**TEMPLATE FOR Service level improvement plan (Sewerage)**

1. **Assess the Service Level Gap**

The first step is to assess the existing situation and service levels gaps for Sewerage (AMRUT Guidelines; para 3 & 6). This will also include existing institutional framework for the sector. For this City has to review all policy, plans, scheme documents etc. to identify service level gaps and hold discussions with officials and citizens. AMRUT is focused on improvement in service levels. The zone wise data shall be used in identifying the gaps. These zone-wise gaps will be added to arrive at city level service gaps. While assessing service level gap reply following questions not more than word indicated against each question.

* What kind of baseline information is available for sewerage system of the city? Detail out the data, information, plans, reports etc related to sewerage available with city? Is zone wise information available? Have you correlated your data with census 2011 data? (100 words)

**The baseline information available with the city regarding sewerage system is –** Master Plan/ Development Plan/ City Development Plan/ SERVICE LEVEL BENCHMARKS – ANY OTHER PLAN/ REPORT/ DATA PLEASE SPECIFY.(Corporation has conducted a survey for Slum Development on 2013).

**At present there is no integrated sewerage system in town. All households in the city have individual septic tanks and overflow is draining in drains/nallahas.**

**Yes we have correlated our data with the census 2011 data. The non-toilet household were 10814 nos. as per 2011 census and as per July 2015 survey by corporation these are 5019 nos. and this data collection is ongoing proses for new development areas.**~~PLEASE MENTION WHAT DATA IS AVAILABLE WITH ULB (Survey by corporation)~~

* What are existing service levels for sewerage for coverage of sewerage network services, efficiency of collection of sewerage and efficiency in treatment. Provide information in table 2.1

Table 2.1: Status of sewerage network and Service Levels~~PLEASE MENTION SOURCE OF THE DATA~~(Source- from field data collection by corporation)

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Indicators (as per SLB framework) | Existing Service Level | MOUD Benchmarks |
| 1 | Coverage of latrines (individual or community) | 82.4% | 100% |
| 2 | Coverage of sewerage network services | 0% | 100% |
| 3 | Efficiency of collection of sewerage | 0% | 100% |
| 4 | Efficiency in Treatment: Adequacy of sewerage treatment capacity | 0% | 100% |

* What is the gap in these service levels with regard to benchmarks prescribed by MoUD? (75 words)

**As explained the town does not have integrated sewerage system. There is an upmost need of integrated sewerage system in accordance to MoUD norms. Coverage of latrines gap is 17.60%.**

* Does city has separate drainage system or sewer lines take care of storm water? (50 words)

**The city does not have a separate drainage system or ewer line for storm water. The city only has open drains to carry the storm water. However, in some areas of the city these drains also carry sewage as sewage is discharged in the drains in absence of a sewerage system. The carrying capacity of these drains have been adversely affected due to siltation and physical damages with the time.**

Sewerage network And Collection of Sewerage

* How much of the area of the city is covered by sewerage network? What is the status of household connections in each zone? What are the areas covered under septage? Provide information in Table 2.2.

Table 2.2: Zone Wise Coverage of Households

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone No** | **Total No of Households** | **Households with Sewerage Network** | **Households with Septic Tank** | **Households without any outlets for toilets** |
|  | 40520 | - | 33388 | 7132~~ARE THESE SLUM HOUSEHOLDS? PLEASE MENTION THE WARD NUMBER OF THESE HOUSEHOLDS~~Ward no. includes 1,2,3,4,5,7,8,9,10,  11,12,20,21,23,24,26,  27,29,30,31,32,33,34,35,  36,37,38,39  total 38 wardsout of 48 wards. Approx. 80% Slum HHs are there. |

* Are there any areas where sewer lines have been laid but still households are not connected to sewer lines? Are there any areas where toilets may be connected to sewer lines but kitchen or bathroom waste are not connected to sewerage system? (75 words)

**The city lacks a sewerage network and therefore none of the households are connected with a sewerage line. Most of the households have septic tanks to collect the sullage and sewage. However, due to lack of maintenance septic tanks overflow at times and water drains into storm water drain. Water from bathroom and kitchen is drained in the storm water drains.**

* Is there any systematic and organized method to collect and treat waste from septic tanks? What is the duration of cleaning of septic tanks (monthly, quarterly, semiannually or annually)? Indicate status of overflows of septic tanks, either in the nearby drains /open fields/ sewerage lines etc? (75 words)

**No there is no systematic and organized method to collect and treat waste from septic tanks. The households inform the corporation when their septic tank gets filled. The Corporation then lends it’s sever with 1 no. suction machine capacity 2500 ltr. on chargable basis which cleans septic tank. Furthermore the Corporation is planning to procure 2nos. new suction machine with capacity 2500 ltrs under upcoming scheme (AMRUT).Yes the septic tanks overflows in nearby nallahs or storm water drain.**

* What is the situation of O&M of the existing sewerage system? Does the city has routine maintenance system or breakdown maintenance system? What is the duration of cleaning ofsewer lines (monthly, quarterly, semiannually or annually)? Indicate infrastructure available for O&M of the sewerage systemi.e sewer jetting machines etc? (100 words)

**There is no integrated sewerage system in the city currently. The Operation & maintenance of sewer lines /septic tanks is taken care by Municipal Corporation.There is one sewage cleaning machine. Septic Tanks are cleaned as and when required.**

Sewage Treatment System

* Does city has Sewage Treatment Plant (STP)? Which areas are covered under each of the STPs? Provide details in Table 2.3.

No there is no STP in city.DO THEY HAVE AN OXIDATION POND?NO

Table 2.3: Status of Existing STPs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Location | Capacity (MLD) | Inflow in the STP (MLD) | Efficiency in % |
|  | - | - | - | - |

* Does decentralized waste treatment system exist or planned in the city? If yes, provide details (75 words)

**No, there is no decentralized waste treatment system or planned in the city.**

* How much of sewerage is generated in the city? How much of this sewerage generated reaches the STPs? What is the Biological Oxygen Demand (BOD) of incoming and outgoing sewage of each STP? (100 words)

Ans:-**There is no data available.**~~PLEASE CHECK~~

* Is treated sewage being reused or recycled? Is treated water being used for irrigation or industrial purpose? Does the option of power generation being explored? (75 words)

Ans:-**NA**

Institutional Framework

* Define role and responsibilities in terms of O&M, policy planning, funding, service provision in table 2.4.

Table 2.4: Functions, roles, and responsibilitiesWHAT IS THE STATUS OF SELECTION OF CONSULTANT FOR PLANNING AND CONSTRUCTING SEWERAGE SYSTEM IN THE CITY?Planning with AMRUT Scheme

|  |  |  |
| --- | --- | --- |
| Planning and Design | Construction/ Implementation | O&M |
| Municipal corporation Raigarh through consultant | Municipal corporation Raigarh through open bidding process | Municipal corporation Raigarh |

* Please also detail that how city is planning to execute projects. Shall the implementation of project be done by Municipal Corporation or any parastatal body? (75 words)

The ULB IS PLANNING TO APPOINT A CONSULTANT FOR DESIGNING AND CONSTRUCTING THE SEWERAGE NETWORK. THE CONSULTANT SHALL BE APPOINTED THROUGH OPEN BIDDING. THE CONSULTANT WILL ALSO BE INVOLVED IN OPERATION AND MAINTENANCE OF SEWER LINES AND STP’S.

1. **Bridging the Gap**

Once the gap between the existing Service Levels is computed, based on initiatives undertaken in different ongoing programs and projects, objectives will be developed to bridge the gaps to achieve universal coverage. (AMRUT Guidelines; para6.2 & 6.3, Annexure-2; Table 2.1). Each of the identified objectives will be evolved from the outcome of assessment and meeting the opportunity to bridge the gap.

* List out initiatives undertaken in different ongoing programs and projects to address these gaps. For this provide details of ongoing projects being carried out for sewerage system under different schemes with status and when the existing projects are scheduled to be completed? Provide information in Table 2.4

Table 2.4: Status of Ongoing/ Sanctioned

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.No.** | **Name of Project** | **Scheme Name** | **Cost in RsCrore** | **Month of Completion** | **Status**  **(as on dd Month 2015)** |
|  | NA | NA | NA | NA | NA |

* How much the existing system will able to address the existing gap in sewerage system? Will completion of above will improve the coverage of network and collection efficiency? If yes, how much. (100 words)

A planned underground drainage scheme with STP’s is required for the city.

* Does the city require additional infrastructure to improve the services? What kind of services will be required to fulfill the gap?

An **Integrated sewerage system is required for 100% coverage of town.**

* How does the city visualise to take the challenge to rejuvenate the projects by changing their orientation, away from expensive asset replacement programs, to focusing on optimum use of existing assets?

**The town does not have any existing sewerage system. The sewerage system is very much required for the town.**

Provide information in Table 3.5.

Based on assessment of existing infrastructure and ongoing / sanctioned projects, calculate existing gaps and estimated demand by 2021 for sewerage network, number of household to be provided with connections, and required enhancement in capacity of STP (MLD), area to be covered under septage management. Based on the demand and gap assessment, evolve objectives to achieve bridging these gap.

1. **Examine Alternatives and Estimate Cost**

The objective will lead to explore and examine viable alternatives options available to address these gaps. These will include out of box approaches. (AMRUT Guidelines; Para 6.4 & 6.8 & 6.9). This will also include review of smart solutions. The cost estimate with broad source of funding will be explored for each alternative. While identifying the possible activities, also examine the ongoing scheme and its solutions including status of completion, coverage and improvement in O&M. Please reply following questions in not more than 200 words.

* What are the possible activities and source of funding for meeting out the objectives?

**There are no funding agencies are allotted yet instead of AMRUT.~~The proposed project is to funded under various schemes~~**~~(PLEASE MENTION WHICH SCHEMES?)~~ **~~/Foreign(PLEASE PROVIDE NAME OF THE DONOR AGENCIES) funding having maximum grant component so as to reduce the financial burden of ULB.~~**

* How can the activities be converged with other programmes like JICA/ ADB funded

projects in the city etc?

**No activities or programmes of Sewergae system is being considered/proposed in JICA and ADB so convergence of the proposed sewerage system in any other plan is out of question**

* What are the options of completing the ongoing activities?

**There is no on-going sewerage activities in town.**

* How to address the bottlenecks in the existing project and lessons learnt during

implementation of these projects?

**Not Applicable as there is no sewerage system in the city.**

* Has projects includes O&M of sewerage system?

**Yes the proposed project includes O&M of the sewerage system.**

* What measures may be adopted to recover the O&M costs? Can the option of sale

of treated wastewater be applicable to recover the O&M **cost.**

**The sale of treated water** (TREATED WATER WILL BE SOLD TO WHOM – INDUSTRIES? IRRIGATION PURPOSES?)**alongwith Sewerage cess shall be imposed for recovering the O&M cost.No Proposal for selling.**

* What are innovative alternative solutions explored in achieving objectives?

**The innovative solutions in the form of SBR technology for sewage treatment plant so that the treated water can be reused and the land requirement for setting of STP can be minimised. Also it is proposed to use the best available pipe material in terms of life and performance i.e., Double wall corrugated HDPE pipes alongwith Ductile Iron pipe for pumping and trunk sewer lines.**

* Are different options of PPP such as Design-build-Operate-Transfer (DBOT),

Design Built Finance Operate and Transfer (DBFOT) are considered?

**The project execution is on DBOT basis wherein EPC contractor shall execute the project on detailed designs prepared by him after approval by the competent authority. The consultant will operate and maintain the facility for 20 years including sewer lines and STPs.**

* How the recycle and reuse of water will be done? How much quantity of treated

water may be reused?

**To be finalized soon**

* Have you analysed best practices and innovative solutions in sewerage sector? Is

any of the practice be replicated in the city?

**SBR technology is proposed for sewage treatment so as to keep the BOD load and land requirement minimum. Also PLC SCADA shall be done to reduce the man power cost.**

* Have you identified the areas for decentralized waste treatment system? Explore

the approaches for septage management i.e People Public Private Partnership (PPPP) model or replacing septic tanks by bio-digesters, bioremediation etc.

**SBR technology is proposed for sewage treatment so as to keep the BOD load and land requirement minimum. Also PLC SCADA shall be done to reduce the man power cost.**

For each identified activity and alternative indicate the cost estimate with broad source of funding will be explored for each alternative in Table 3.6

1. **Citizen Engagement**

Each alternative will be discussed with citizens and activities to be taken up will be prioritized to meet the service level gaps. ULB will prioritize these activities and their scaling up based on the available resources. (AMRUT Guidelines; Para 6.6, 6.7 & 7.2). Please reply following questions in not more than 200 words.

**The work of the sewergae system shall be carried out by Municipal Council. For this the detailed plan shall be prepared by Municipal Council. The plan shall be approved by the Municipal Council wherein councilors shall discuss and approve the plan therby ensuring the participation of stakeholder**

* Has all stakeholders involved in the consultation?

**NO**(PLEASE MENTION IN DETAIL THE DATE AND DAY OF CONSULTATION, NUMBER OF PARTICIPANTS, WHO WERE INVITED, WHERE WAS THE CONSULTATION HELD, WHAT ISSUES WERE RAISED IN THE CONSULTATION BY THE CITIZENS, WHAT IDEAS/ SUGGESTIONS WERE GIVEN, HOW MANY CONSULTATION HAVE BEEN HELD IN THE CITY AND ARE THESE HELD IN EACH ZONE?)

* Has ward/ zone level consultations held in the city?

**NO**(CONSULTATIONS HAVE BEEN CONDUCTED IN HOW MANY WARDS)

**48 wards**

* Has alternativesexplored are crowd sourced?

**YES**

* What is feedback on the suggested alternatives and innovations?

**Septic tanks should be cleaned as per schedule.**

* Has alternative taken up for discussions are prioritized on the basis of

consultations?

**Yes**

* What methodology adopted for prioritizing the alternatives?

**As per AMRUTGuidelines**

1. **Prioritize Projects**

Based on the citizen engagement, ULB will prioritize these activities and their scaling up based on the available resources to meet the respective objectives. While prioritizing projects, please reply following questions in not more than 200 words.

* What are sources of funds?

**The sources of funds shall be Grant in aid from GOI/GoCGalongwith the possible investment from ULB.**

* Has projects been converged with other program and schemes?

**~~The proposed project shall be converged into the existing sewerage facilities if any.~~**~~PLEASE MENTION THE NAME OF THE SCHEME WITH WHICH THE PROPOSED SEWERAGE PROJECT MAY BE CONVERGED.~~There is no existing schemes are ongoing so convergence is not possible.

* Has projects been prioritized based on “more with less” approach?

**YES**

* Has the universal coverage approach indiated in AMRUT guidelines followed for prioritization of activities?

**The proposed work of the sewerage system shall ensure universal coverage approach as indicated inAMRUT guidelines and rejuvenation of town in terms of cleanliness and hygienic environment.**

1. **Conditionalities**

Describe the Conditionalities of each project in terms of availability of land, environmental obligation and clearances, required NOC, financial commitment, approval and permission needed to implement the project. Please reply following questions in not more than 100 words.

**The ULB is committed for the financial participation as per the guidelines of the AMRUT programe. The project to be prepared for lying of a sewerage system shall be approved by GoMP and the tenders called for the execution of the works shall also be approved by GoCG as per prevailing norms**

1. **Resilience**

Required approvals will be sought from competent authority and organizations. The resilience factor would be built in to ensure environmentally sustainable sewerage scheme. Please reply following questions in not more than 100 words.

**100%**PLEASE PROVIDE AN EXPLANATION

1. **Financial Plan**

Once the activities are finalized and prioritized after consultations, investments both in terms of capital cost and O&M cost has to be estimated. (AMRUT Guidelines; para 6.5) Based on the investment requirements, different sources of finance have to be identified. Financial Plan for the complete life cycle of the prioritized development will be prepared. (AMRUT Guidelines; para 4, 6.6, 6.12, 6.13 & 6.14). The financial plan will include percentage share of different stakeholders (Centre, State and City) including financial convergence with various ongoing projects. While preparing finance plan please reply following questions in not more than 200 words

* does financial plan for the complete life cycle of the prioritized development?

**To be decided on State level**

* does financial plan include percentage share of different stakeholders (Centre, State, ULBs and)

**YES**

* does it include financial convergence with various ongoing projects.

**No**

* Does it provide year-wise milestones and outcomes ?

**There are no funding agencies are allotted yet instead of AMRUT scheme.~~The proposed project is to funded under various schemes~~**~~(PLEASE MENTION WHICH SCHEMES?)~~ **~~/Foreign funding (PLEASE PROVIDE NAME OF THE DONOR AGENCIES)having maximum grant component so as to reduce the financial burden of ULB~~**

work and Service Levels

|  |  |  |  |
| --- | --- | --- | --- |
| Sr. No. | Indicators | Existing Service Level | MOUD Benchmarks |
| 1 | Coverage of latrines (individual or community) | 82.4% | 100% |
| 2 | Coverage of sewerage network services | 0% | 100% |
| 3 | Efficiency of collection of sewerage | 0% | 100% |
| 4 | Efficiency in Treatment: Adequacy of sewerage treatment capacity | 0% | 100% |

Table 3.2 Zone Wise Coverage of Households

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zone No** | **Total No of Households** | **Households with Sewerage Network** | **Households with Septic Tank** | **Households without any outlets for toilets** |
| Zone 1 | 16453 | - | 13654 | 2799 |
| Zone 2 | 11651 | - | 9605 | 2046 |
| Zone 3 | 12416 | - | 10129 | 2287 |

Table 3.3: Status of Existing STPs

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Sr. No. | Location | Capacity (MLD) | Inflow in the STP (MLD) | Efficiency in % |
| - | - | - | - | - |

Table 3.4: Status of Ongoing/ Sanctioned

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **Name of Project** | **Scheme Name** | **Cost in RsCrore** | **Status**  **(as on dd Month 2015)** |
|  | - | - | - | - |

Table 3.5: Demand Gap Assessment

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Component | Existing | Ongoing projects | Existing + Ongoing | 2021  (Short term) | |
| **Demand** | **Gap** |
| Sewerage network (km) | - | - | - | 554.48 km | 554.48 km |
| No of Households covered under sewerage system | - | - | - | 71162 | 71162 |
| Sewerage Treatment Plant (MLD) | - | - | - | 36.93 | 36.93 |

Table 3.6: Cost Estimate for each Objective:

|  |  |  |  |
| --- | --- | --- | --- |
| S.No | Activity | Basis | Amount in Rs.Cr |
| 1 | Septage Management | As per DPR | 10.00 |
| Total = | | | 10.00 |

Table 8.1 MasterPlan ofSewerage Projects for Mission period

(As per Table 2.1of AMRUT guidelines)

(AmountinRs. Cr)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sr.  No. | Project Name | Prioritynumber | Year inwhichtobeimplemented | Year in which proposed to be completed | Estimated Cost |
| 1 | Septage Management | 1 | 2015-16 | 2016-17 | 10.00 |
| Total | |  |  |  | 10.00 |

Table 8.2 Year wise Plan for Service Levels Improvements during mission period

(As per Table 2.5 of AMRUT guidelines)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Proposed  Projects | Project  Cost | Indicator | Baseline | AnnualTargets  (IncrementfromtheBaselineValue) | | | | | |
| FY2016 | | FY  2017 | FY  2018 | FY  2019 | FY  2020 |
| H1 | H2 |
| Septage | | | | | | | | | |
| Septage Management | 10.00 | Coverage | 0% | 0% | 15% | 100% | 100% | 100% | 100% |

Table8.3 AnnualFundSharingPattern forSewerageProjects

(As per Table 2.3.1of AMRUT guidelines)

(AmountinRs. Cr)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sr.  No. | Name of Project | Total Project  Cost | Share | | | | |
| GOI | State | ULB | Others | Total |
| 1 | Septage Management | 10.00 | 5.00 | 3.00 | 2.00 | - | 10.00 |
|  | Total | 10.00 | 5.00 | 3.00 | 2.00 | - | 10.00 |

Table 1.10 Annual Fund Sharing Break-up for SewerageProjects

(As per Table 2.3.2 of AMRUT Guidelines)

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sr.  No. | Project | GoI | State | | | ULB | | | Convergence | Others | Total |
| 14th  FC | Others | Total | 14th  FC | Others | Total |
| 1 | Septage Management | 10.00 | - | 5.00 | - | - | 2.00 | - | - | - | 10.00 |
|  | Total | 10.00 | - | 5.00 | - | - | 2.00 | - | - | - | 10.00 |

Table 1.8 Master Service Levels Improvements during Mission Period

(As per Table 2.2 of AMRUT guidelines) (AmountinRs. Cr)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Project Name | Physical  Components | Change in Service Levels | | | Estimated Cost |
| Sr.  No. | Indicator | Existing  (As-Is) | After  (To-be) |
| 1 | Septage Management | 3 Nos HTP & Vehicle | coverage | 0% | 100% | 10.00 |
|  | Total |  |  |  |  | 10.00 |