

# Hybrid-Annuity based Public Private Partnership (PPP) model for creation of sewage treatment infrastructure



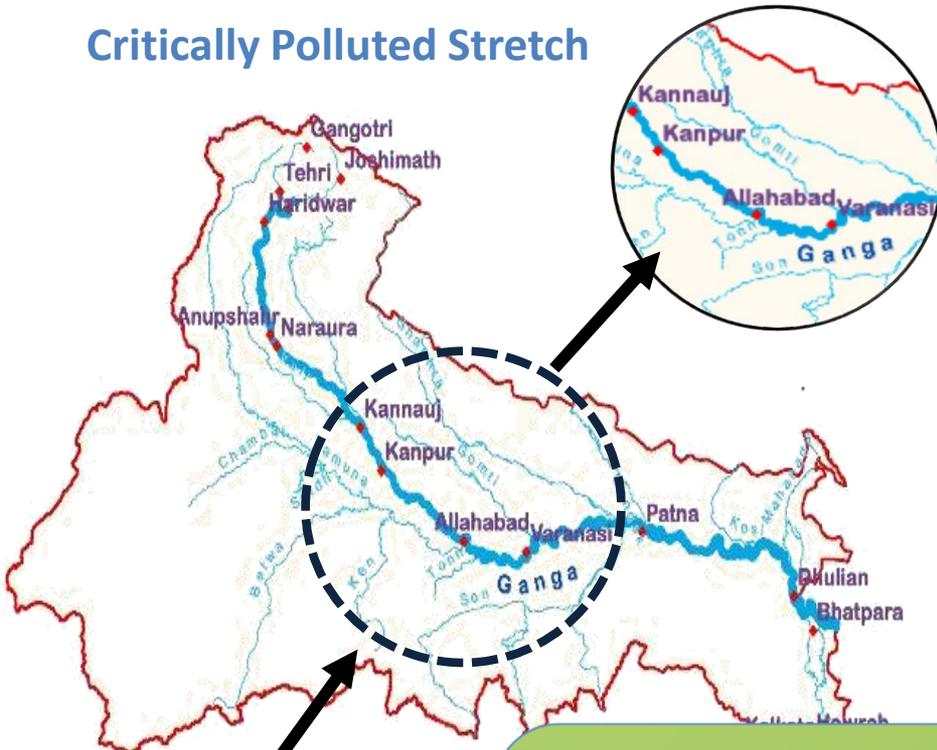
*Namami Gange Programme*

**NATIONAL MISSION FOR CLEAN GANGA**

**MINISTRY OF WATER RESOURCES, RIVER DEVELOPMENT & GANGA REJUVENATION**

# Overview- Pollution in River Ganga

## Critically Polluted Stretch



- Significant Investments (~ 4000 Cr) yet...
- STP Infrastructure created but largely Non-Functional / Inadequate / Inefficient
- 6000 + MLD treatment capacity gap in 5 basin states (*source: IIT*)
- River still polluted

# Namami Gange Programme

Programme approved by Gol with an investment of INR 12,728 crores for new initiatives

## Entry-level

- River Surface Cleaning
- Rural Sanitation
- Crematoria modernization/renovation/new construction
- Ghat repair

## Medium Term

- Municipal Sewage Management
- Industrial Effluents Management

## Long Term

- Ensuring adequate flow of water

## Other Activities

Biodiversity Conservation, Afforestation, Water Quality Monitoring

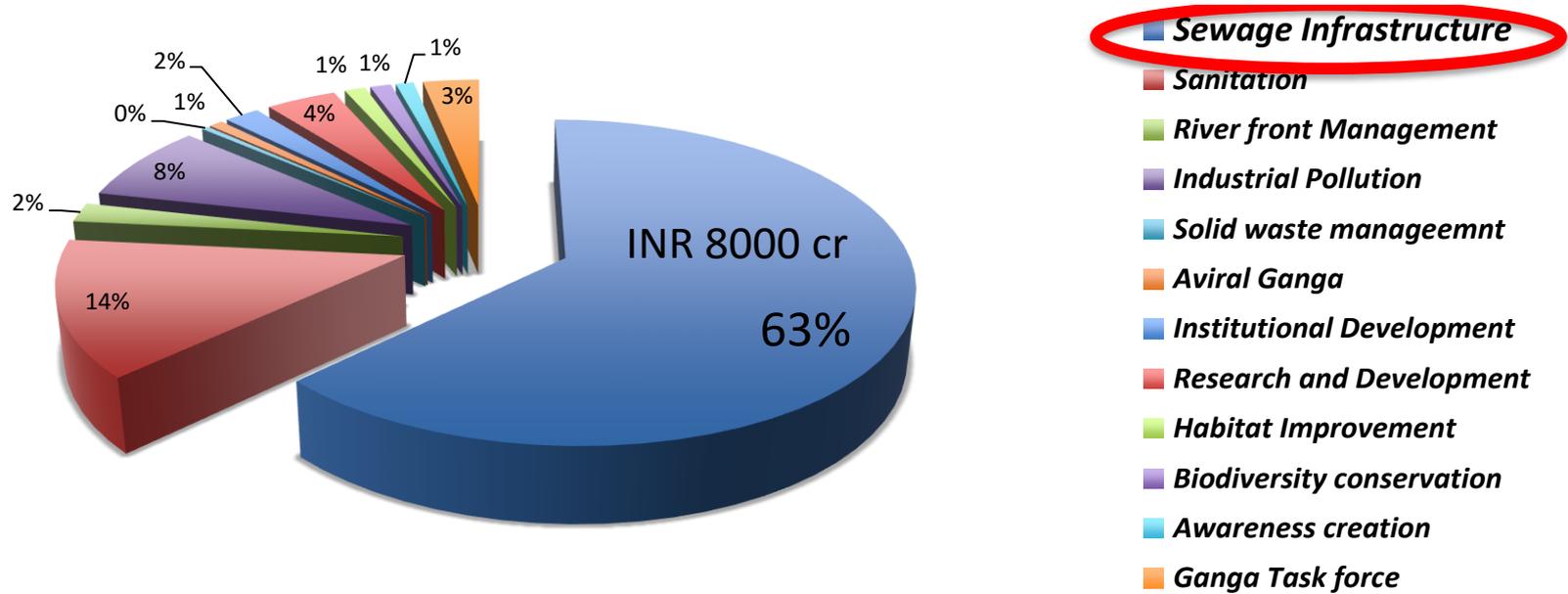
# Namami Gange Programme

**30%** of STPs monitored in UP, Uttarakhand, Bihar and West Bengal **were not operational, 94% were non-compliant** with prescribed standards\*

**Significant thrust to sewage infrastructure development - INR 8000 cr**

\*(source: CPCB)

## Financial outlay – Namami Gange Programme



**\*\*Percentage is relative to ₹ 12,728 crores earmarked for new initiatives**

# Sewage Treatment Capacity in Ganga Main Stem

## *Created Infrastructure & Gaps*

State	Total Capacity (MLD)	Gap (MLD)
Uttarakhand	122	130
Uttar Pradesh	2204	1330
Bihar	338	568
Jharkhand	12	640
West Bengal	638	1319
Total	3314	3987

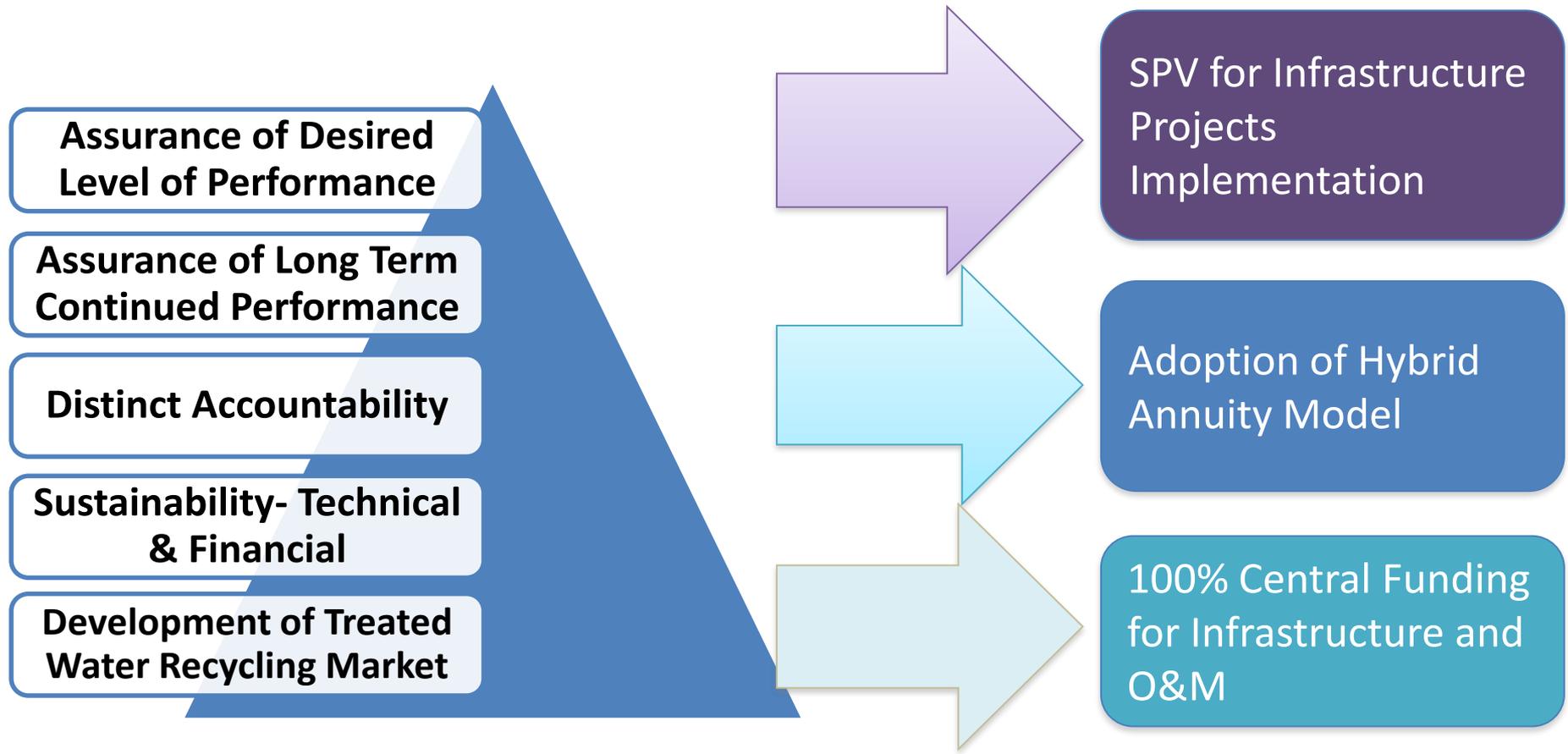
*\*figures are for complete state (not specific to towns around Ganga main stem)*

- ❑ 30% STPs not operational; 60% capacity utilized; treated water not of standard / quality
- ❑ **Total sewage generation** in Ganga basin (11 states) - **12051 MLD**
- ❑ **Gap in treatment capacity** - **6334 MLD** (11 states) *(source: consortium of IITs)*

**Target:** Additional 4000 Million Litres per Day (MLD) treatment capacity to be created

**Paradigm shift in approach required**

# Gov Initiative on Sewerage Management in Ganga Basin

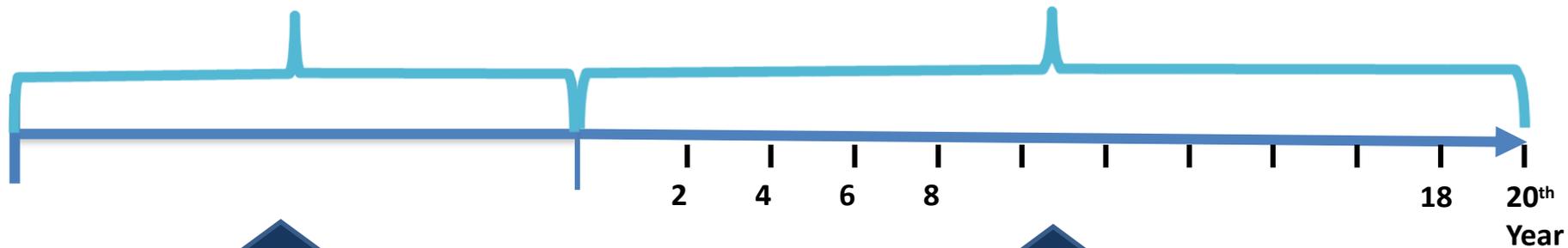


**BUSINESS AS USUAL ?**

# Hybrid Annuity Model

Construction Phase

O&M Phase

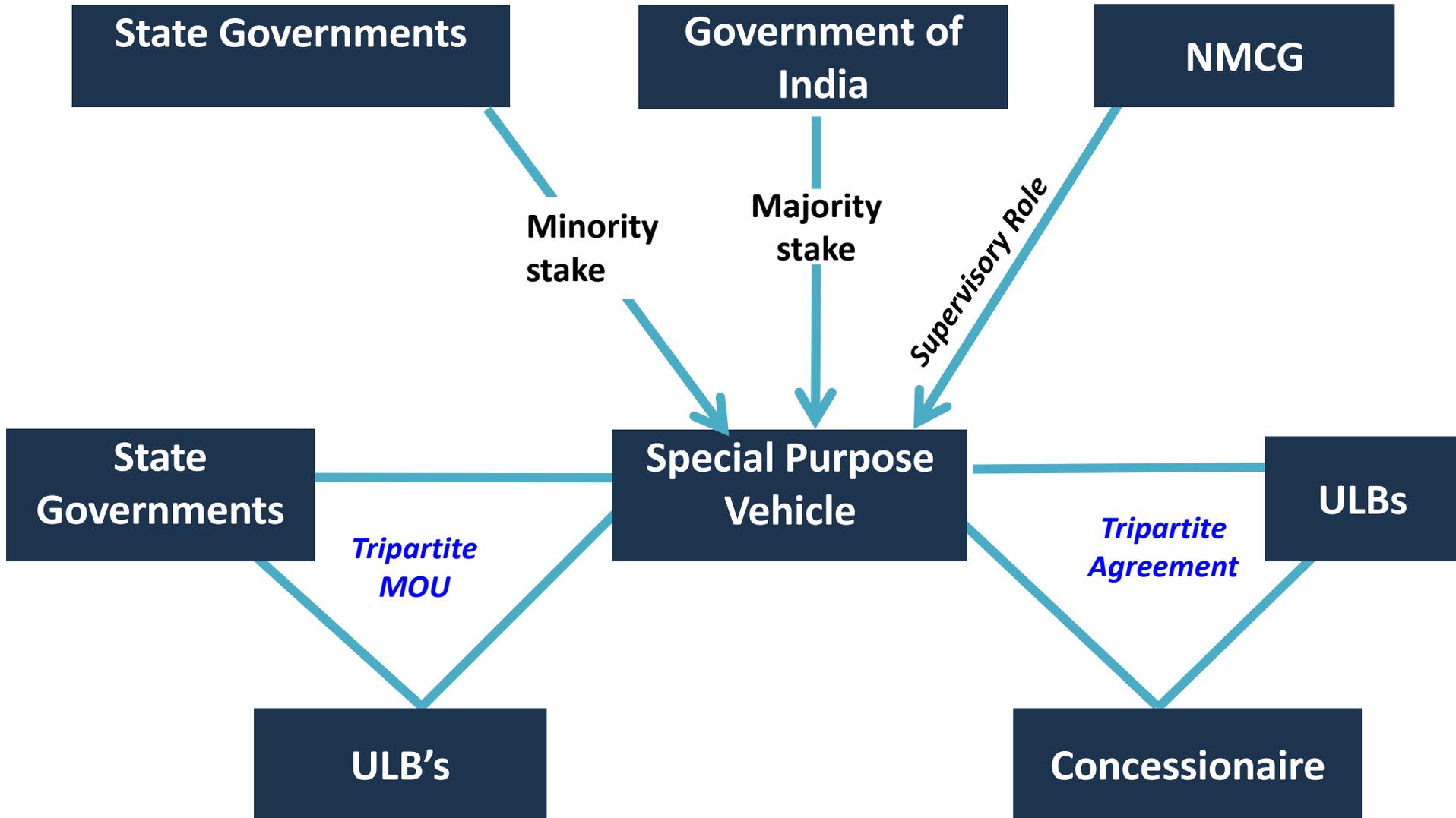


Upto 40% of Capital Cost  
by Government

Annuity payments

- *Remaining capital investment*
- *Annual O&M cost*
- *Payments linked to performance standards*
- *Independent of treated water recycling revenue*

# Institutional Arrangements



# Role & Responsibilities of Stakeholders

## SPV

- Facilitate hiring of concessionaires
- Finance capital cost for construction /rehabilitation of STP
- Cover O&M cost for concession period through performance based payments for water quality treated
- Create enabling framework for treated water market development

## State Govt.

- Provide necessary approvals, land for WWT plant
- Participate in evaluation process for selecting concessionaire
- Ensure tariff structure/ guidelines to promote reuse of treated WW
- Enabling reforms

## ULBs

- Delegate requisite powers & mandate to SPV for implementing investments
- Participate in evaluation process for selection of concessionaire
- Implement user tariffs to cover O&M cost

## Concessionaire

- Build Infrastructure
- Operate the sewage treatment plants for period of concession
- Ensuring prescribed quality of treated water
- Participate in market development for treated WW

# Payment Security Mechanism

Payments to be effected by SPV

Separate Account Having 2 Years Liabilities Set Aside through Budgetary Support

Additional funding through Clean Ganga Fund or Multilateral Funding, If Necessary

# Infrastructure Project Boundaries

Sewage Treatment / CETP operations of an entire city/town

O&M of existing STPs

Rehabilitation /upgradation of those in disuse/underuse

Creation of additional infrastructure required (I&D network and STPs)

O&M period of upto 20 years

Possible bunching of smaller cities /towns for viability

# Preparatory Activities Initiated

**Exhaustive condition assessment studies in priority towns by CPSUs in progress**

**EOI for appointment of transaction advisors**

**Treated water recycling potential/opportunities in three towns initiated**

**MoU with Ministry of Railways signed for treated water reuse**

**MoUs with Ministries of Power, Petroleum, Industries being worked out**

**Creation of Special Purpose Vehicle**

# Way Ahead

<b>March 2016</b>	<input type="checkbox"/> RFP for Transaction Advisory services to be issued <input type="checkbox"/> Special Purpose Vehicle to be created
<b>April 2016</b>	Condition Study Reports start arriving
<b>June 2016</b>	Appointment of Transaction Advisors
<b>December 2016</b>	Output from Transaction Advisors (Projects)
<b>Jan-March 2017</b>	Hiring of Concessionaires

*Thank you*