GOVERNMENT OF INDIA

MINISTRY OF HOUSING AND URBAN AFFAIRS

RAJYA SABHA

UNSTARRED QUESTION NO. 1336

TO BE ANSWERED ON DECEMBER 19, 2022

PERFORMANCE OF STATES IN AMRUT

NO. 1336. DR. SASMIT PATRA:

Will the Minister of Housing and Urban Affairs be pleased to state:

(a) the details of the performance of States in AMRUT;

(b) the details of best practices of States as seen in AMRUT; and

(c) the details of performance of the State of Odisha in AMRUT?

ANSWER
THE MINISTER OF STATE IN THE
MINISTRY OF HOUSING AND URBAN AFFAIRS
(SHRI KAUSHAL KISHORE)

(a): Atal Mission for Rejuvenation and Urban Transformation (AMRUT) focusses on providing universal coverage of water supply & substantial improvement in coverage of sewerage/septage management besides providing other basic amenities in 500 cities. Against the approved plan size of ₹77,640 crore, 5,873 projects worth ₹82,222 crore have been grounded. Of this, 4,676 projects worth ₹32,793 crore have been completed. Overall, works worth ₹66,313 crore have been physically completed & ₹59,615 crore expended on projects.

Till date, 134 lakh water tap connections and 102 lakh sewer connections (including households covered throughFaecal Sludge and Septage Management -FSSM) have been provided through AMRUT & convergence against targeted 139 lakh water connections and 145 lakh sewer connections respectively.

Total Sewage treatment capacity of 6,340 MLD is being developed through AMRUT projects. Of which, 2,840 MLD sewage treatment capacity has been created, & 1,437 MLD capacity has been developed for recycle/reuse.

AMRUT has led to development of 2,299 green parks adding 4,480-acre of green spaces. Additionally, 951-acre of green spaces will be added through ongoing park projects.

666 Storm Water Drainage projects have been completed under AMRUT. This has resulted in elimination of 2,434 water logging points and another 1,307 water logging points are in progress of elimination.

More than 250 Green Mobility projects have been completed to promote environment-friendly mode of transport and infrastructure

<u>Achievements through Reform component of AMRUT:</u>

Urban reforms are a core agenda under AMRUT spread over a set of 11 reforms comprising 54 milestones. ₹1,884.86 crore has been awarded as incentive to 25 States/UTs for reform implementation so far.

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For promoting energy conservation, 97 lakh out of 101 lakh identified conventional streetlights have been replaced with energy efficient LEDs leading to energy savings of 212 crore units per annum and reduction in CO2 emission by 16.93 lakh tons per annum.

To make cities credit worthy, Credit rating work has been completed in 470 cities. 164 cities have received Investible Grade Rating (IGR), including 36 cities with rating of A- or above.

₹3,940 crore has been raised through municipal bonds by 11 ULBs namely Ahmedabad, Amravati (AP), Bhopal, Ghaziabad, Hyderabad, Indore, Lucknow Pune, Surat, Vadodara and Visakhapatnam. ₹227 crore have been released as incentive to these ULBs for bonds issuance.

Online Building Permission System (OBPS) has been made operational in 2,465 towns including 457 AMRUT cities to facilitate online issuance of construction permits. This has resulted in improvement of India's rank in Ease of Doing Business (EODB) in construction permits to 27 in World Bank's Doing Business Report (DBR) 2020 from 181 in 2018.

Geographical Information System (GIS) based Master Plan will be prepared for 461 AMRUT cities which will result in efficient urban governance through various layers such as property tax, water and sewage coverage etc. Final plans have been prepared for 148 towns and draft plans are ready for another 135 towns.

To improve the capacities of States/cities in urban planning to promote land use efficiency and prevent urban sprawl, pilot scheme on implementation of Local Area Planning and Town Planning Scheme (LAP-TPS) have been taken up in 25 cities. Of these,12 cities have completed their draft LAP-TPS.

Against the committed central assistance of ₹36,036 crore, ₹31,198 crore has been released for projects of which ₹27,538 crore worth of utilisation certificates have been received. Overall, ₹37,533 crore has been released of which ₹33,234 crore worth of utilisation certificates have been received.

(b): The details of best practices of States/ Union Territories under AMRUT are at ANNEXURE-I.

(c): Nine cities are covered under AMRUT in State of Odisha. Against the approved plan size of ₹1,599 crore, State has grounded 191 projects worth ₹1,714 crore of which 186 projects worth ₹1,680 crore have been completed. Overall, physical works worth ₹1,712 crore have been completed & ₹1,597 crore worth of expenditure has been incurred.

So far 4.98 lakh tap connections & 4.14 lakh sewer connections/households coverage under septage management have been provided achieving the Mission targets. Under reform agenda, State has replaced 1.70 lakh conventional streetlights with LEDs resulting in estimated energy savings of 3.71 crore units/year and 0.30 lakh tonnes of CO_2 emission/year. State have implemented OBPS in all the Mission cities.

Against the committed central assistance of ₹797 crore, ₹785 crore has been released for projects against which ₹785 crore worth of utilisation certificates have been received. Overall, ₹913 crore has been released to the State against which ₹898 crore worth of utilisation certificates have been received.

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ANNEXURE-I REFERRED TO IN REPLY TO PART (b) OF RAJYA SABHA UNSTARRED QUESTION NO. 1336 REGARDING "PERFORMANCE OF STATES IN AMRUT", DUE FOR ANSWER IN THE RAJYA SABHA ON 19 DECEMBER, 2022.

BEST PRACTICES OF STATES/ UNION TERRITORIES UNDERAMRUT

S.No.	Project Details& Description
1.	**Tertiary Treatment Reverse Osmosis (TTRO) at Chennai, Tamil Nadu** • To manage increasing water demand, Chennai Metropolitan Water Supply & Sewerage Board (CMWSSB) started recycle of wastewater and also encouraged industries to reuse the treated water. • Two Tertiary Treatment plants of 45 Million litres Per Day (MLD) each based on Reverse Osmosis established at Kodungaiyur & Koyambedu, Tamil Nadu • Uses - secondary treatment of sewage for industrial use, public garden maintenance, power generation from sludge, recharge of lakes • Revenue of ₹16 crore/year being generated through sale of treated water to nearby petrochemical and fertilizer industries • Ultra-filtration to tap every drop of sewage to rejuvenate around 200 lakes.
2.	**Water Supply scheme at Shirdi, Maharashtra** • Shirdi Brings Down Water Percolation to Zero through geo-membraning • Shirdi Nagar Panchayat augmented water supply by successfully geo-membraning the balancing tank and thereby reducing the water percolation to zero. • Completed in 18 months, this AMRUT project with cost of ₹36.76 crore has ensured supply of water to the city daily as per the standard norms benefitting 3,569 households.
3.	**Water Scarcity to Water Security at Betul, Madhya Pradesh** • Project consisted of (a) Creation of new source for drinking water by constructing 183 m long barrage having 7 m depth, built across Tapti River, south of Betul town & (b) Water Supply distribution system across the town with distribution network of 65 Km. • Total cost of project is ₹32 crore. • The entire Water Supply System will be monitored by Supervisory Control and Data Acquisition (SCADA), technology which will help in real time monitoring and control of the entire system including maintaining adequate pressure, achieving required water quality and notification in case of any fault in the system. It will also enhance the reliability of the water supply system.
4.	**Initiatives of New Delhi Municipal Council to harvest rainwater in parks & road circles** • New Delhi Municipal Council (NDMC) has completed a rainwater harvesting project worth ₹1.08 crore under AMRUT. • The project involved construction of 25 rainwater harvesting system with storage reservoir having capacity of 50,000 litres at each location.
5.	**Komati Cheruvu Park, Siddipet, Telangana** • Siddipet Municipality in Telangana has developed Komati Cheruvu Park having an area of 4 acre. • Pathways, round seating arrangements, horticulture works, automated sprinkler system, bollard lights, compound wall etc. have been developed. • Park entrance ticket cost ₹10/- per person generating monthly income of about 6 lakh.

S.No.	Project Details& Description
	• Revenue of ₹1 lakh per month garnered by charging entry & hosting pre-wedding & birthday events.
6.	**Transformation of dumping yard to park – Kollam, Kerala** • Vehicle dumping yard transformed to a park equipped with restrooms, cafeteria, and parking at Kollam, Kerala • Project cost – ₹ 1.07 crore • Total area - 2,420 sq.m. • Households benefitted – 5,000 nos.
7.	**Water ATMs at Kullu, Himachal Pradesh** • Water ATMs are option at public places/slums with no water pipeline. • Facilities of water ATMs have been successfully extended at 11 different locations in Kullu. • The idea was to facilitate availability of clean and cheaper drinking water in public places. • Water ATMs dispense drinking water as cheap as ₹1 per litre and facilitate people to get 24x7 clean and safe drinking water. • Reduces usage of plastic bottle.
8.	**Filtration of Natural Springs in Shimla, Himachal Pradesh** • Installation of minor filtration units at 13 locations near natural springs to facilitate water use for non-drinking purpose • Water from spring is passed through filtered beds and stored in clean water tanks after disinfection • Project Cost - ₹33 lakh • This water can also be used for car washing, laundry, dust suppression etc.
9.	**Rejuvenation of century old Overhead Water Reservoir in Kolkata, West Bengal (in progress)** • Rejuvenation of century old 9-million-gallon reservoir is being done in Kolkata with project cost of ₹80 crore. • Present capacity - 32 MLD • Revamp of old steel structure with anti-aging protection by sandwiching a layer of concrete wall from all sides • Steel columns also being strengthened • Challenge is not to disrupt the present water supply to avoid inconvenience
10.	**Grid Connected Solar Power Plant at 345 MLD STP, Bharwara, Lucknow** • 345 MLD STP Bharwara is Asia's biggest Sewage Treatment plant, which is constructed on UASB technology. • To utilize the shadow free area available in STP campus, Grid connected ground mounted P.V. solar power plant has been constructed under AMRUT with project cost of ₹12.75 cr. • Project has led to generation of 6000 – 7000 units i.e. 60 – 70 % of daily consumption of STP. • Project payback period is 6-7 years and total life of plant is 25 years which means remaining 18 years of free power generation will save more than ₹40 crores during the entire life. • Pollution free energy generation reduced CO_2 emission and earned almost 2,000 carbon credit per year which is equivalent to 7,000 tree plantations in a year.
11.	**Natural treatment of wastewater: Rejuvenation of Shahdara Jheel in East Delhi** • Shahdara Jheel rejuvenation by East Delhi Municipal Corporation (EDMC) is expected to be a marvel in the field of management of open spaces and natural water

S.No.	Project Details& Description
	bodies. • The project has been considered under AMRUT Mission at a cost of ₹15 crore. • The project is in two phases and works of Phase-I including construction of wastewater treatment plant has already been completed. • The plant treats wastewater from the surrounding area of Naveen Shahdara. • Phase-II includes commissioning of a 3 MLD phytorid type treatment plant and landscaping including other design which are to be implemented by providing improved landscape to rejuvenate the Shahdara Jheel waterbody and surrounding area. • The rejuvenated water body is envisaged to enhance the bio aesthetical beauty of the area with positive public health impressions.
12.	**Upgradation of existing 82.5 MLD STP to 122 MLD at Anjana, Surat, Gujarat (project cost-₹103 cr.)** • The old sewage treatment plant at Anjana was based on the conventional activated sludge process with a capacity of 82.5 MLD serving about 13.54 sq.km area. • This has been upgraded to IFAS (Integrated Fixed Film Activated Sludge) process to achieve the norms prescribed by Central Pollution Control Board (CPCB)/Gujarat Pollution Control Board (GPCB). • For minimum disruption of existing plant and maximum utilization of the existing unit processes, advanced sewage treatment technology - Integrated Fixed Film Activated Sludge (IFAS) technology was adapted. IFAS system was retrofitted in the existing aeration tanks of sewage treatment plant to utilize the existing land without adding extra land. • The upgraded Sewage Treatment Plant (STP) & new STP are capable of handling high loads and achieve treatment upto Biological Nutrient Removal (BNR). • Control through SCADA System has added accuracy and enhanced the reliability of operation of STP. • Moreover, as an initiative towards Green Energy Generation from Sewage gas which was otherwise supposed to be released / burned in the atmosphere and to save GRID power consumption, Surat Municipal Corporation has taken an initiative to establish Biogas based power plant of 375 KWe. The electricity generated from this sewage gas-based power plant is being utilized as captive power plant for operation of STP.
13.	**Upgradation of Bamroli STP, Surat, Gujarat (project cost - ₹73 crore)** • The old sewage treatment plant at Bamroli was based on the UASB+ extended aeration with a capacity of 100 MLD. The STP serves about 18.93 sq.km area of Surat Municipal Corporation. • The existing STP was upgraded to IFAS (Integrated fixed film Activated Sludge) process to achieve the norms prescribed by CPCB/GPCB. • For minimum disruption of existing plant and maximum utilization of the existing unit processes, advanced sewage treatment technology - Integrated Fixed Film Activated Sludge (IFAS) technology was adapted. IFAS system was retrofitted in the existing aeration tanks of sewage treatment plant to utilize the existing land without adding extra land. • The upgraded STP is capable of handling high loads and achieve treatment upto Biological Nutrient Removal (BNR). • Control through SCADA System has added accuracy and enhanced the reliability of operation of STP. • Moreover, as an initiative towards Green Energy Generation from Sewage gas which was otherwise supposed to be released / burned in the atmosphere and to save GRID

S.No.	Project Details& Description
	power consumption, Surat Municipal Corporation has taken an initiative to establish Biogas based power plant of 0.25 MWe. The electricity generated from this sewage gas-based power plant is being utilized as captive power plant for operation of STP.
14.	**Upgradation & augmentation of Bhesan STP at project cost of ₹189 crore** • The old sewage treatment plant at Bhesan was based on the conventional activated sludge process with a capacity of 100 MLD. • The total wastewater generation in the catchment area of Bhesan STP was estimated to be 255 MLD for the year 2044 and 200 MLD for the year 2033. So as per development within the catchment area and as per population forecast, new 100 MLD STP based on oxidation ditch technology is constructed at Bhesan, in addition to 100 MLD existing treatment plant. • The existing 100 MLD Bhesan STP based on Conventional Activated Sludge Process was upgraded to IFAS (Integrated fixed film Activated Sludge) process to achieve the latest norms prescribed by National Green Tribunal (NGT). • For minimum disruption of existing plant and maximum utilization of the existing unit processes, advanced sewage treatment technology - Integrated Fixed Film Activated Sludge (IFAS) technology was adapted. IFAS system was retrofitted in the existing aeration tanks of sewage treatment plant to utilize the existing land without adding extra land. • The upgraded STP & new STP are capable of handling high loads and achieve treatment upto Biological Nutrient Removal (BNR). • Control through SCADA System has added accuracy and enhanced the reliability of operation of STP.
15.	**Refurbishment of Existing Pedestrian Bridge Linking Central Library and Creek, Panaji, Goa (Project cost – 1.68 crore)** • Also called the "Birds of Goa Bridge" • The project has helped connect the areas lying on the either sides of the Rua de Ourem Creek. • The existing bridge was refurbished with an attractive collage of the various species of birds found across the State thus enhancing this area through the elimination of the steps and reorganization and installation of upgraded services and utilities, thus enhancing the overall durability of the bridge and ensuring its long life. • All the utilities were shifted from the bridge slab and placed below it thus making the space available for pedestrians.
16.	**Development of the walkway along central library side of the creek, Panaji, Goa** • More commonly known as the "Boardwalk across the Mangroves" the Boardwalk displays state-of-the-art use of design and aesthetics in harmony with the natural environmental settings • The walkway is made entirely of wood, a naturally found ingredient. The total area of the walkway is 1,100 sq. m. • The foundation is built using water resistant Jamba wooden bally piles of diameter 150mm. For the decking pattern, the Wood Plastic Composite (WPC) material that is used is fixed on primary and secondary beams that are made up of Indian Teak Wood. • The Walkway is like an open air interpretation center that helps bring about awareness amongst the citizens on various types of mangroves and their importance in Goa's ecosystem, of flora and fauna and other ecological biodiversity.
17.	**Improvement of Ferry service along NH-1 at Uluberia Municipality, West Bengal** • Project completed under AMRUT at a cost of ₹2.5 crore. The old jetty which was built under JnNURM has weakened due to scouring which necessitated development

S.No.	Project Details& Description
	of new jetty. The new jetty built is of floating type which will service ferries by adopting to variation in water level. • The ferry from Uluberia connects districts of Howrah and South 24 Parganas. • This service reduces travel time of 3hrs by road to 0.5 hrs by waterways, thereby helping mitigate pollution and providing a very economical mode of transport to public. The cost of one-side journey in ferry is ₹10 only.
18.	**Septage Management at Puri, Odisha** • The 50 KLD Septage Treatment Plant (SeTP) employs co-treatment for septage management. • The solids present in the septage are separated in a setting-cum-thickener tank and taken to the sludge drying bed for drying and disposal. The liquid part of the septage is treated in the 15 MLD STP located adjacent to the SeTP. • The SeTP is co-located with the existing STP and is designed to work on co-treatment process, where effluent from settler-cum-thickener is pumped to STP for treatment and the settled sludge is taken out to the sludge drying bed.
19.	**Rejuvenation of Clusters of Lanes of Althino Steps, Panaji, Goa (Project cost ₹3.88 crore)** • Upgradation of Mushtifund High School Steps and the Steps near the Well stairway to provide pedestrian access to Altinho. Further, renewal of steps with new paver blocks, provision of handrails, painting of walls, provision of light poles, utilities shifted underground and renovation of storm water drains was undertaken.
20.	**Development of Open Spaces Opposite Old IPHB Complex at Altinho, Panaji, Goa** • The park & public spaces project completed at a cost of ₹0.74 crore comprises of paving the entire floor area of the garden, providing seating areas with glass mosaic tiles at the front face and granite atop, fixing of kerb stones at the periphery of the garden area, pergola with cross beams and planters and soft/hard landscaping.
21.	**Construction of Multilevel Car Parking at SMG, Srinagar, J&K. (Cost of the project Rs. 29.63 Cr)** • The salient features of the project include construction of 3 Floors, with capacity of parking for 500 Cars and 150 Two wheelers with a built-up area: 38,000 sq.ft. • The project benefits include: ✓ Reduction of on street parking & traffic congestion on road-side area ✓ Providing safe, secure and efficient vehicular circulation/ passage inside as well as outside parking facility, ✓ Providing good public amenities for residents & tourists in the area.
22.	**164 KLD Septage Treatment Plant at Alluchi-Bagh / Tengpora Srinagar Zone-I, Srinagar Project Cost ₹4.92 crore** • FSTP has been constructed under AMRUT with Activated Sludge Process (ASP) with supervisory control and data acquisition (SCADA) system also includes purchase of Sucker& Jetting Machines for transportation of Sewage. • The project provides ✓ Benefit to 3.08 Lac population comprising 61,672 households. ✓ No sewage discharge into water bodies and open fields leading to reduction of pollution to water bodies & hygienic environment.
23.	**Gwalior sewerage scheme, Madhya Pradesh** • Total sewerage generation under Gwalior Municipal Area is 147 MLD (yr 2021). • Total sewerage treatment capacity of GMC is 222 MLD: 145 MLD Jalalpur, 65 MLD Laltipara, 8 MLD Shatabdipuram and 4 MLD Lashkar. • Actual Utilized capacity in all 4 Operational STP is 115 MLD

S.No.	Project Details& Description
	• 100% Reuse of treated Effluent is done for 145 and 65 MLD STPs as effluent is directly tapped into the Irrigation Canal. • Sewer Network laid is 291.26 kms • House service connections is 1,70,435.
24.	**Indore Sewerage Scheme, Madhya Pradesh** • Sewage Generation: 367.8 MLD (yr 2020) • Established Capacity: 416.5 MLD (10 STP and 1 CETP) • Online Continuous Effluent Monitoring System (OCEMS)of STPs has been set up for Effluent Monitoring • Rejuvenation of River Kanh and River Saraswati - IMC has trapped a total 1746 nos. major outfalls & 5,624 minor outfalls • Total Sewerage network in city limits is of 2,180 Km. **Reuse of Treated Water in Indore: 367.8 MLD** • Treated wastewater is being reused for Horticulture, Road cleaning, Construction, Lake filling and agriculture • IMC is earning Rupees 10 Lacs/month by selling Treated Water • In Indore City, One No of Sludge Hygienisation Plant with 500 KLD capacity established.

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