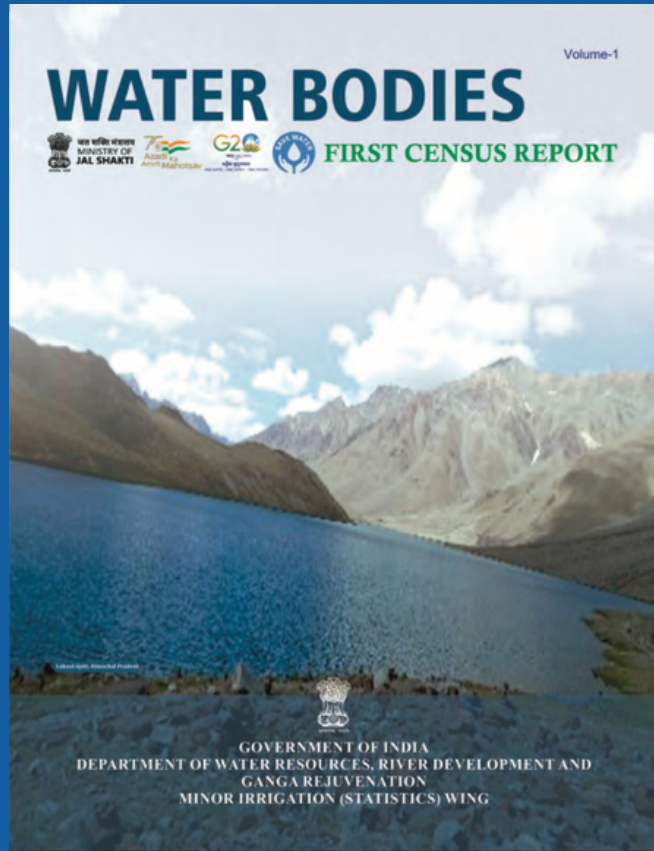


Urban Insights

from

India's 1st Water Bodies Census Report





What is a Water Body?

(As per the report)

All natural or man-made units bounded on all sides with some or no masonry work, being used for storing water, for irrigation or other purposes (e.g. industrial, pisciculture, domestic/drinking, recreation, religious, groundwater recharge etc.) are treated as water bodies in this Census.

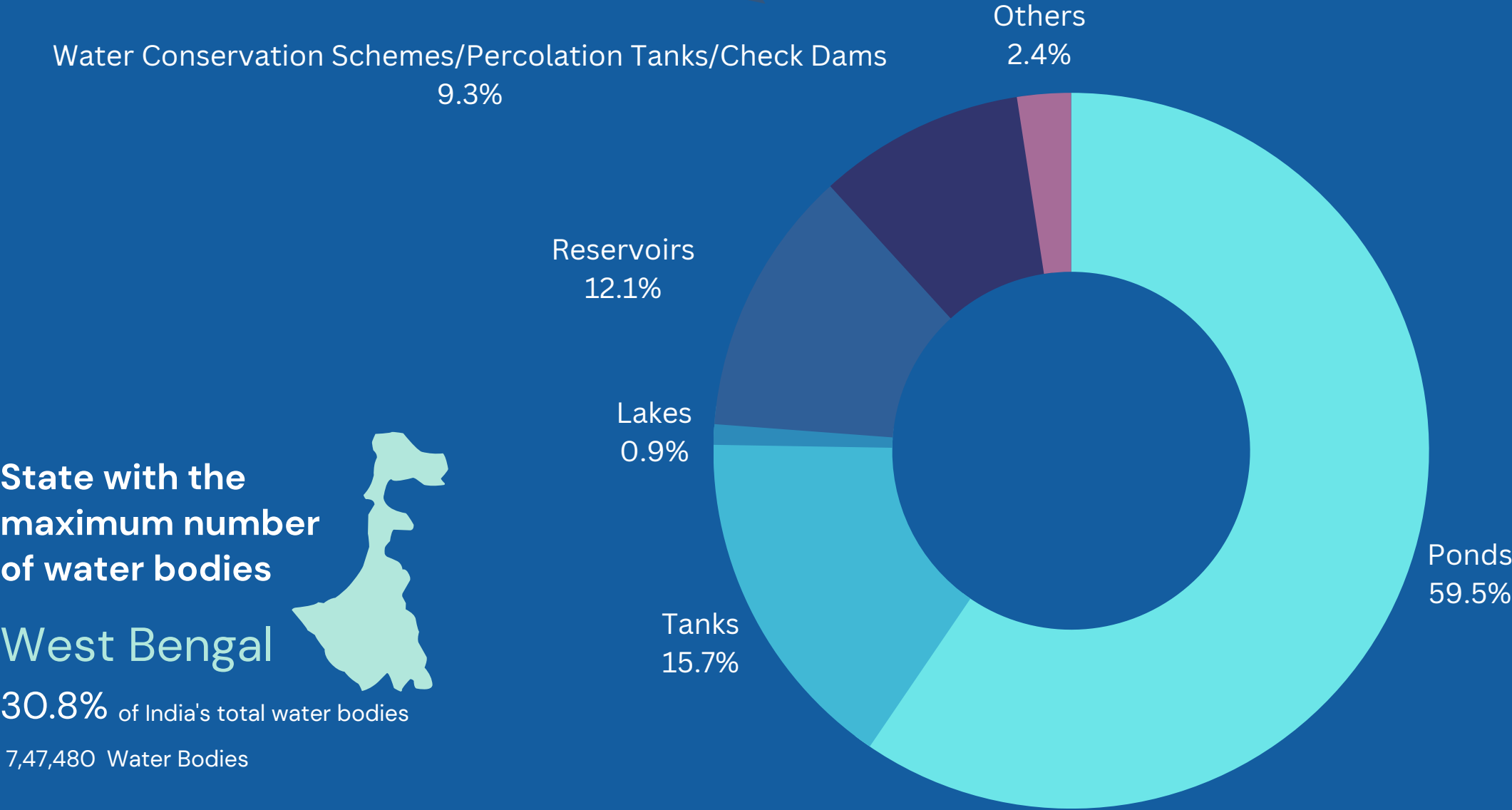
These are usually of various types and known by different names like tanks, reservoirs, ponds and *bundhis* etc. A structure where water from ice-melts, streams, springs, rains or water drained from residential or other areas is accumulated or stored by diversion from a stream, *nalaah* or river is to be treated as a water body.

Snapshot of Water Bodies in India

Water Bodies Distribution in India (including urban and rural)

24,24,540

water bodies have been enumerated in the country in the 1st water bodies census



State with the maximum number of water bodies

West Bengal

30.8% of India's total water bodies

7,47,480 Water Bodies



Urban
3%



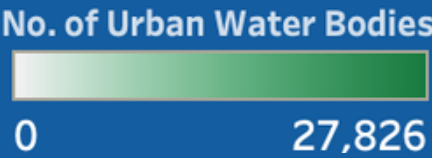
Urban vs Rural Water Bodies

3% of all the waterbodies are in urban areas.

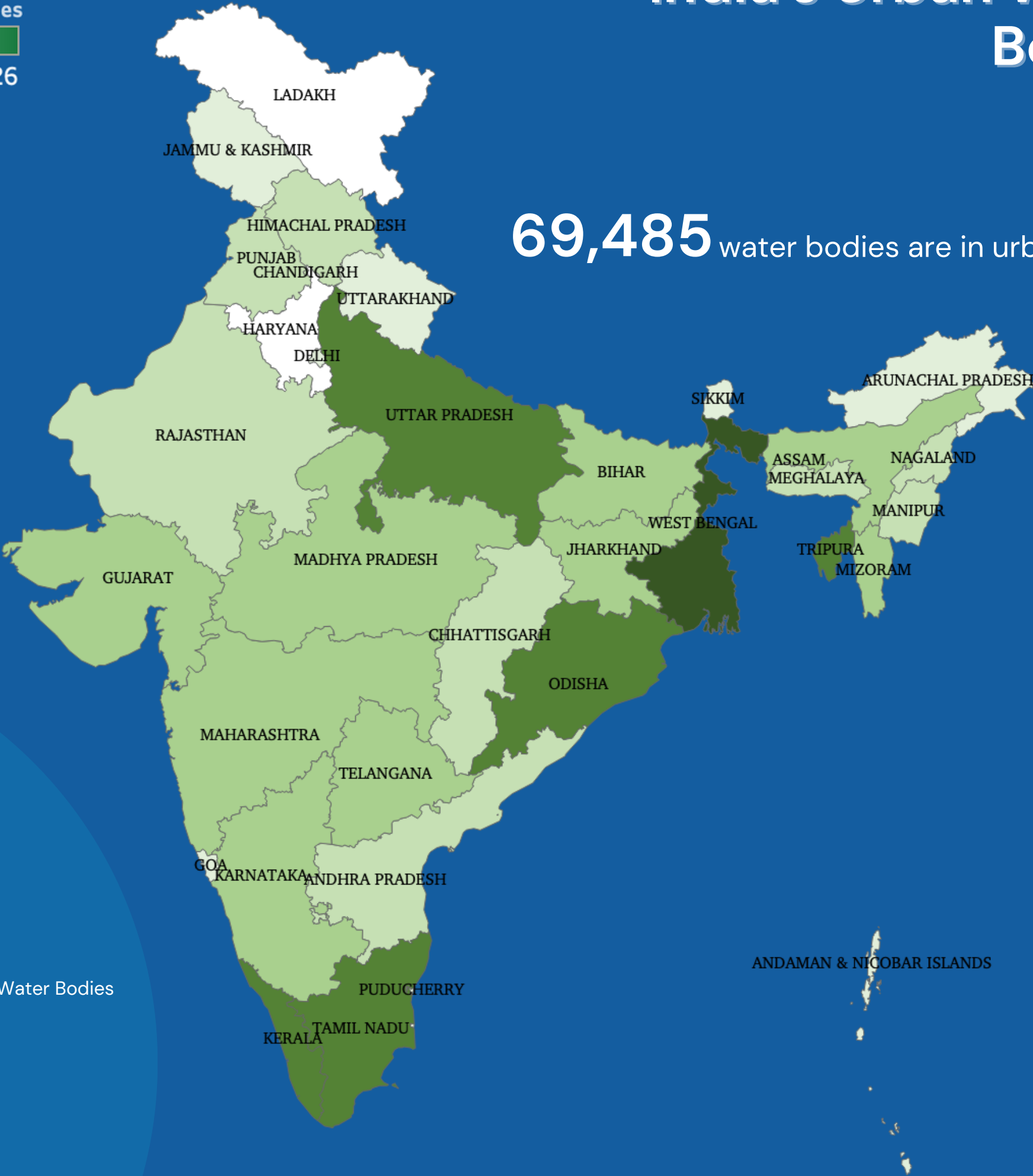
Rural Water Bodies are dominating in India's water bodies scenario. They support agriculture, biodiversity, and recreation, with lesser pollution but still require conservation for ecological integrity and rural livelihoods.

While **Urban Water Bodies** are vital as they provide ecosystem services to the city. They are used in supplying water, managing stormwater, recharging groundwater, and acting as sponges to mitigate floods and also providing recreational opportunities. However, they face extreme challenge of pollution and habitat degradation. Majority of them require attention and are in need to be valued for maintaining the urban ecosystem.

India's Urban Water Bodies



69,485 water bodies are in urban areas

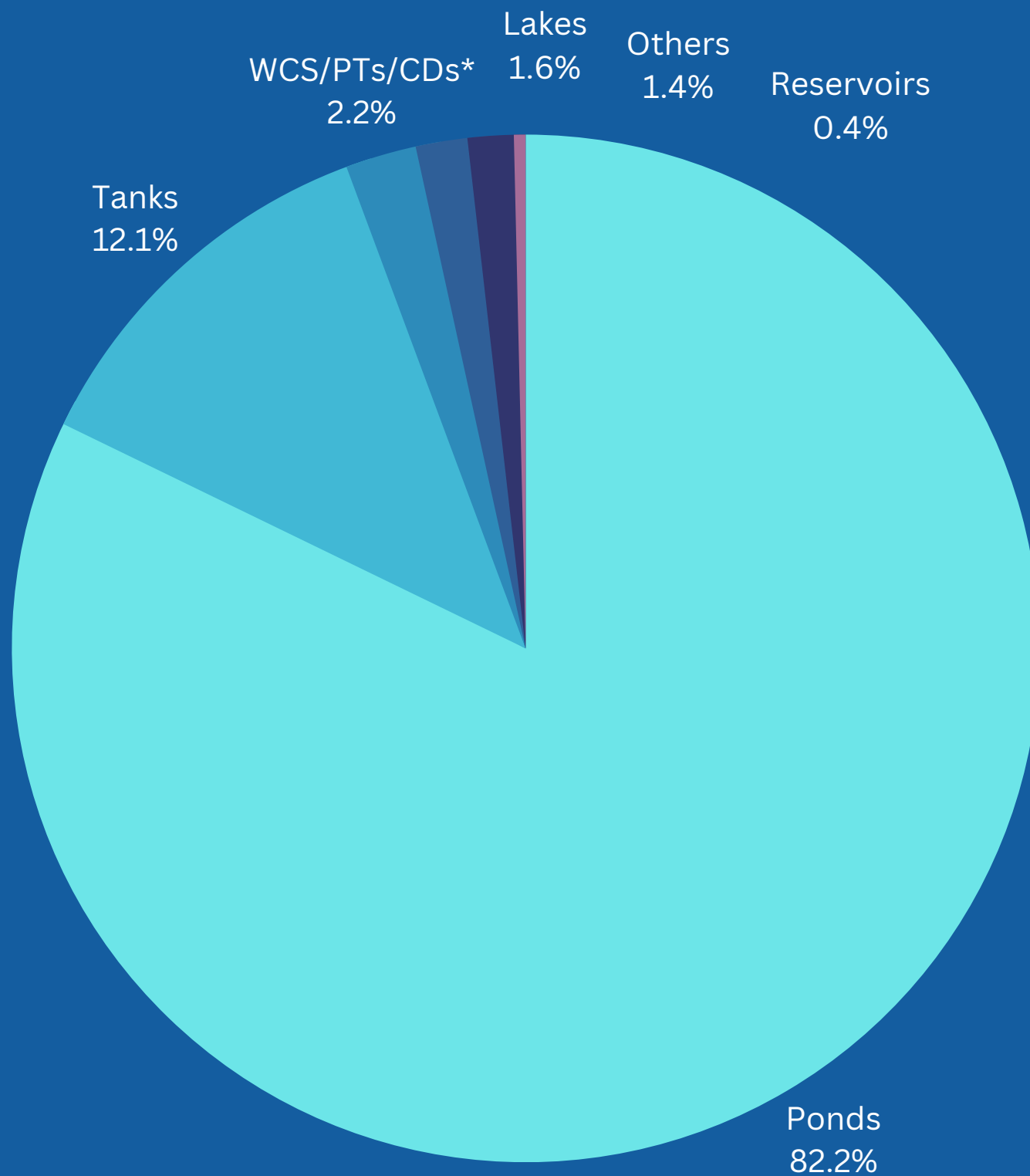


West Bengal
has the highest no. of urban
water bodies in India

40%
of India's Total Urban Water Bodies

27,826
Urban Water Bodies

Types of Urban Water Bodies



*WCS/PTs/CDs:
Water Conservation Schemes/Percolation Tanks/Check Dams

Jharkhand

has the highest no. of
Urban Reservoirs in India

20% of Total Urban Reservoirs

Maharashtra

has the highest no. of Urban
WCS/PTs/CDs in India

34% of Total Urban WCS/PTs/CDs

Tamil Nadu

has the highest no. of Urban
Tanks and Lakes in India

34% of Total Urban Tanks

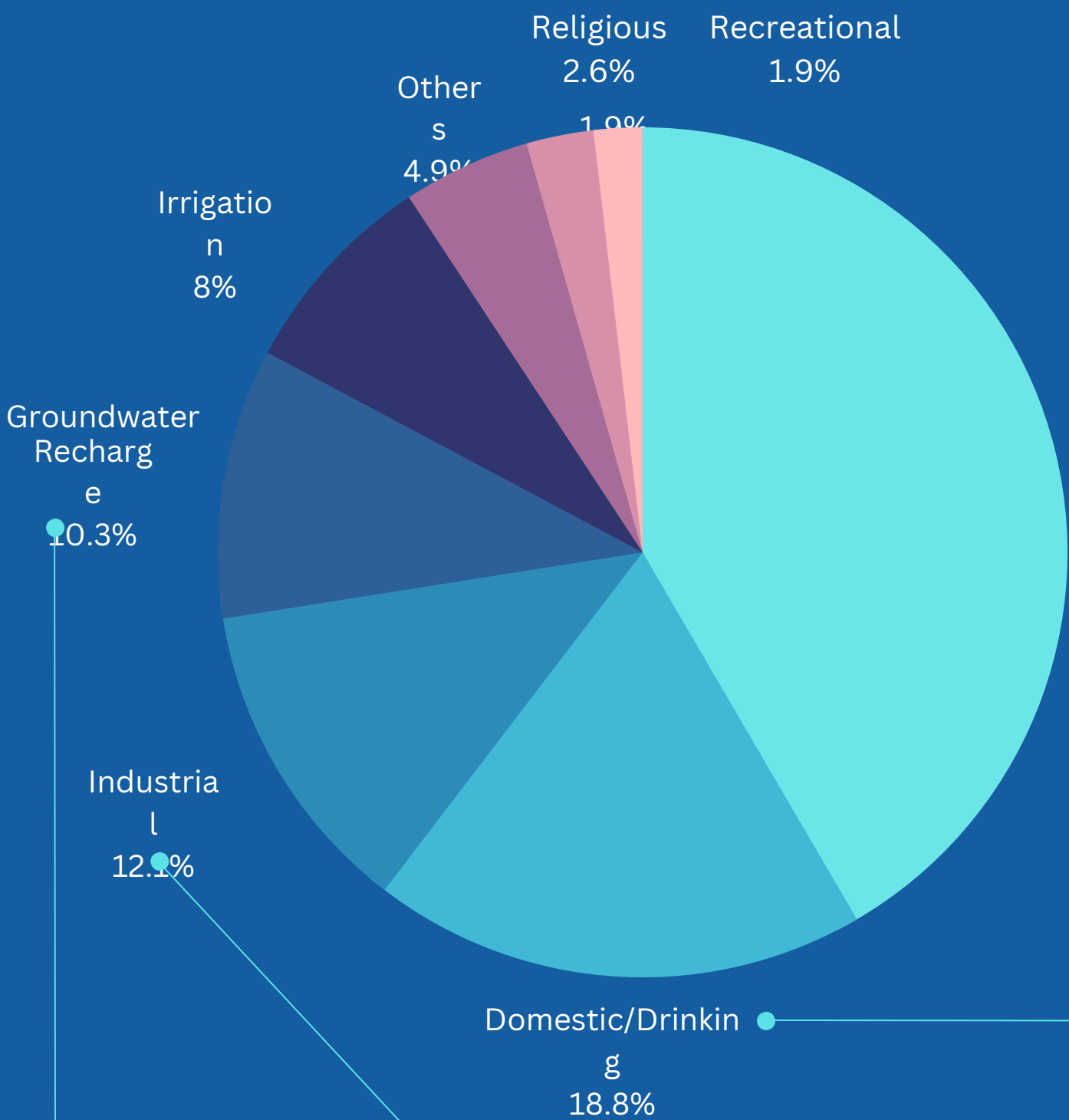
48% of Total Urban Lakes

West Bengal

has the highest no. of Urban
Ponds in India

48% of Total Urban Ponds

Uses of Urban Water Bodies



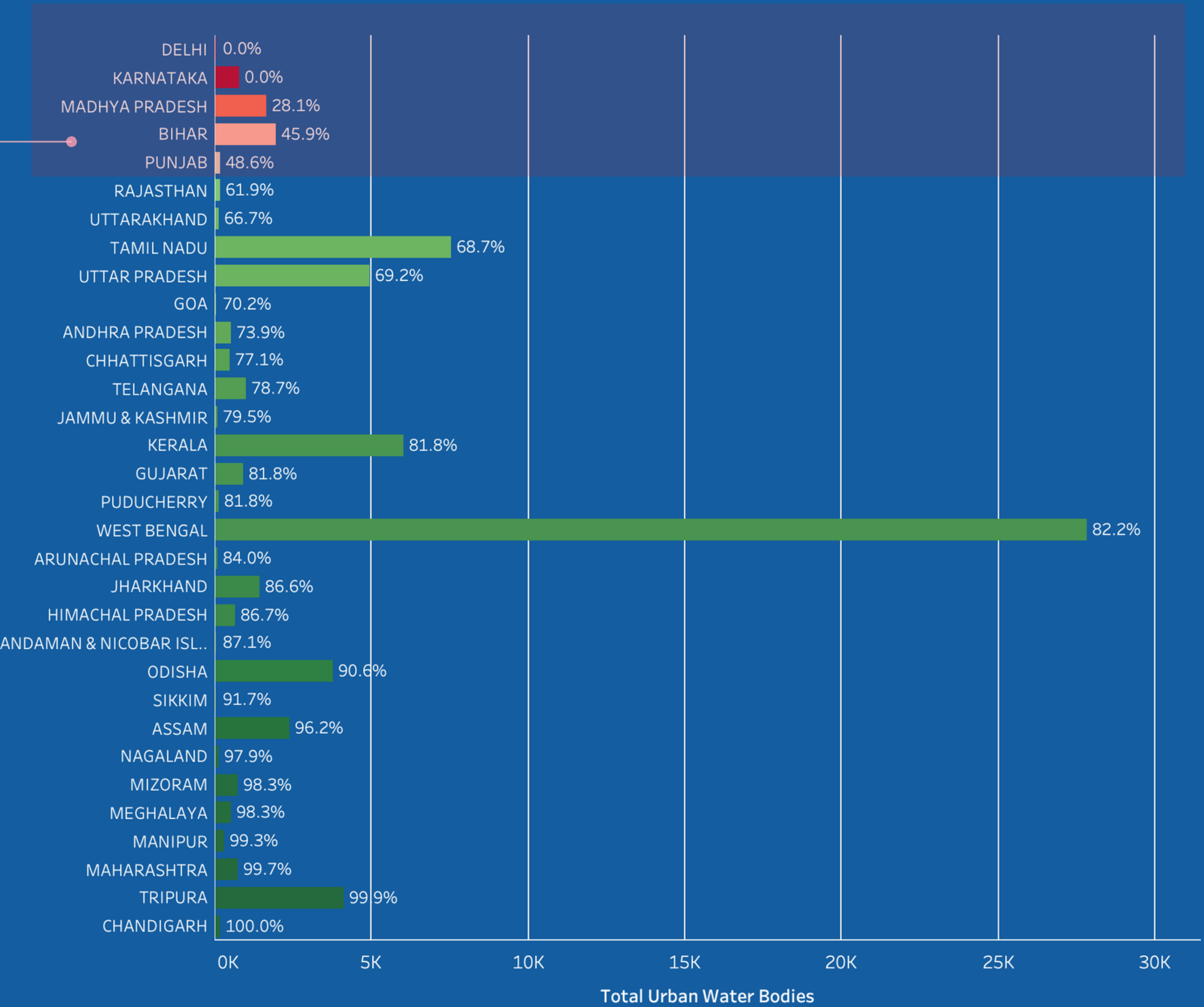
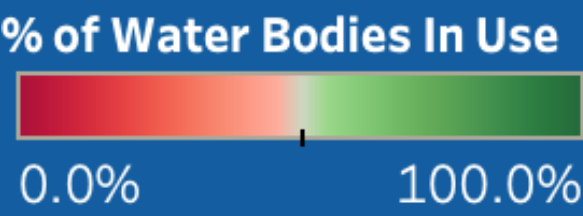
Most of the **North-East States** Tripura (100%), Assam (91%), Nagaland (91%), Meghalaya (75%), Mizoram (73%) and Arunachal Pradesh (52%) **& Odisha** (73%) are majorly using their urban water bodies for pisciculture and therefore their livelihood are dependant on these water bodies

Chandigarh (96%)
Himachal Pradesh (84%)
J&K (82%)
Manipur (71%)
Sikkim (64%)
are primarily using their urban water bodies for domestic or drinking purpose

Gujarat (83%)
Maharashtra (65%)
Punjab (64%)
are majorly using their urban water bodies for the groundwater recharge

28% of the urban water bodies in **West Bengal** are being used for industrial purpose

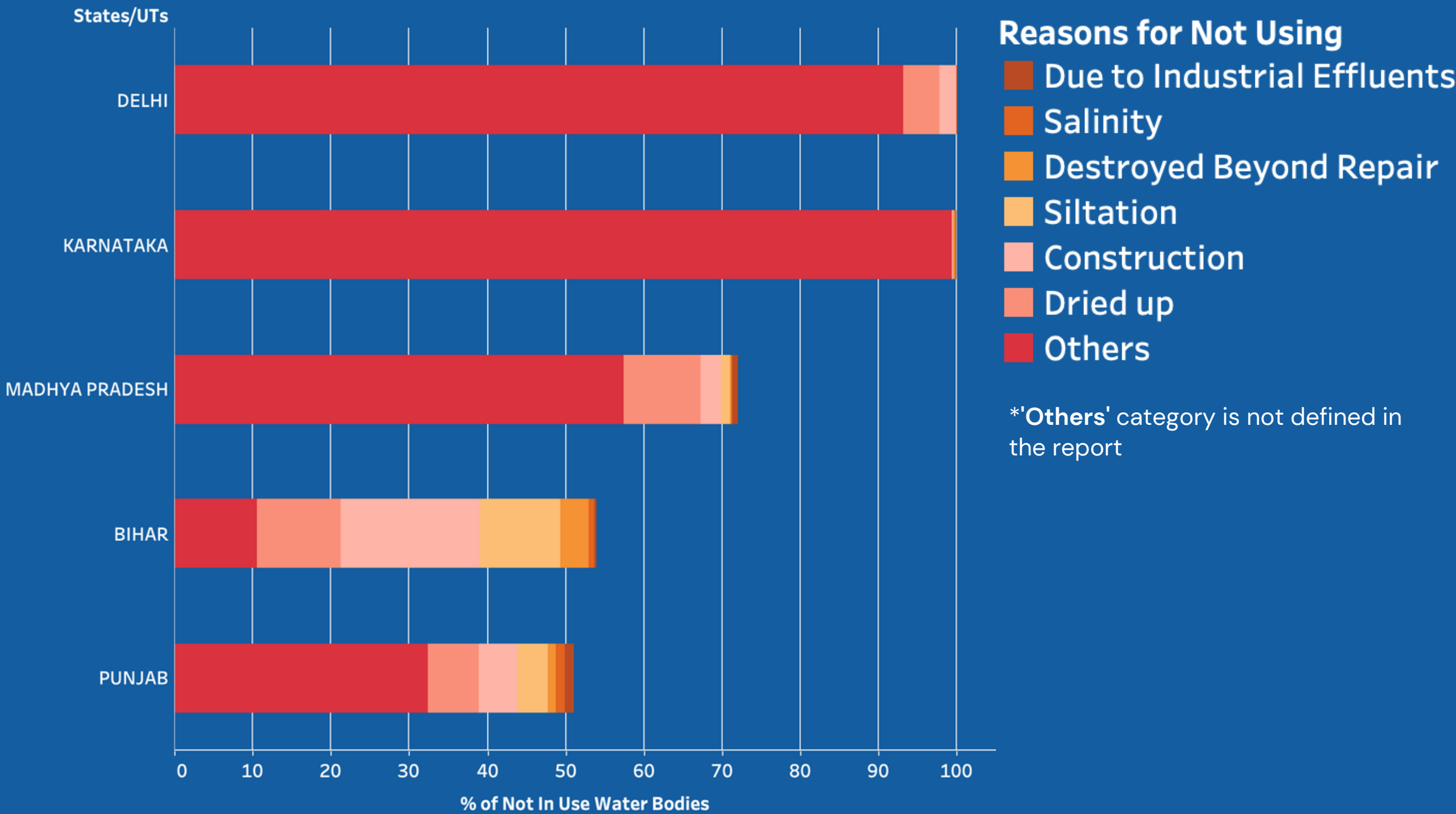
Urban Water Bodies In Use w.r.t. Total Urban Water Bodies



States like

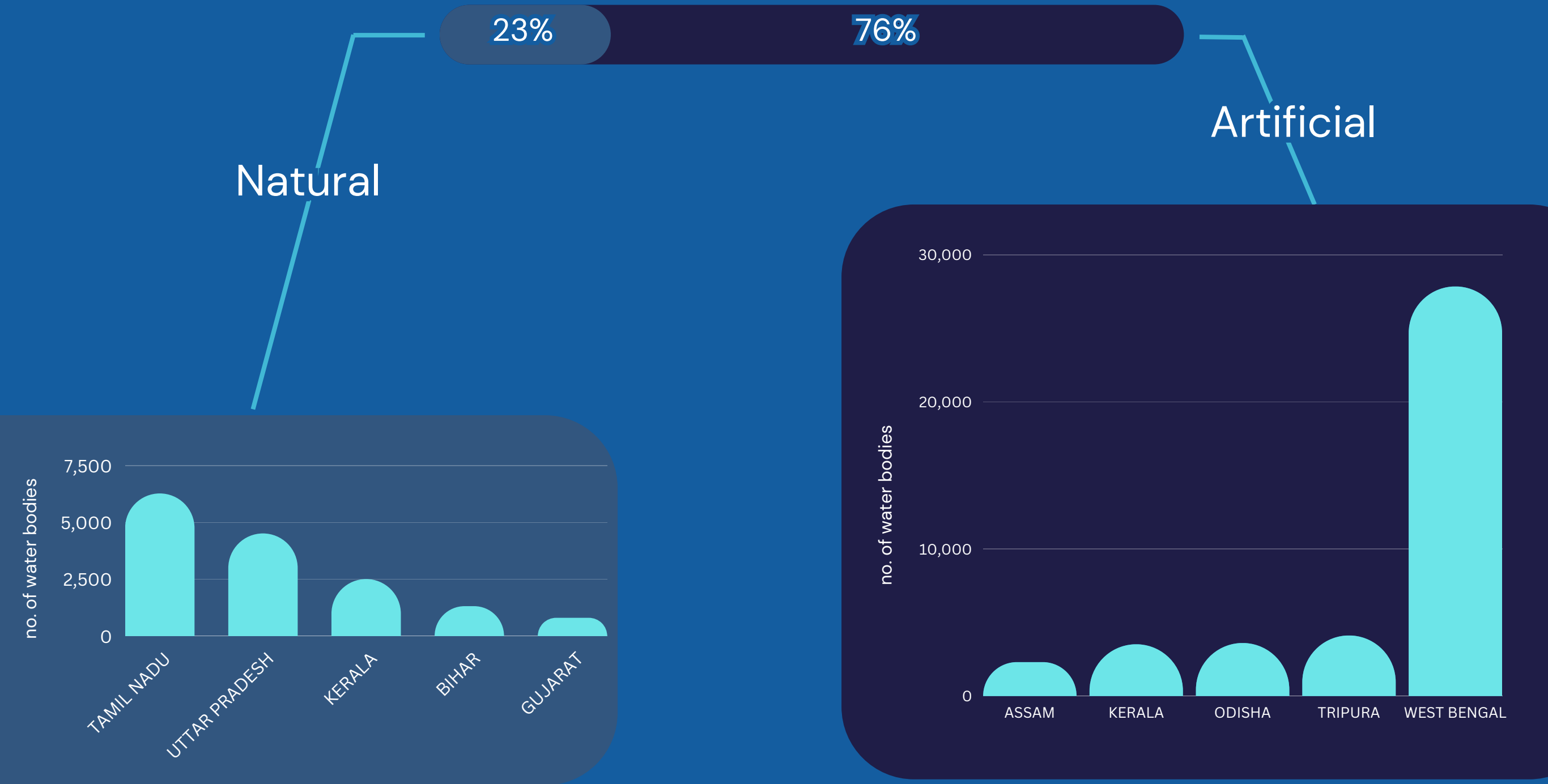
Chandigarh (100%), **Tripura** (99.9%), **Maharashtra** (99.7%) & **Manipur** (99.3%) are using almost 100% of their urban water bodies primarily for domestic/drinking (Chandigarh and Manipur), pisciculture (Tripura) and groundwater recharge (Maharashtra).

States with least number of 'In Use' urban water bodies and their reason



In **Bihar** out of the total urban water bodies
18% have been encroached due to construction
11% have been dried-up
10% are not in use due to siltation

Natural vs. Artificial Urban Water Bodies



Tamil Nadu

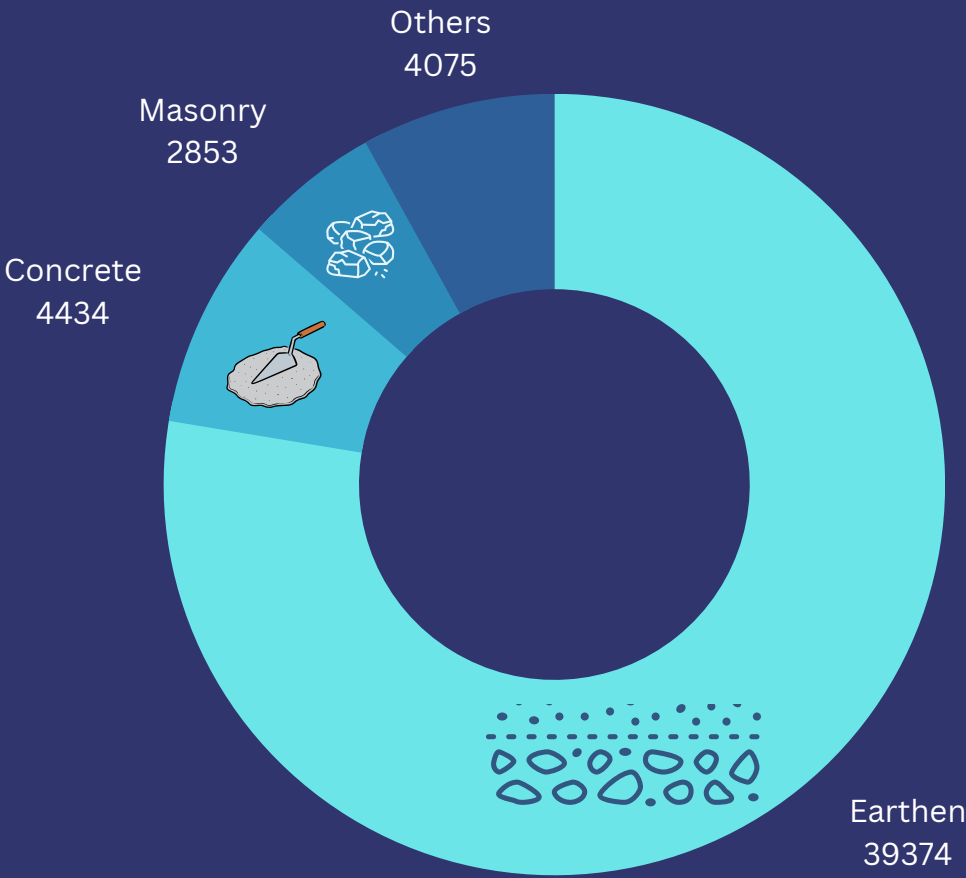
has the highest number of natural water bodies in urban areas.

Despite the abundance of natural water bodies, Tamil Nadu faces water scarcity in certain regions due to urbanization, and overexploitation of water resources. Sustainable water management practices and conservation efforts are crucial to ensure the long-term availability and equitable distribution of water in the state.

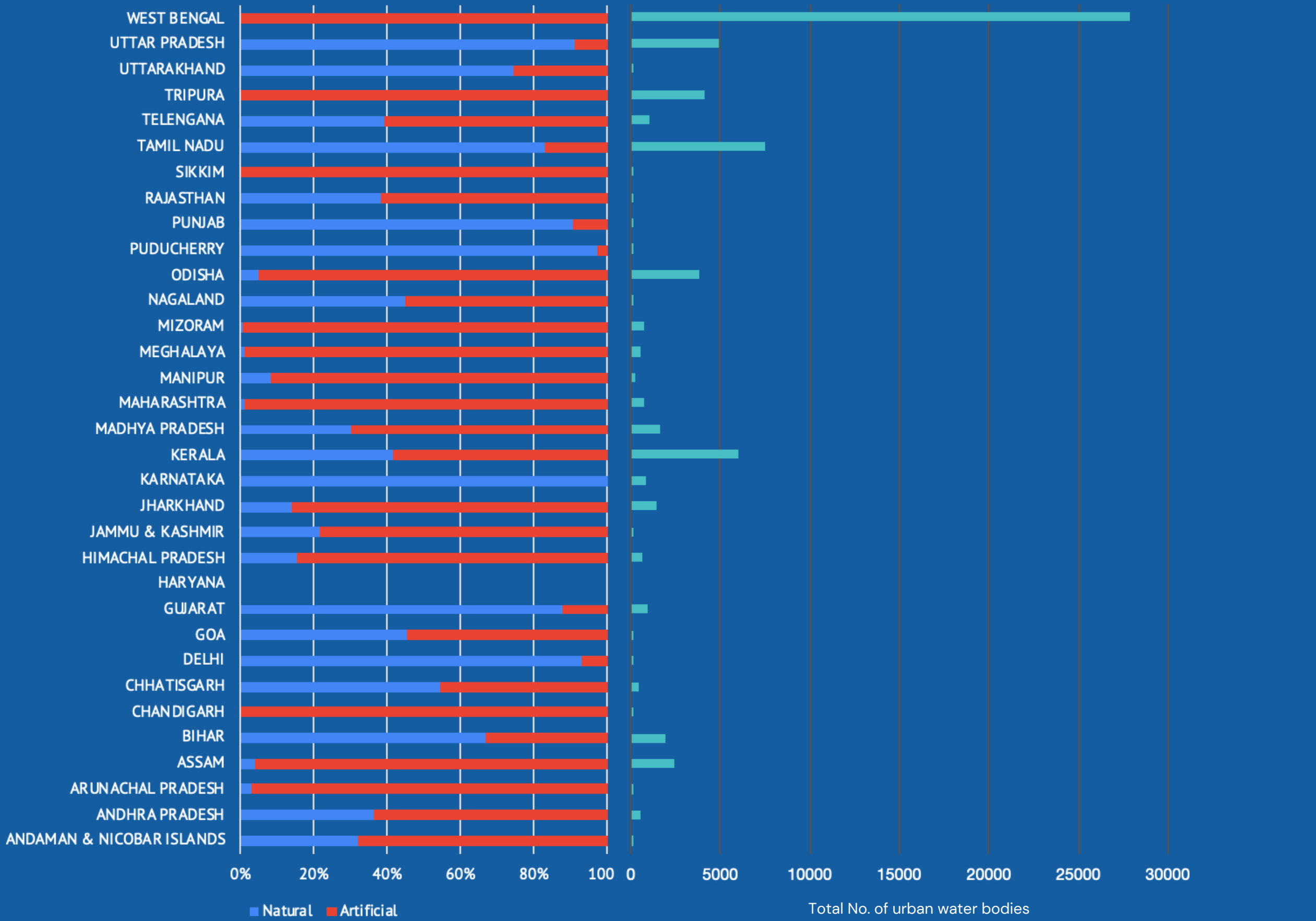
West Bengal

has the highest number of artificial water bodies in urban areas.

Types of artificial water bodies

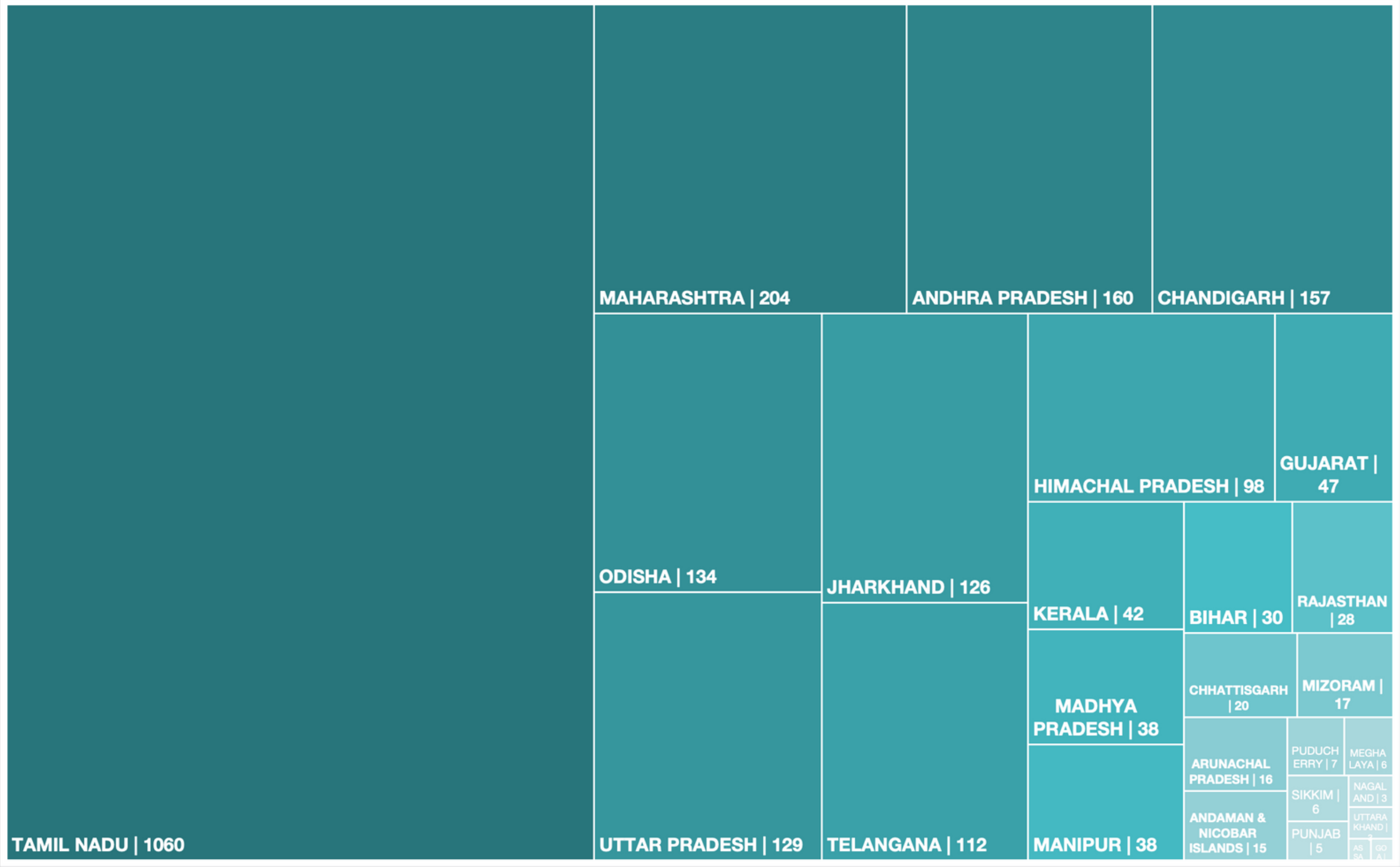


Statewise Distribution of Natural and Artificial Water Bodies in Urban Area



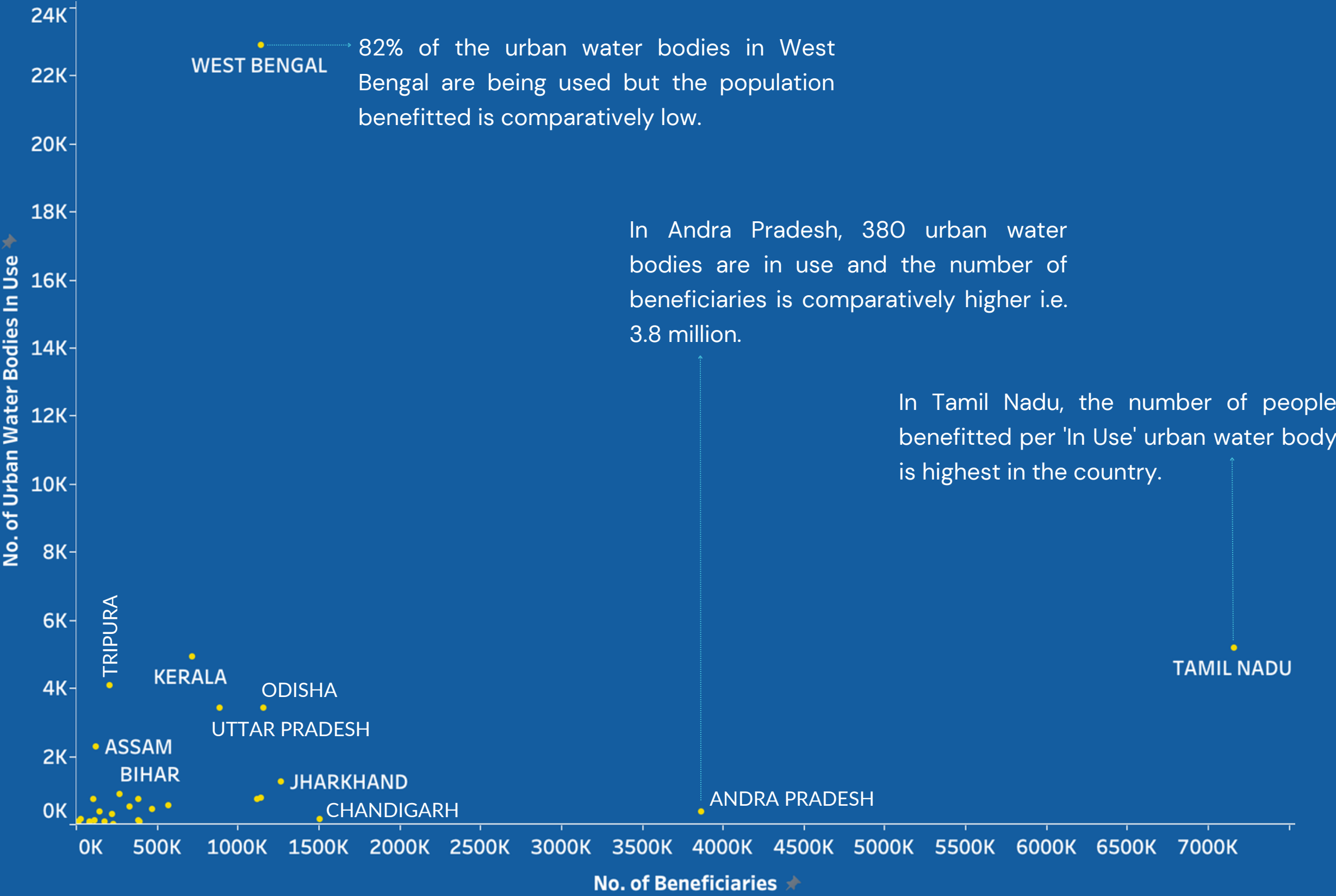
Population Directly Benefitted from the Urban Water Bodies

Number of urban water bodies in different states that directly benefit >1,000 people



20% of the 'In Use' urban water bodies in Tamil Nadu are benefitting >1,000 people.

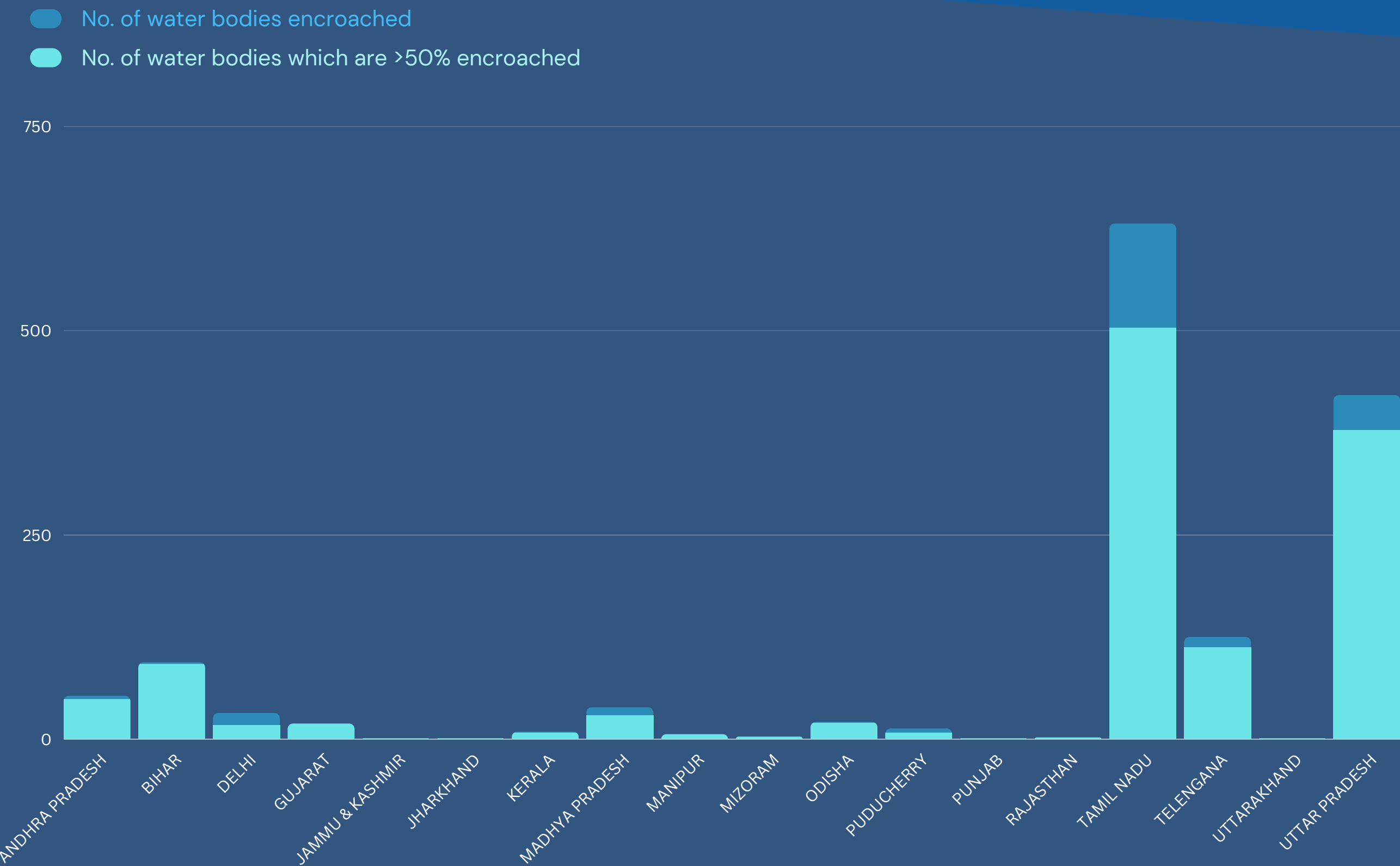
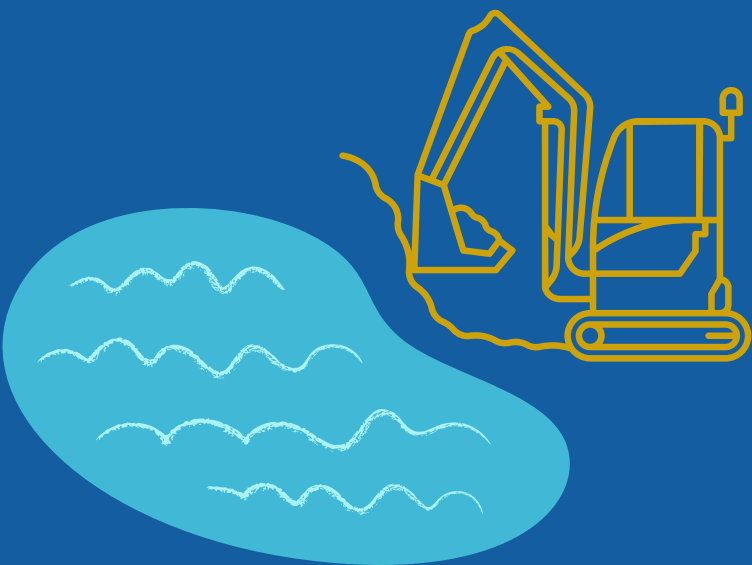
No. of People Benefitted w.r.t. No. of Water Bodies In Use



States like West Bengal, Kerala, Tripura, Odisha and Uttar Pradesh are using a large number of their urban water bodies but the population it is benefitting is comparatively less. However, in states and UTs like Tamil Nadu, Andhra Pradesh, Chandigarh number of people getting benefitted per urban water body is much higher.

Encroachment of Urban Water Bodies

3% of India's urban water bodies are encroached.
Most of the water bodies are encroached by >50% of their total area.



Addressing encroachment of water bodies in urban areas is crucial for sustainable water management, flood mitigation, climate resilience, and the well-being of communities.

It requires proactive planning, policy enforcement, public awareness, and stakeholder engagement to ensure the protection and preservation of the valuable natural assets.

Limitations

- Some Union Territories i.e. Ladakh, Daman & Diu, Dadra & Nagar Haveli and Lakshadweep are not considered in this report.
- No City/Town is considered in Haryana for Urban Water Body Analysis.
- The limitation is also related to the total number of towns/cities considered in the states indicating that the data might not represent all urban areas within a state, potentially leading to a partial understanding of the urban water body scenario.
- Water quality data has not been collected which is one of the important aspects to consider while analyzing water bodies.
- It's important to note that the specific findings and conclusions from the analysis may vary depending on the actual data presented in the Indian Urban Water Bodies Census Report. The report itself should be referred to for more detailed and accurate information.

Urban Growth and Implications

Analyzing data over time can provide insights into the impact of urban growth on urban water bodies. It can help assess whether expansion of urban areas has resulted in loss or degradation of water bodies, changes in their characteristics or alterations in their storage capacity.

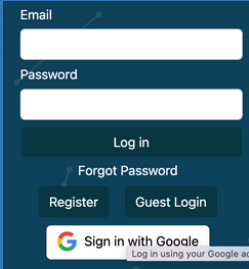


NIUA's Urban Water Body Diagnostic Tool

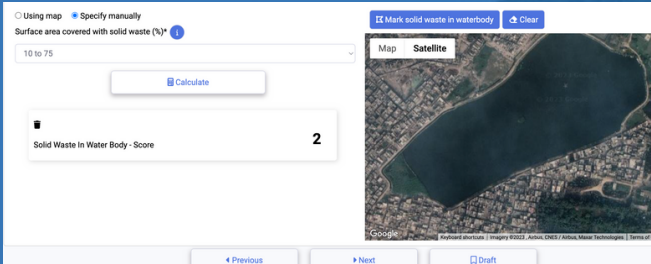
The web tool is meant to help city officials to identify and prioritise actions for rejuvenation of water bodies within their cities.

The diagnostic tool is based on assessing the status quo of urban water bodies, in terms of various physical, chemical, biological, and management parameters. Importantly, the tool helps in conducting a rapid assessment that a city can perform easily and periodically, in order to identify immediate actions for their management.

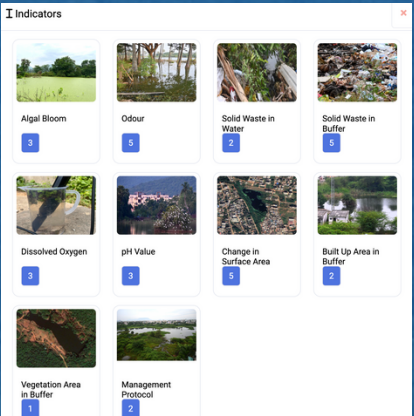
Easy sign-in process
Web-based Tool
Open for all



Satellite image assistance along the data input process for a better understanding of the conditions spatially



Multiple options for data input for various indicators
Automatic user database creation for analysed waterbodies on the tool.



Scan the QR code for more details



A decision support system for cities to manage the water bodies within their jurisdiction.



Supports the rapid assessment of the health of water bodies.



Can be used for all urban water bodies of area greater or equal to one Acre (4047 sqms)



Informs tangible actions for improving/ maintaining the state of water bodies.



Help city officials in identifying and prioritising actions for rejuvenation of water bodies

Access the Urban Water Bodies Diagnostic Tool at
<https://niua.in/rca/uwdtool/>
or
uwdtool.in