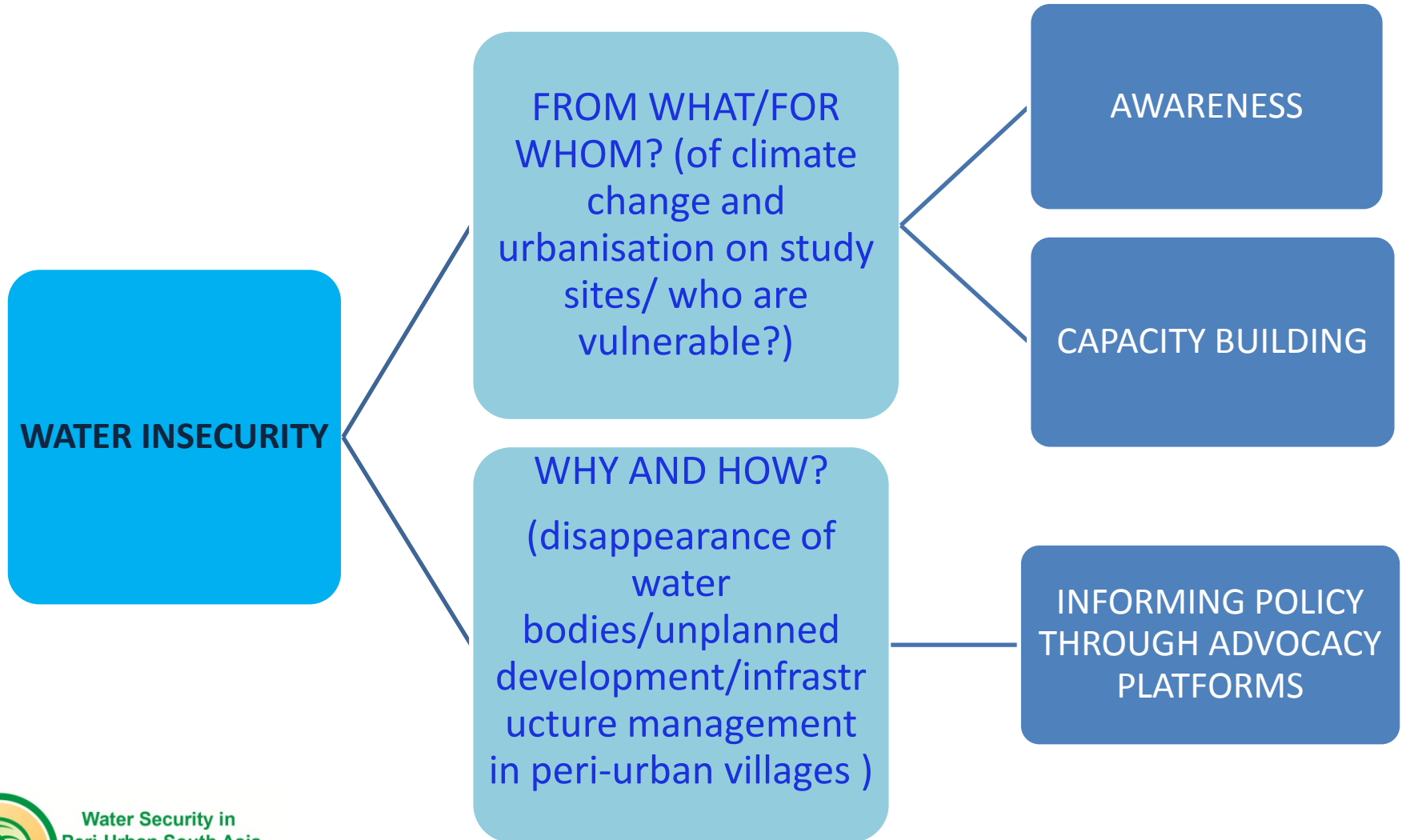
AFTER 2000



Areas of Capacity Building/Intervention



Summing Up



THANK YOU