

II. International Water Conference in Berlin
12 – 14th September, 2007.

PRESENTATION ON DRINKING WATER SUPPLY IN URBAN AREAS

By

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Preamble

Water Supply is a State Subject as per Article 246 of the Constitution. (Item 17 of the List-II – State List under 7th Schedule)

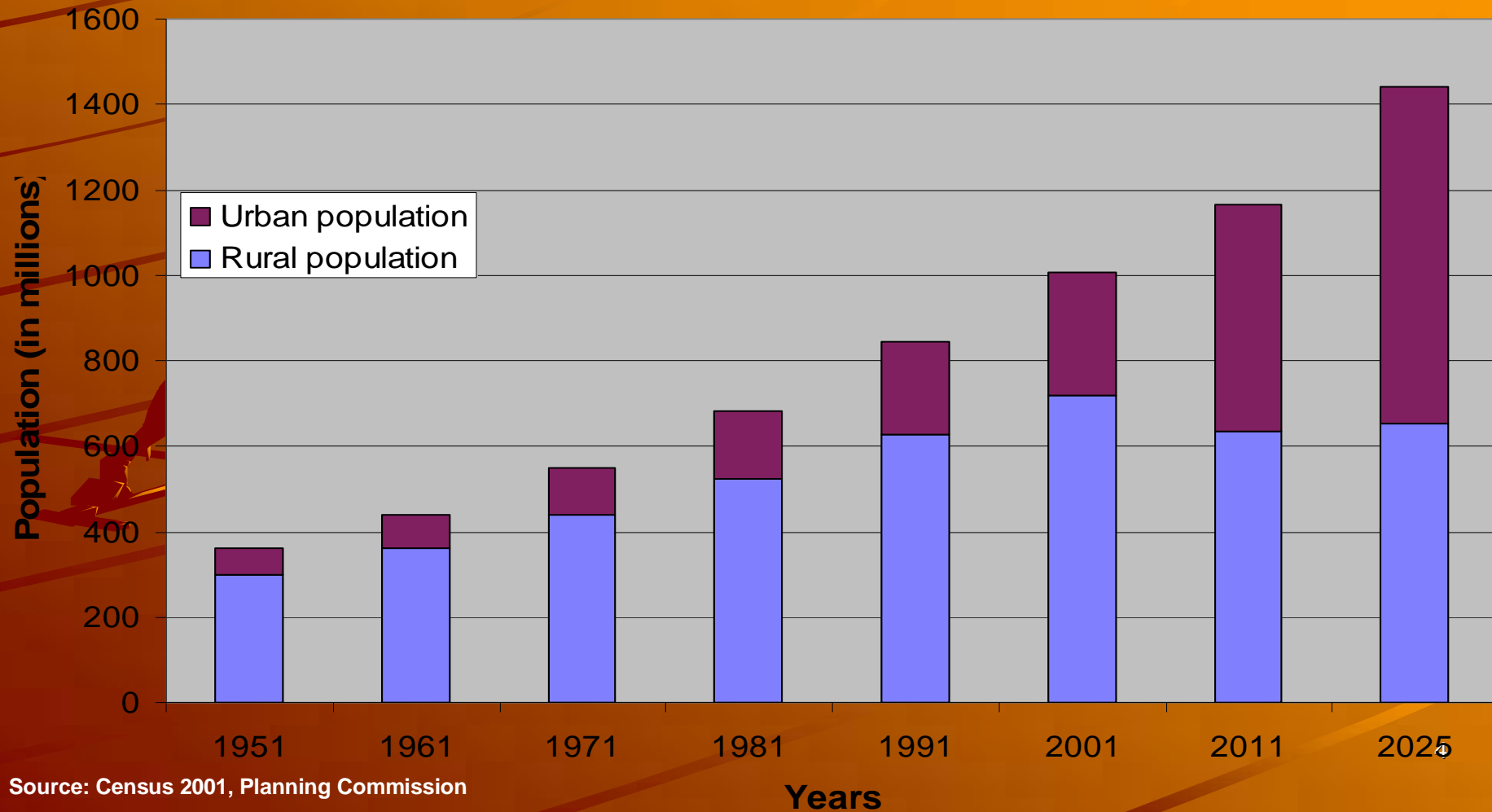
- States/Urban Local Bodies (ULBs) are responsible for planning, designing, implementation and operation & maintenance of water services
- Govt. of India formulates policy guidelines, provides financial and technical assistance and facilitates mobilization of external assistance

Current status of urban water supply



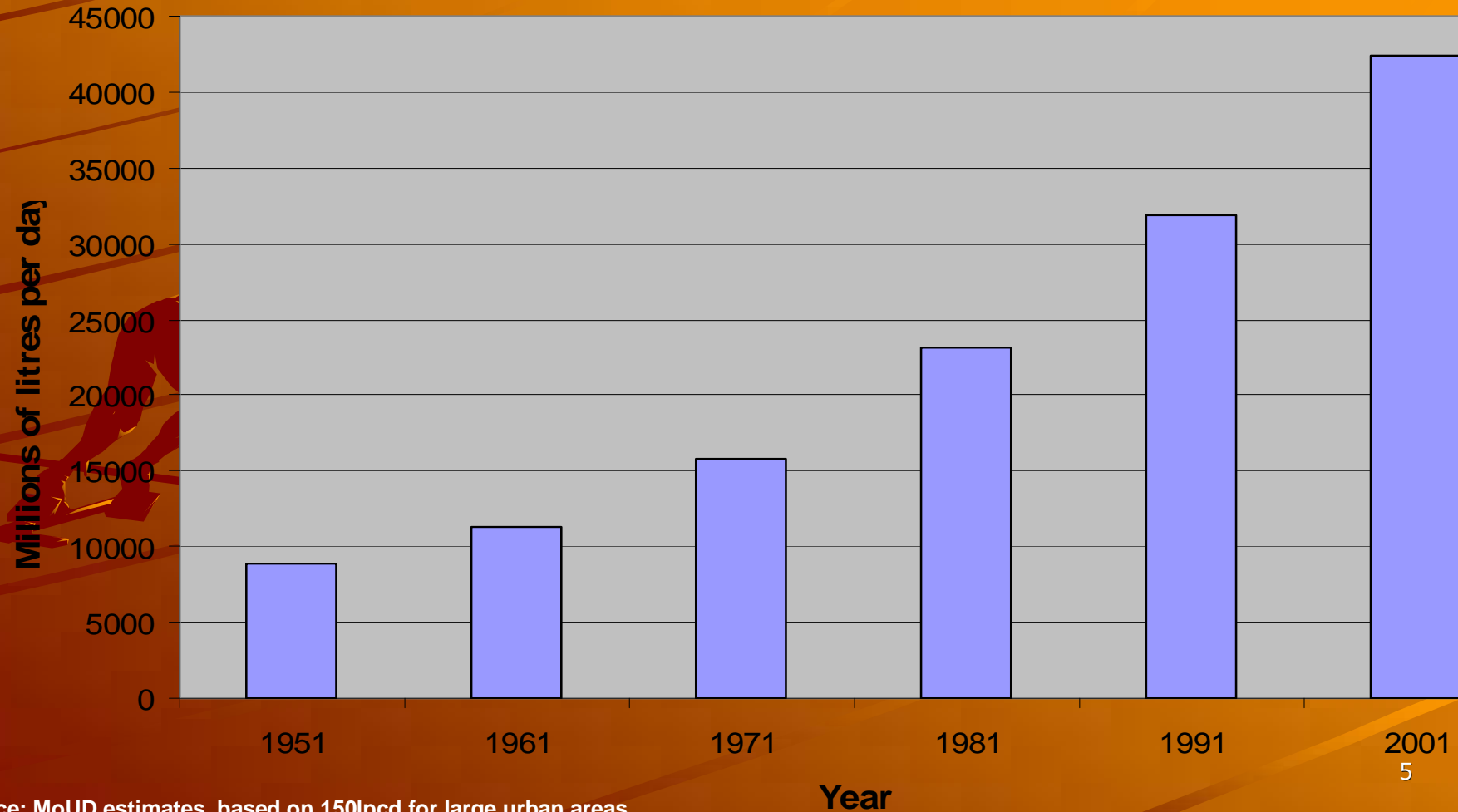
Massive growth in urban population as India enters its "urban transition"

Urban population growth



This population growth has translated into a rapid rise in the demand for water in urban areas

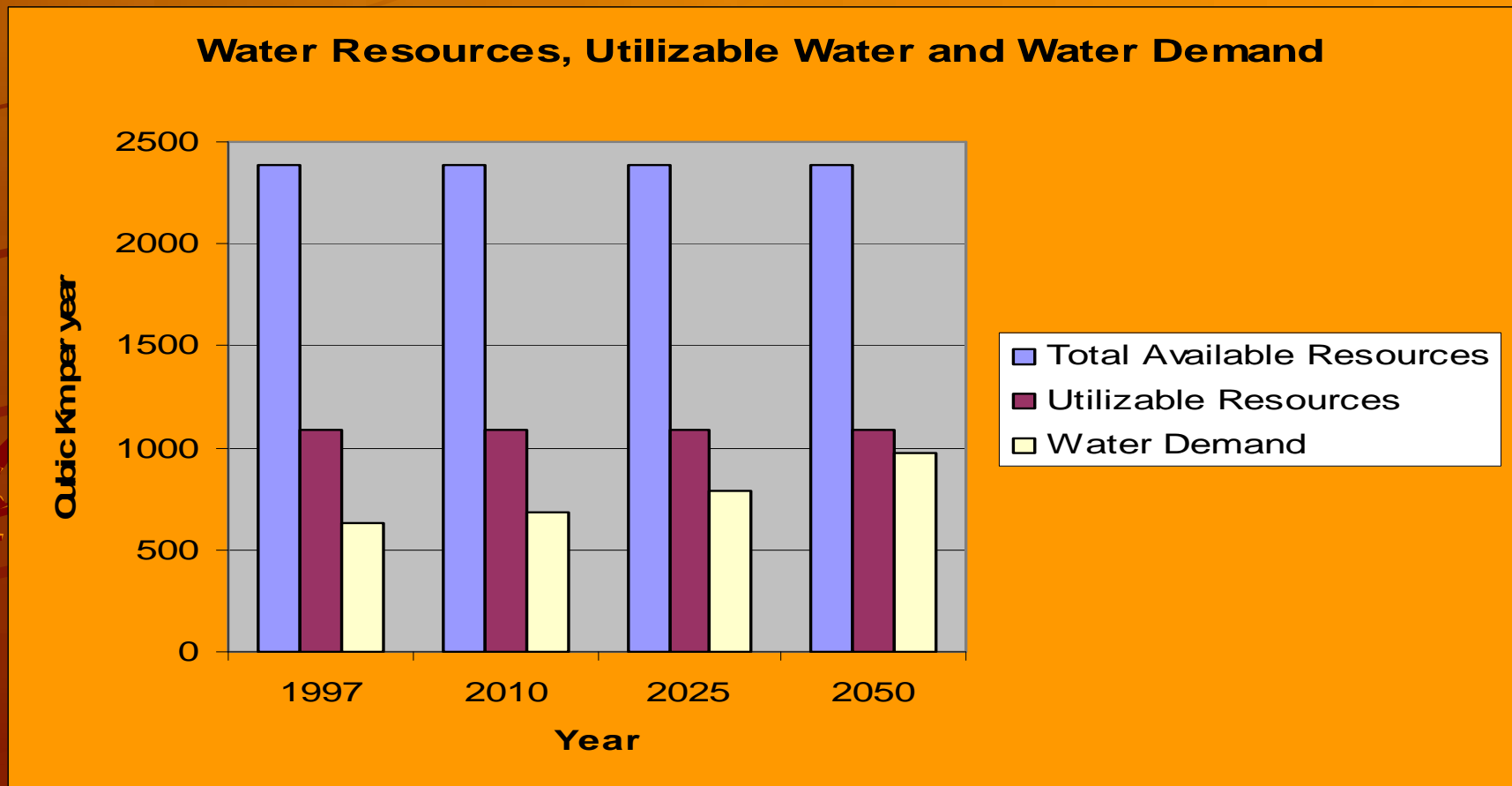
Total urban demand for water



Source: MoUD estimates, based on 150lpcd for large urban areas and 135 lpcd for remaining urban areas

India has enough utilizable water resources to meet this demand, but much of this is not effectively available

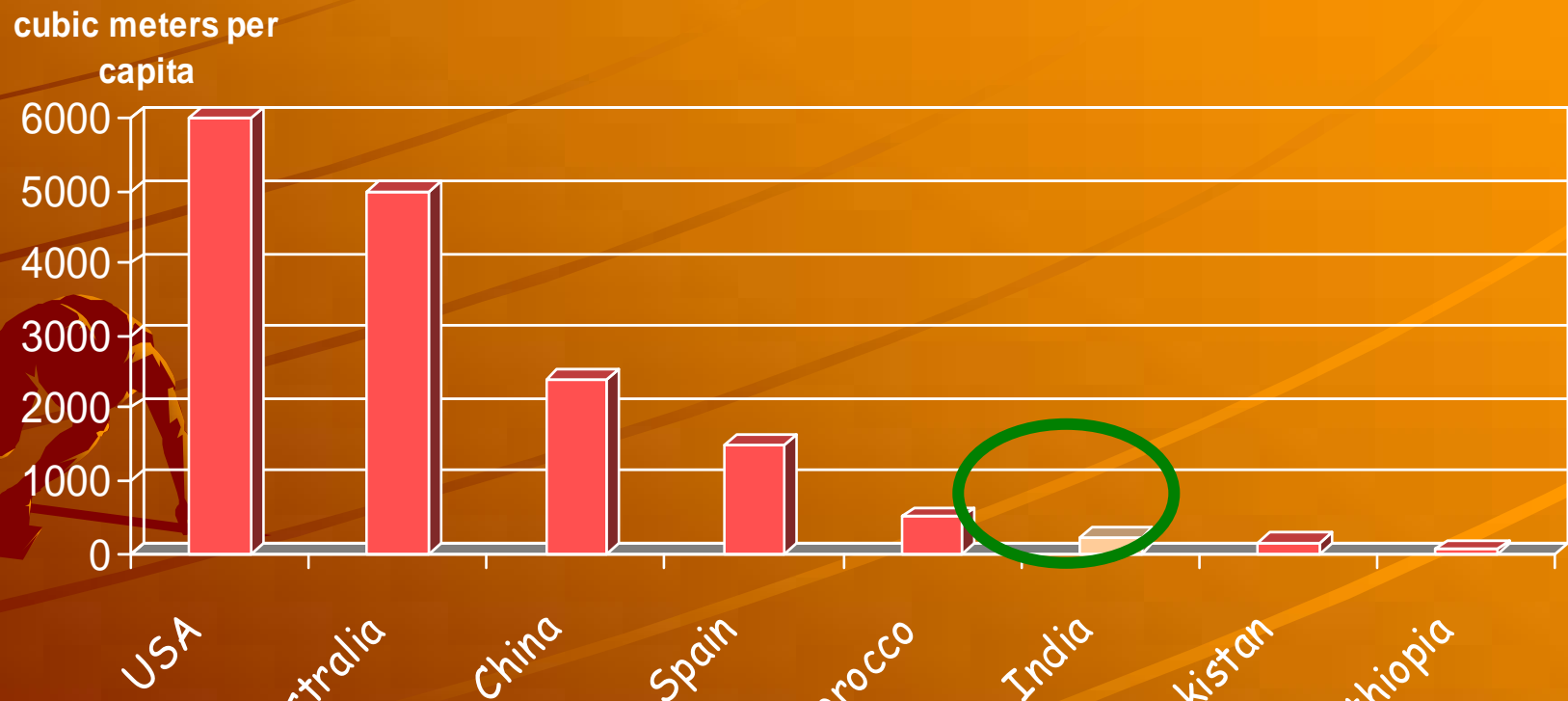
While total utilizable water covers growing demand, additional storage capacity is required to turn this into an effectively available source



Source: National Commission on Water, 1999

... as there is a lack of storage capacity ...

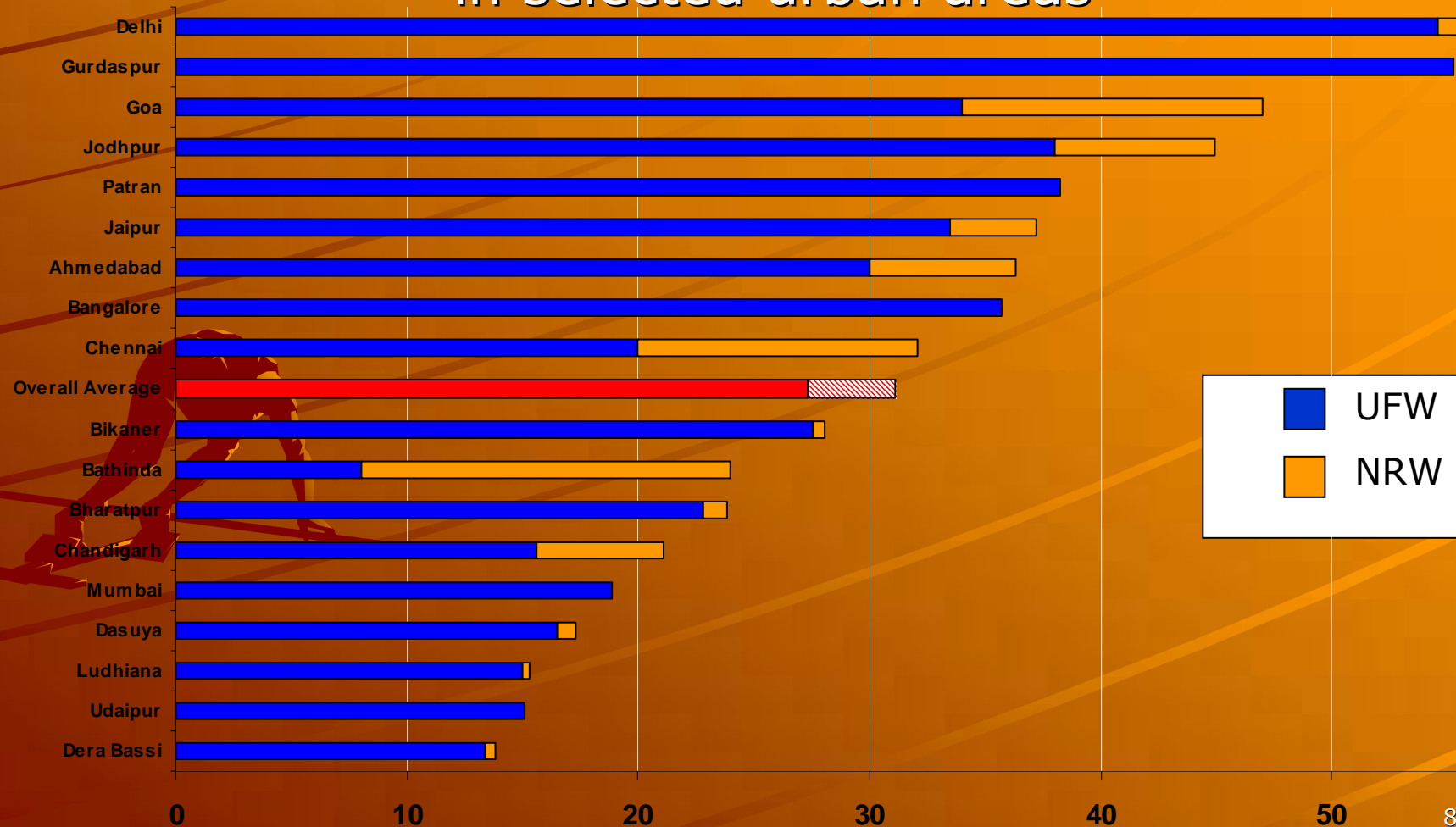
Storage per capita in different semi-arid countries



- US and Australia have $\approx 5000 \text{ m}^3/\text{capita}$;
- India has 207 cubic meters per capita

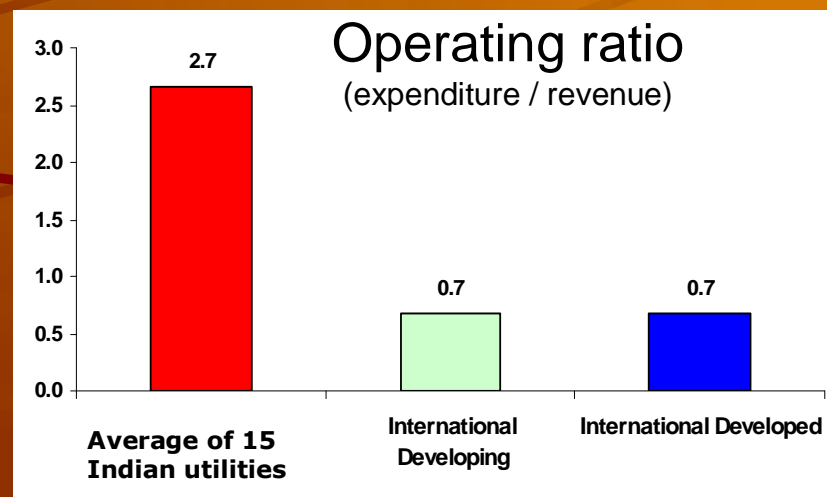
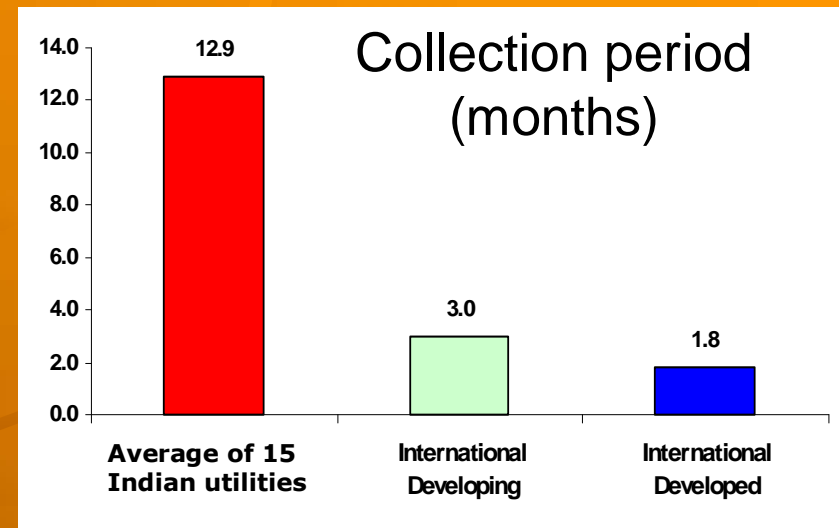
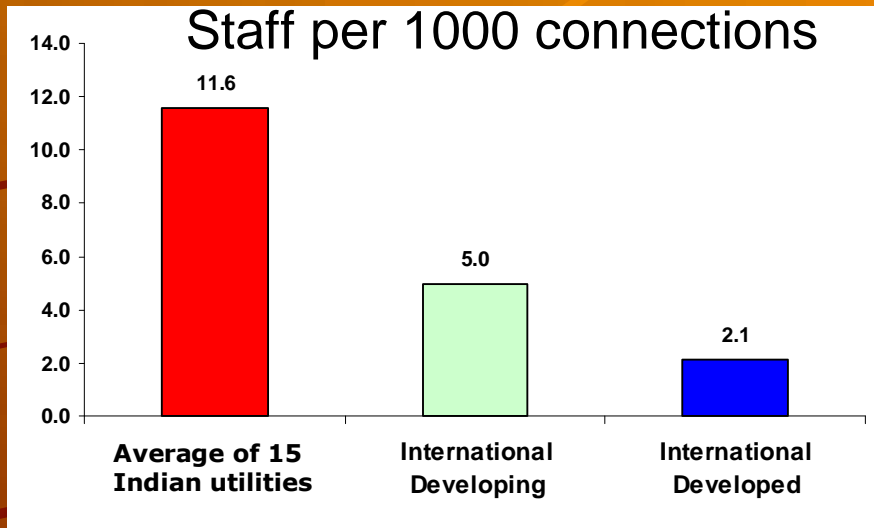
However, urban water supply systems also typically waste large amounts of water

% Unaccounted for water and Non-Revenue Water in selected urban areas



Source: MoUD/WSP benchmarking study.
Figures verified by relevant utilities

... and do not compare well with other developing countries



... and provide inequitable access to services

Households with access to water supply

- Access to safe drinking water sources 82%
- Access to tap water 65%
- Access to tap water within premises 42%

Unreliable, inadequate, unknown quality of water

Even in metropolitan areas, large number of people still do not have access to water networks

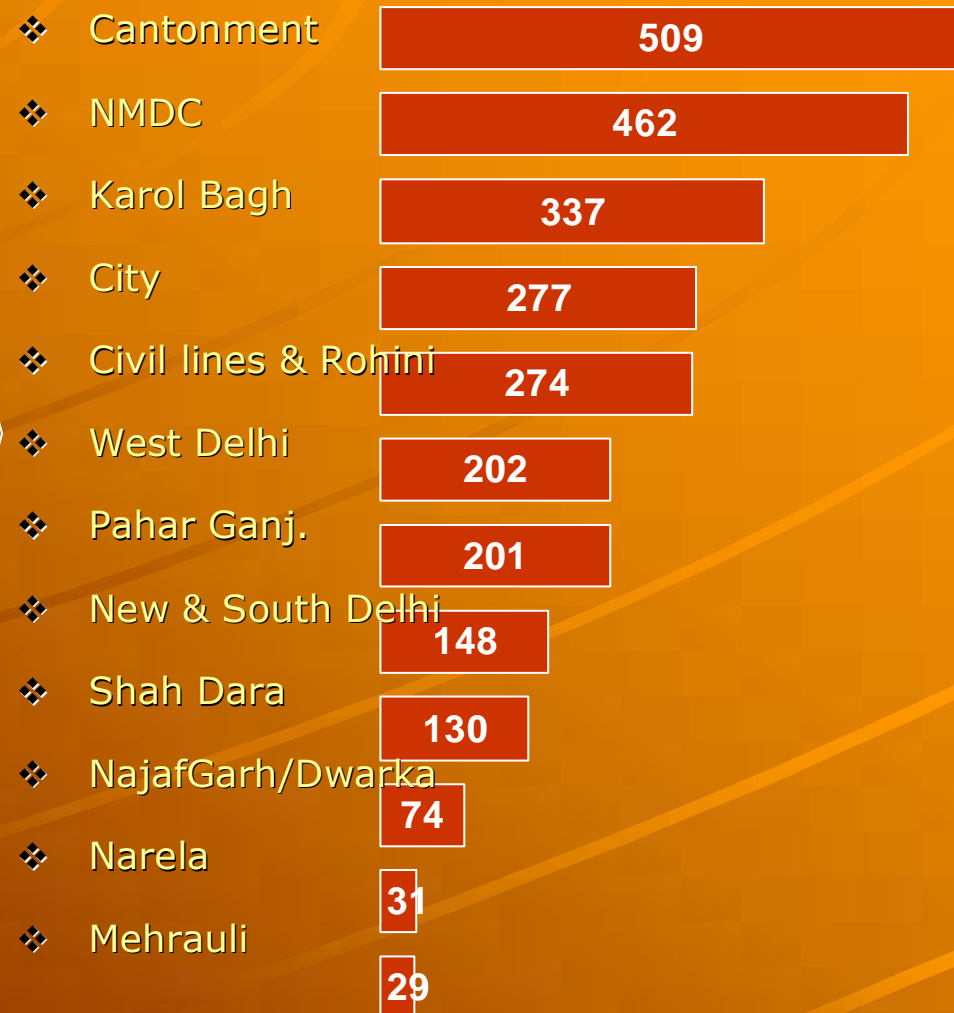
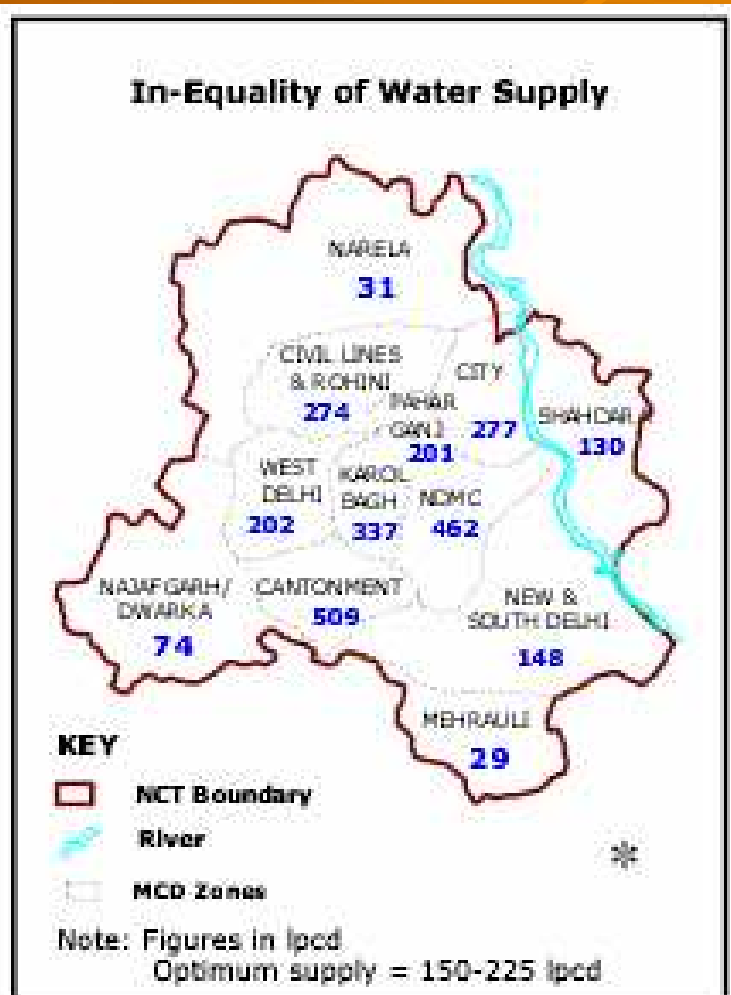
	Unit	Delhi	Bangalore	Mumbai	Kolkata	Chennai	Hyderabad
Households having access to water within premises (piped and un-piped)	%	75.8	74	72.2	61	64.4	81.8
Households with access to piped supply water (taps) – within or outside premises	%	77	84.2	97.6	76.9	45	91.6
Households with tap within premises	%	63.2	67.3	71.8	55.4	36.2	79.2
Households having tap outside premises (shared)	%	13.8	16.9	25.8	21.5	8.8	12.4

23% of households in Delhi & Kolkata, and 55% of households in Chennai are not connected to piped water supply

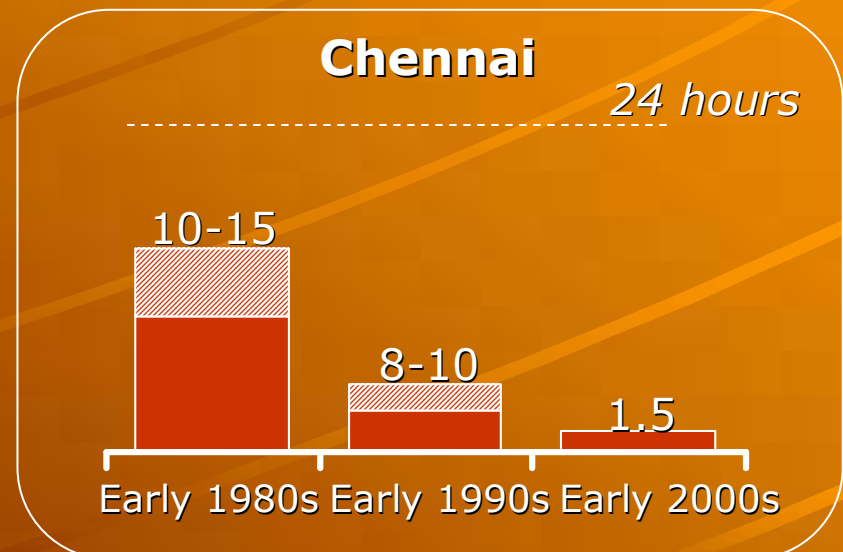
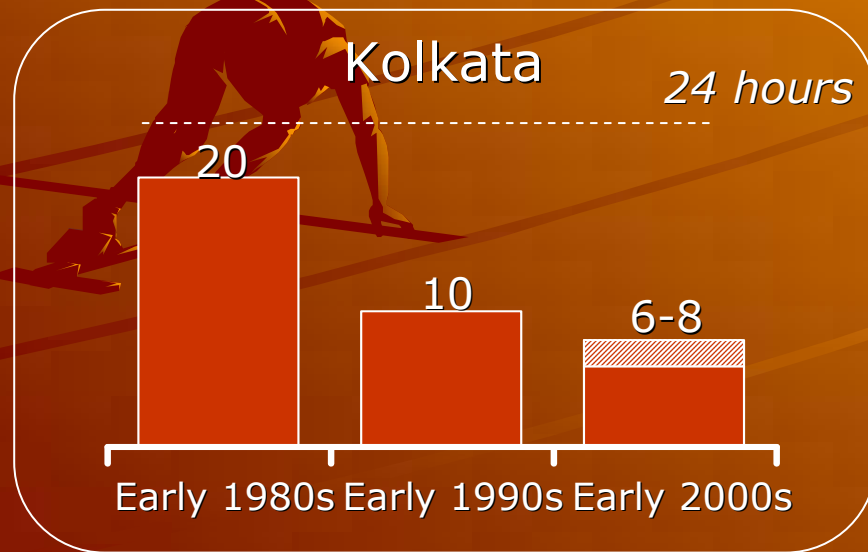
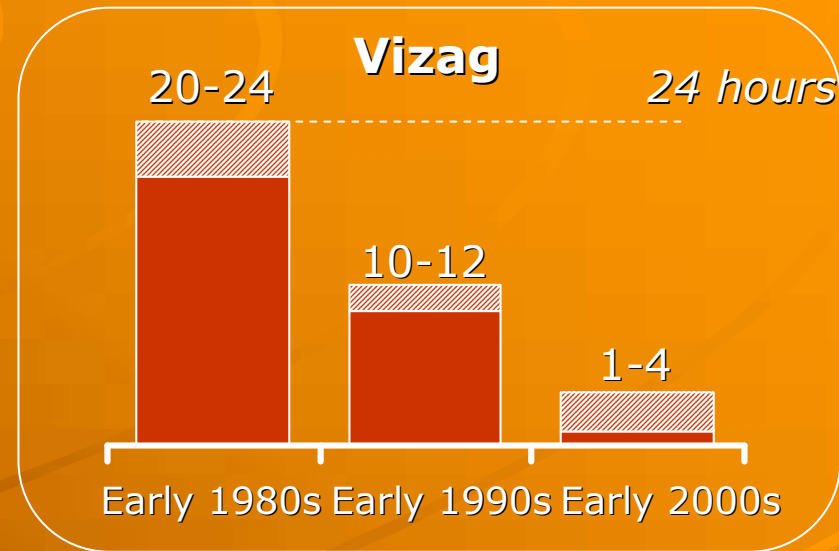
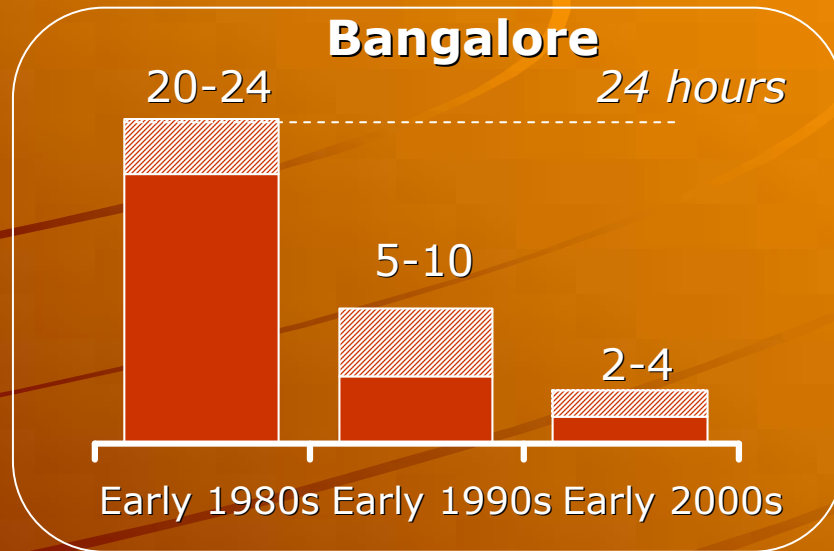
- These households thus rely on informal or non-revenue generating sources of water, which *may* represent a net drain to water providers

... with large inequalities in availability of water occurring WITHIN cities

LPCD in various parts of Delhi



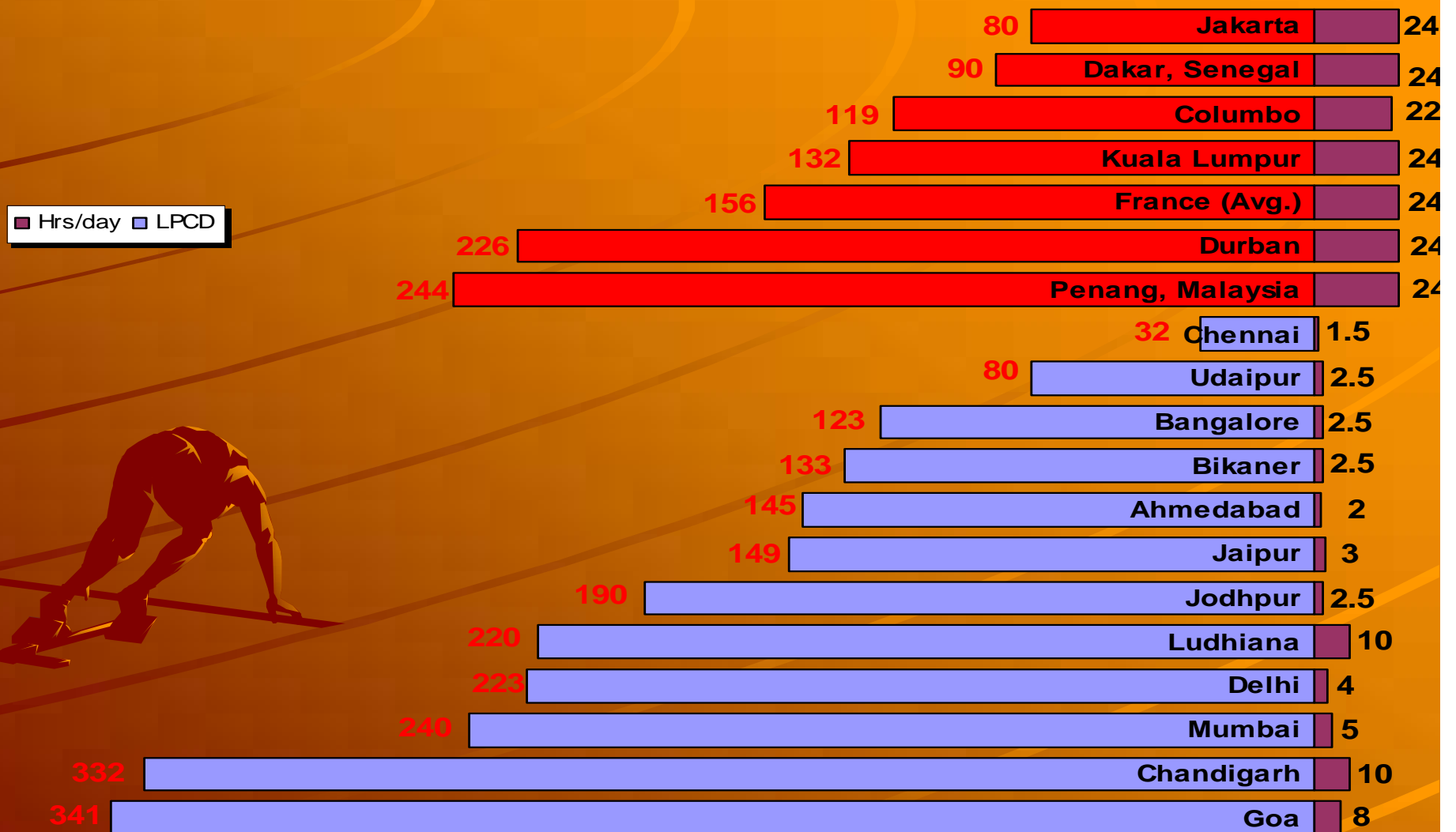
Moreover, the hours of service has declined over time



Understanding the problem

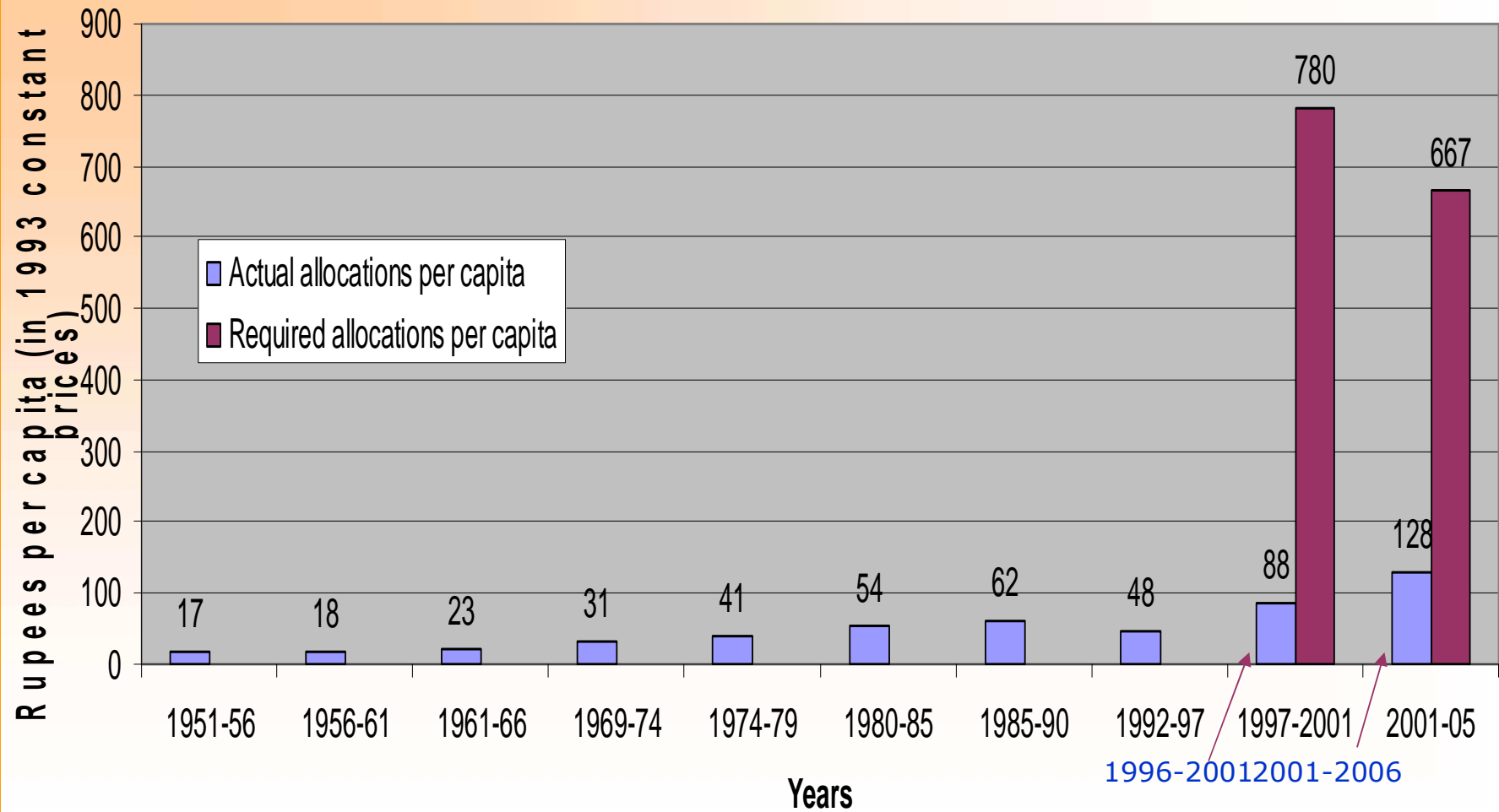


The problem is not a shortage of water: Even water rich cities do not come close to 24/7 supply



'Water production in liter per capita per day' vs. 'hours of supply per day', selected cities

... or only lack of investment, as allocations are increasing (though inadequate)



Source: Planning Commission, Census 2001, Rakesh Mohan Report (1996), RBI deflators

Funding has been predominantly under state plans:
direct central assistance only provided from 1993

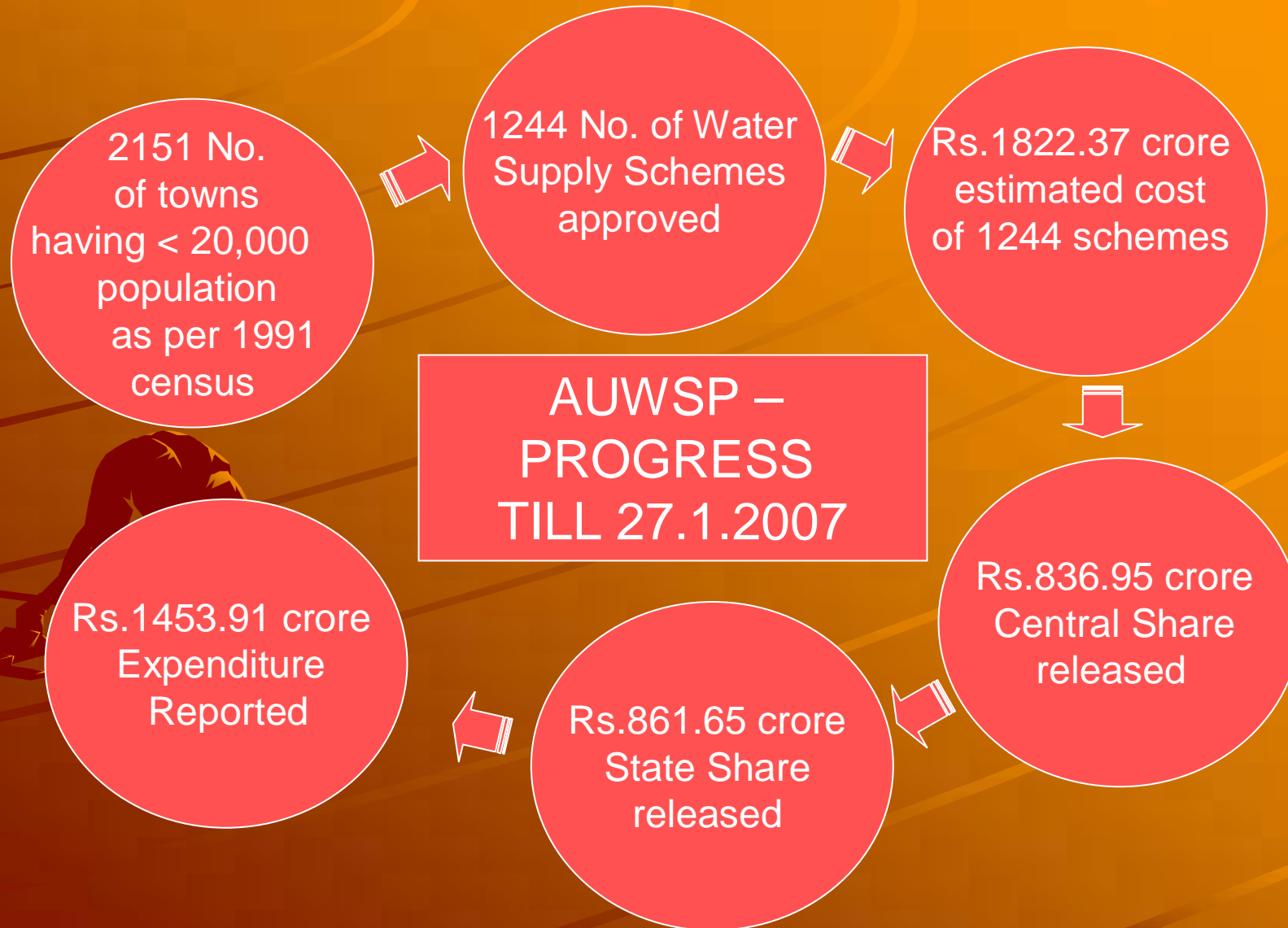
Funding
pattern
is 50:50
between
Centre and
States.

**CENTRALLY
SPONSORED
ACCELERATED
URBAN WATER
SUPPLY
PROGRAMME
(AUWSP)**

**Average annual outlay
of Rs64.33 crore**

Applicable to
towns having
population
less than 20,000
as per
1991 Census
(2151 towns)

... but has been too small to offer real incentives for reform



State subsidies are often poorly targeted

- ◆ India spends at least Rs. 5188 crore per year on subsidizing the water sector
 - About 98% comes from State budgets
 - Equivalent to 4.0% of government subsidies / 0.5% of GDP

... relative to government's policy priorities in this area

- ◆ Govt. funds may often subsidize the inefficiency of utilities rather than services to the poor
 - Lack of access/poor service quality ensure that low tariffs do not help the poor, as they are far less likely to be connected to the network in the first place
- ◆ Subsidized tariffs favour those who get most water from publicly funded supply- these are more often wealthier people
- ◆ Unconnected poor households pay disproportionately large amounts per litre of water consumed, notwithstanding large subventions by Government
 - Poor households must buy more expensive water from informal vendors, and purify it themselves – this has high fixed costs for a relatively small amount of water

So what is the problem?

Distorted Incentives and Lack of Accountability

- ◆ Utilities are not maintaining their assets or focusing on service quality:
 - Inadequate financial resources due to low / no tariffs and limited central / state support
 - High costs due to operational inefficiencies
 - Lack of autonomy
- ◆ They are focused on obtaining grants for investment rather than on service provision for which they are not held accountable

Funding can distort incentives and reduce accountability

Consumers use water inefficiently

Low tariffs, low collections

High usage and system losses drive up costs

Investment, maintenance are postponed

Services deteriorate

Customers are ever less willing to pay

Utility lives off state subsidies

Managers lose autonomy and incentives

Efficiency keeps dropping

Subsidies often fail to materialize

Utility can't pay wages, recurrent costs

Motivation and service deteriorate further

System assets go "down the drain"

Poor Services for All

The way forward



Improving urban water services: Key Messages

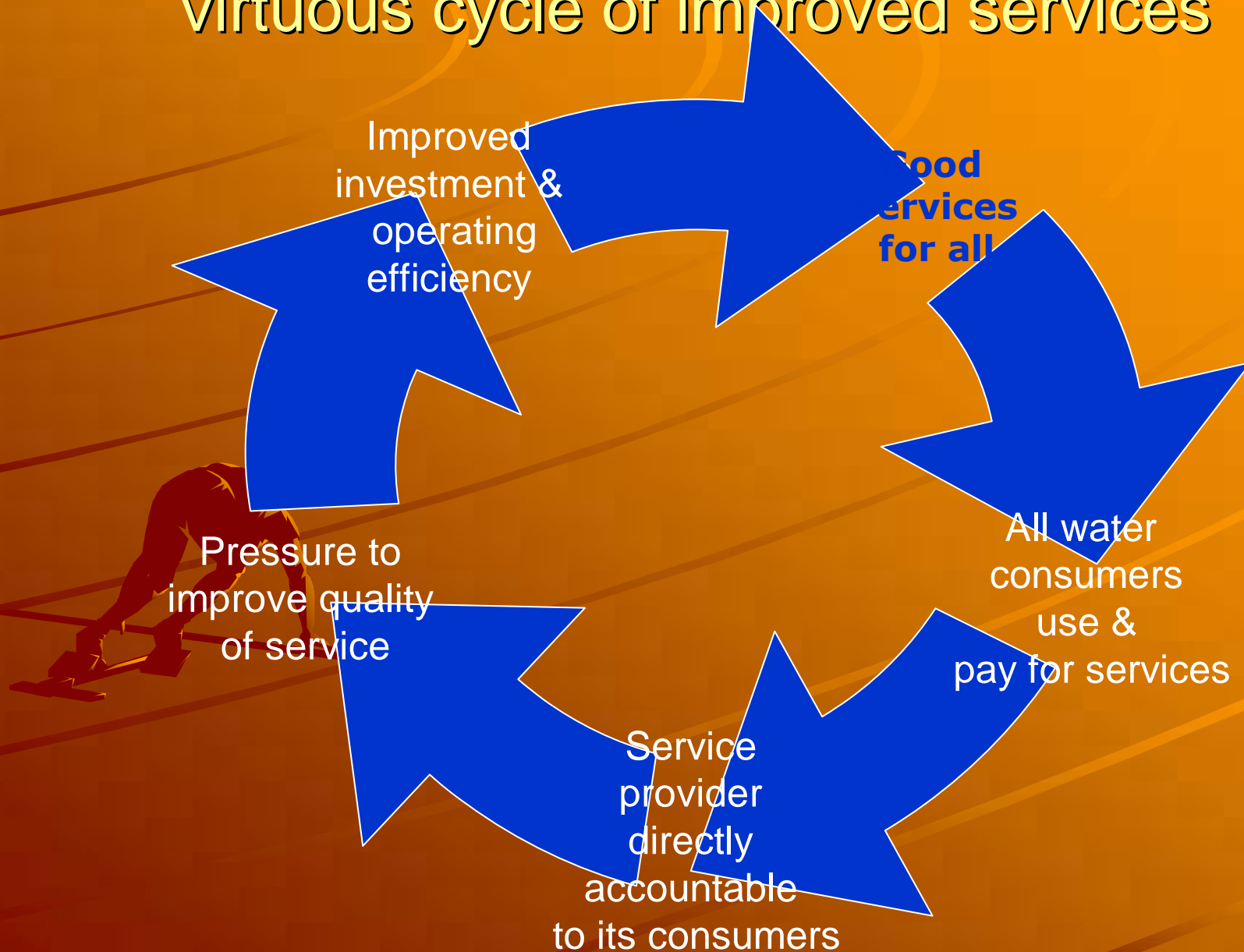
- ◆ The problem
 - Not one of just more bricks, mortar or pipes
 - Not one of just more resources
 - Not one of handouts for the poor
- ◆ It is about restructuring institutions required to provide sustainable services and through resource management improvement which are additional critical areas of concern
 - Operational and financial reforms are part of the package required for effective institutional change
- ◆ Resource management improvements are a critical additional area of concern

Universal, safe and sustainable access to urban water requires efforts to:

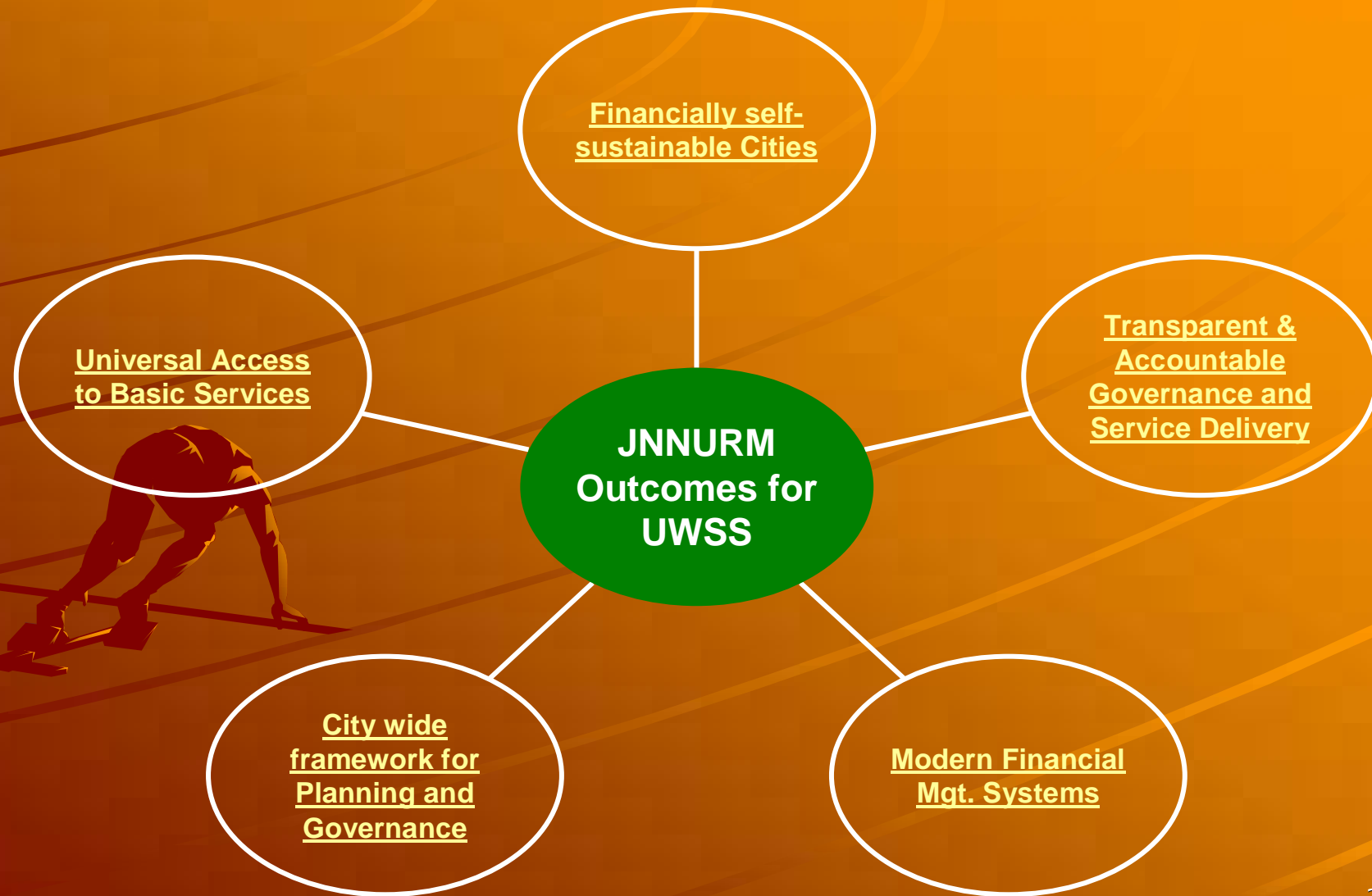
- ◆ Ensure universal access
- ◆ Improve the efficiency of services
- ◆ Improve regulation and knowledge on best practices
- ◆ Secure availability of water resources

To do so requires measures to strengthen effective consumer demand (accountability to water users)

Accountability to consumers creates a virtuous cycle of improved services



New GoI strategy to address sector challenges



Short term operational reforms (2–3 years)

The problem:

- Inefficient operation and maintenance
 - Lack of metering
 - Lack of information – benchmarking of system and management performance
 - Lack of capacity
 - Lack of responsiveness to consumer needs

JNNURM Strategies for improving operational efficiency:

- Performance incentives for providers to provide basic services to the urban poor, with improved monitoring and oversight
- Mechanisms to strengthen consumer voice, including:
 - Passage of public disclosure law
 - Passage of community participation law
 - Associating elected ULBs as with “city planning function”
- Introduction of system of e-governance using IT applications
- Improved information through better metering and introduction of benchmarking & surveillance systems
- Improved management autonomy for water providers to judiciously upgrade, rehabilitate and expand distribution systems, and even treatment capacity as required
- Standardized benchmark for service level

Short term financial reforms (2-3 years)

The problem:

- Inadequate resources from state and central budgets
- Inappropriate subsidy & pricing policies lead to inefficient utilization of water and a lack of consumer orientation

JNNURM Strategies to improve financial sustainability:

- Target subsidies to capital costs, not recurrent costs
- Adoption of modern, accrual-based double entry system of accounting
- Levy of reasonable user charges with the objective of full cost recovery
- Measures to improve credit worthiness

Medium term institutional reforms (5 years)

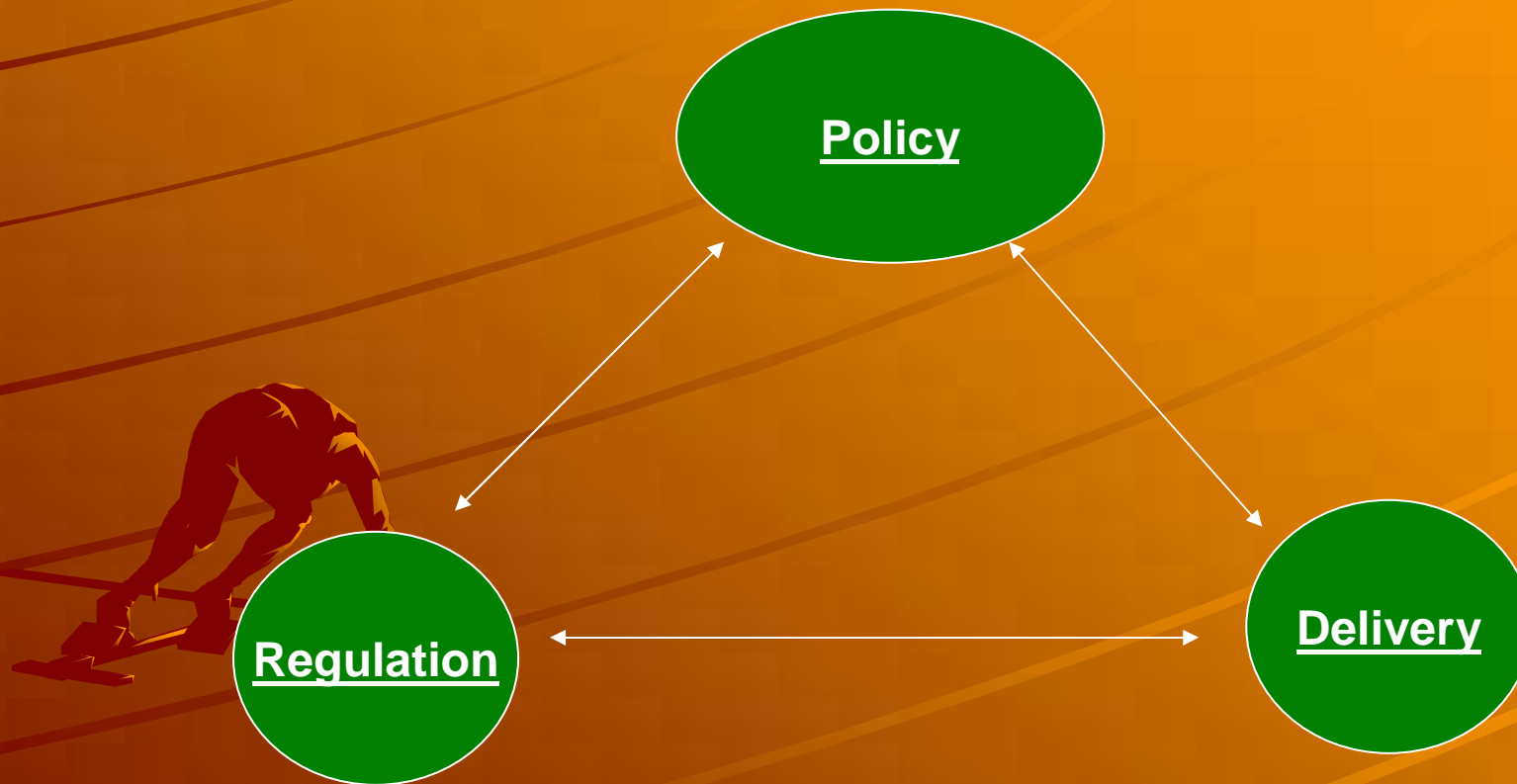
The problem:

- Lack of clarity on responsibility for ensuring provision of water: slow implementation of 74th CAA
- Lack of autonomy of water supply and sanitation utilities
- Absence of effective oversight
- Lack of effective community participation

JNNURM Strategies for sustainable water supply:

- Implementation of 74th Constitution Amendment Act
- Structural reforms to separate the roles of policy-making and service provision
 - Ring-fencing of water utilities from policy-making, with professional management, capacity building and autonomy of water utilities
 - Clarification of regulatory responsibilities
 - Build accountability of utilities through ensuring adequate span of control over revenue, investment and operations
 - Encourage public-private partnerships
 - Incentivise community participation

Role separation improves accountability for *outcomes*



- Enforce the Rules
 - Monitor Compliance
 - Regulate Pricing

- Deliver the Service
- Play by the Rules

Resource management

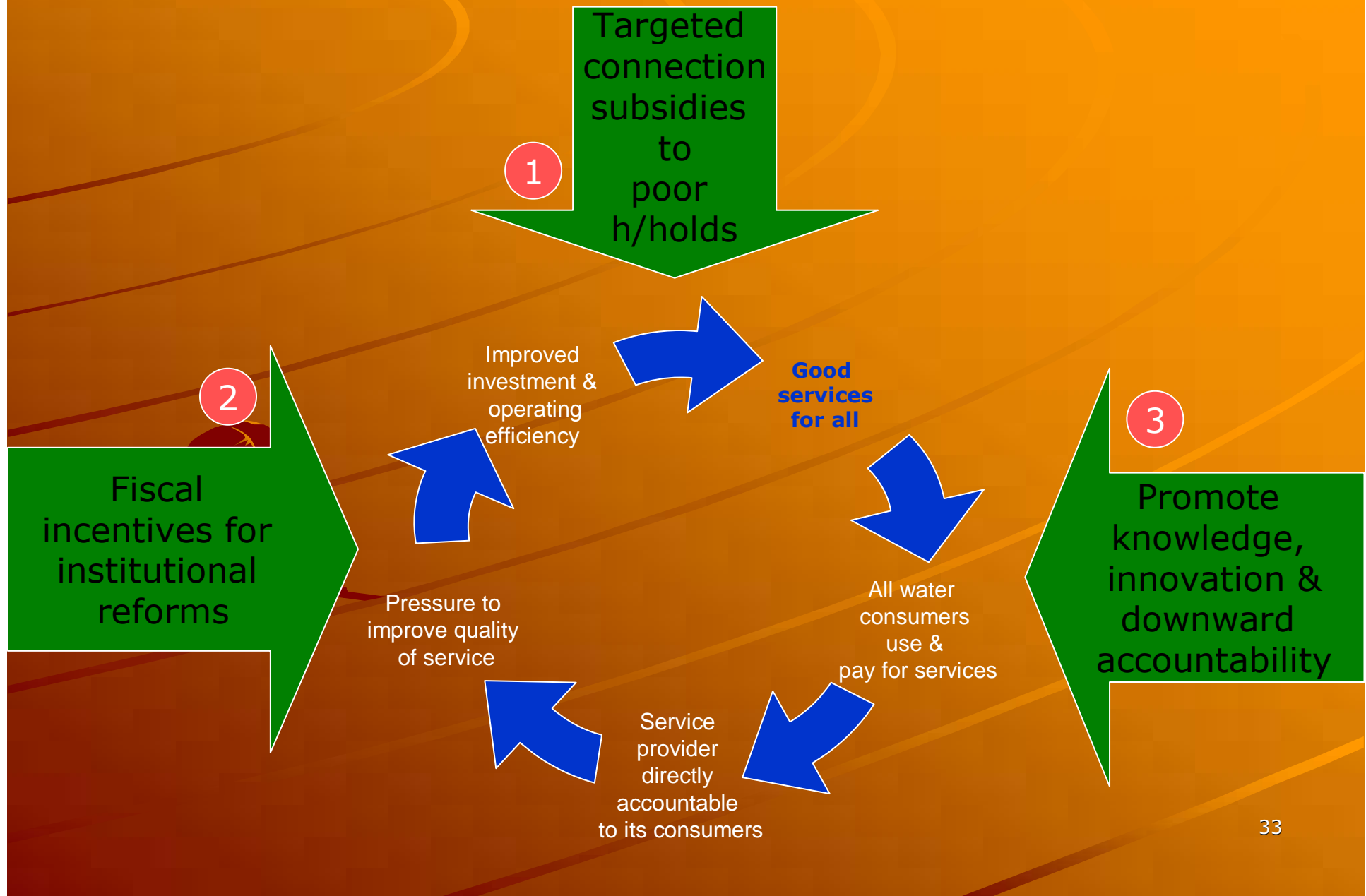
The problem:

- Unsustainable use of groundwater in urban areas
 - Growing dependence on groundwater and a belief that “it doesn’t matter whether formal systems work well, because we can always sink a well”
- Failure to specify and manage water entitlements which induces:
 - Major uncertainties over future access, driving urban areas to “opt out” through expensive infrastructure investment
 - Growing and endemic conflicts between states, and among users within states.

Strategies to improve resource management:

- Clarify water entitlements at all levels so that there can be voluntary re-distribution from low-value to high-value uses
 - (e.g. incipient trading of water rights in Chennai, purchase of water by financing efficiency improvements in irrigation – Noida and Ghaziabad with UP Irrigation Dept, Delhi with Haryana Irrigation Dept)
- Knowledge bank on water entitlements – support changes at local level
- Revision of bye-laws to make rain water harvesting mandatory and encourage reuse of reclaimed water

New GoI strategy to kickstart reforms



A Thought

◆ Global Warming –

- Water, an important causality

◆ National Boundaries –

- Manmade political decisions
- Flow of water, a natural boundary less phenomena

◆ Water – A global asset

◆ Berlin Conference –

- A Valuable forum to conserve, preserve, protect water for future generations by suggesting efficient technologies through shadow operations of existing Systems.



THANKS