



ASIAN INFRASTRUCTURE INVESTMENT BANK

URBAN INCLUSIVE SANITATION PROJECT

PROJECT PREPARATION / APPROVAL

PROPOSAL FOR TECHNICAL ASSISTANCE

08.02.2022

SUMMARY

- Further to our recent discussions (*and the TOR shared by AIIB on 04.01.2022*), the CWIS TA Hub for South Asia has put together a conceptual proposal to provide the TA support help accelerate the project preparation and approval process of the **“Bangladesh Urban Inclusive Sanitation Project (P000553)”** financed by Asian Infrastructure Investment Bank (AIIB).
- It is our understanding that the AIIB funded project aims to adopt the CWIS approach through the following:
 - Explore integrated approach by supporting both **infrastructure development** (with locally adoptable and innovative solutions) and **institutional building** (e.g., development of an integrated information management system for more efficient and sustainable operations) – across the entire sanitation value chain.
 - Explore options for a **clustering / phased approach**
 - Adopt **climate resilient designs** and **sustainable operation and maintenance arrangements**
 - Explore **private sector engagement modalities**
- The request from AIIB to TA Hub to **enhance project Feasibility Study (FS)** in sufficient detail to ensure project readiness and compliance with all the requirements for the financing of AIIB and GoB.

CWIS TA Hub

- CWIS TA Hub is an initiative of the Bill & Melinda Gates Foundation (BMGF), established to provide assistance to governments, development banks & other development partners in the planning, designing, scaling and implementation of CWIS. The primary strategy & aim of the TA Hub is support large scale development project for having impact at scale.
- CWIS TA Hub looks to assist AIIB with recommendations on **ensuring safe, adequate, equitable, sustainable sanitation, hygiene facilities and services, with a special focus on the urban poor women and children, guided by the CWIS approach**

AIIB TOR (04.01.2022)

The TOR shared by AIIB highlights the following **expectations from the TA Hub:**



POLICY REVIEW & INSTITUTIONAL ASSESSMENT

- Review existing sanitation **regulatory, policy and institutional framework**
- Identify **barriers** for institutionalizing CWIS approach
- Recommendations for **public-sector led** and/or **private sector** engagement modalities
- Assessment of **existing institutional capacity** across the sanitation chain at the local level
 - Stakeholder identification and classifications (direct/indirect)
 - Stakeholder consultations to assess institutional, technical, financial management, project management capacities
- Review accountability measures towards efficient and sustainable service delivery



CITY PRIORITIZATION & SPATIAL ASSESSMENT

- **Phasing strategy** at the project-level by prioritizing and clustering of 25 selected cities as well as the proposed service delivery models; and
- **Survey and spatial assessment** developing GIS maps for selected cities, showing areas for conventional sewerage systems vs on-site sanitation, and demographic, socio-economic as well as topographical and physical features & incorporate CWIS planning



FEASIBILITY OF IMPLEMENTATION OF IMIS

assess the feasibility of integrating Integrated Municipal Information Systems (IMIS) into the e-governance systems for effective planning, management and M&E and to identify health-based indicators.



PROJECT FRAMEWORK DOCUMENTS

- 1. Environment & Social Management Framework (ESMPF); Gender assessment and framework, Draft stakeholder engagement plan; Climate vulnerability assessment**
 - review the **major environmental and social impacts** due to the implementation of the project
 - identify potential adverse effects and recommend **suitable and sustainable mitigation measures**;
 - carry out screening procedures for reviewing sub-projects in order to classify them as high or medium risks
- 2. Resettlement Planning Framework (RPF) & Indigenous Peoples Development Framework (IPDF)**
set out a **land acquisition and resettlement framework** and identify any issues related to indigenous peoples and outline how these will be managed
- 3. Financial Management Manual & funds flow**
 - assist DPHE in the **preparation of the FM Manual** covering the FM arrangements for the project
 - detailing roles and responsibilities of DPHE and project municipalities
 - detailing the funds flow, staffing, accounting policies and procedures, internal controls, financial reporting and monitoring, and internal and external audits for the project
 - assess the **FM capacity of proposed project implementing entities**;
 - suggest **appropriate FM arrangements for the proposed project**;
 - identify **FM risks and suggest mitigation measures**;
 - prepare detailed project financial management assessment & proposed implementation report;
 - suggest project municipalities in the appropriate FM systems for the sustainable implementation of the project.
- 4. Draft Project Delivery Strategy (PDS) and Draft Procurement Plan**
assist DPHE in the **preparation of a PDS** as per AIIB's Procurement Policy (PP):
 - Covering all the contract packages identified for financing & implementation in the first 5 years
 - PDS and procurement plan will be prepared taking into account efficiency and economy gains by amalgamating based on similarity of works, proximity of the sites, the number of sub projects.
- 5. Draft Project Results Framework (RF)** – including baseline indicators

AIIB TOR (04.01.2022) (cont'd)

The TOR shared by AIIB highlights the following **expectations from the TA Hub:**



ENHANCED FEASIBILITY STUDIES & PROJECT DESIGN

Mapping existing situation

- review the feasibility reports, other relevant documents to consolidate existing status of urban sanitation services in selected cities

Technology & Market Assessment

- propose **technical options and service delivery models** based on **urban sanitation market assessment** for the entire service chain, including technology, equipment and method options, assessment of existing service providers, customer preferences, pricing controls, key stakeholders;
- prepare **institutional arrangement and O&M plans** covering clear roles and responsibilities across planning, operation and maintenance, financing, monitoring, and regulations, including strategies for municipalities' effective engagement of the private sector in providing sanitation services

Financial & Economic Assessment

- carry out **economic and financial analysis**, to assess **economic and financial viability of the project**. It involves the analysis and calculations like Internal Rate of Return and Net Present Value of the sub-projects; and undertake any other necessary and relevant financial analysis deemed necessary and recommend key strategies, models and approaches to ensure financial sustainability of sanitation services;

Capacity building programs

- number and outline content of training modules to be provided, disaggregated by stakeholder group, and including cost estimates, mode of instruction and training schedule for each module;
- project management and FM systems required during both implementation and operational phases; and

Draft project design report

- review of project proposal and rationale, and confirm project objectives
- propose project scope and components, cost estimate and financing plan.

TA SUPPORT PACKAGE

- The request from AIIB to TA Hub to **enhance project Feasibility Study (FS)** in sufficient detail to ensure project readiness and compliance with all the requirements for the financing of AIIB and GoB.
- CWIS TA Hub looks to assist AIIB with recommendations on **ensuring safe, adequate, equitable, sustainable sanitation, hygiene facilities and services, with a special focus on the urban poor women and children, guided by the CWIS approach**

PRELIMINARY ASSESSMENT

In-line with the TOR prepared by AIIB, the TA Hub would like to highlight that in order to conduct a comprehensive assessment and design a CWIS-inclusive project, the following aspects are essential and highly critical.

LIST OF 25 TOWNS

1. Chandpur
2. Feni
3. Habiganj
4. Noakhali
5. Sunamganj
6. Kishoreganj
7. Madaripur
8. Manikganj
9. Netrokona
10. Rajbari
11. Sherpur
12. Tangail
13. Chuadanga
14. Jhenaidah
15. Gopalganj
16. Meherpur
17. Satkhira
18. Bogura
19. Joypurhat
20. Naogaon
21. Gaibandha
22. Lalmonirhat
23. Nilphamari
24. Panchagarh
25. Thakurgaon



TOWN CLASSIFICATION

- Selection criteria for the 25 towns (*required from DPHE and AIIB*) – grouping?
- Classification of the 25 towns
 - a. Population
 - b. Level of urbanization
 - c. % population living under poverty line
 - d. Coverage of safely management sanitation
 - e. FSTP Status
 - f. Masterplan availability
 - g. GIS data availability

Indicators for Categorization

Selection Criteria	Population as a criteria	pop <150,000, (+)	pop 150-300,000, (++)	pop >300,000, (+++)
	Level of Urbanization	Low, (+)	Medium, (++)	High, (+++)
	% Lower Poverty (LIC)	below 10%, (+)	between 10-20%, (++)	above 20%, (+++)
	Safely Managed Sanitation Coverage	1-10%, (+)	11-20%, (++)	Above 20%, (+++)
Readiness	FSTP Status	Not Available, (+)	Not in Operation, (++)	Running, (+++)
	Masterplan Availability	Not Available, (+)	Masterplan available, (++)	Masterplan Available With GIS Data Base, (+++)

- The classification is basically to see if we can group certain towns into 'categories' and choose a set of representative towns for quick in-depth feasibility assessments.
- TA Hub has developed a set of criteria based on which the 25 towns will be classified into "three category" types
- Findings in these 5 towns will represent situation in the other remaining 20 towns

Towns with indicator values.

District	Narshingdi	Jamalpur	Shariatpur	Cumilla	Laxmipur	Pabna	Natore	Sirajganj	Bagerhat	Patuakhali
Population (Projected 2020)	++	++	+	+++	++	++	+	++	+	+
% Lower Poverty	++	+++	+++	+	+++	+	++	++	++	+
Level of Urbanization	+	++	+	+++	+	++	+	+	+	++
Safely Managed Sanitation Coverage	+	++	+	+	+	++	++	+++	+	+
FSTP Status	+	+++	+	+	++	+	+	++	+	+
Masterplan Availability	+	+	+	+++	+++	+	+++	+	+	+++
Points	8	13	8	12	12	9	10	11	7	9

SAMPLE SELECTION

Categorization of the towns (based on points)

Category	Name Of the City	Number of types	Recommended town for Indepth Feasibility	Rational
Type A (City Corporation)	Cumilla	1	Cumilla	City Corporation
Type B (Points, > 10)	Jamalpur, Laxmipur, Sirajganj, Pabna(High Level of urbanization)	4	Laxmipur	FSTP not working, High poverty
Type C (Points, ≤ 10)	Patuakhali, Bagerhat, Natore, Shariatpur, Narshingdi,	5	Natore	High population in Class, High

PRELIMINARY ASSESSMENT

CWIS READINESS ASSESSMENT OF AIIB TOWNS

TA Hub will assess the sanitation situation of the 25 towns (or selected towns) using the CWIS assessment approach to further refine the selection of the representative towns for in-depth analysis and 'phased-approach'.

TABLE 5: CWIS INDICATORS AND DATA FROM 10 LLF TOWNS

CWIS INDICATOR	INDICATORS AVAILABLE	CUMILLA	BAGERHAT	SIRAJGONJ	JAMALPUR	LAKSHMIPUR	NARSINGDI	NATORE	PABNA	SHARIATPUR	PATUAKHALI	WEIGHTAGE AVERAGE
EQUITY	Population	444,831	53670	198461	178293	146525	178825	101411	180388	54176	74320	
	FSM											
	% Sanitation coverage by SDG indicators	4%	9%	25%	12%	9%	1%	16%	15%	3%	12%	10%
	% Sanitation coverage by MGD Indicators	95%	96%	95%	95%	96%	76%	98%	97%	98%	94%	93%
	SWM											
	% covered by SWM service (collection efficiency)	43%	75%	98%	53%	34%	55%	91%	52%	49%	82%	57%
	Tariffs											
	Gender + social aspect											
	% women responsible for maintaining toilets (responsible for cleaning)	96%	96.40%	99%	99.70%	98%	99%	99.50%	99.00%	100%	96.40%	99%
	% women responsible for carrying waste to disposal location	87%	97%	99%	97%	97%	97%	97%	98%	99%	98%	94%
	Regulations											
	Is there a government policy to recruit women in the municipality	10%	10%	20%	15%	15%	15%	20%	10%	10%	40%	15%
	Environmental (SWM+FSM)											
	% of containment within 3 meters of groundwater source	59%	42%	32%	47%	17%	54%	30%	32%	40%	57%	44%
	% of containment disposing directly to environment	86%	92%	90.78%	91%	91.50%	98%	85%	85%	85%	78.68%	89%
	SWM											
	% of household having clean solid waste surrounding	29%	49%	24%	24%	24%	16%	36%	32%	84%	27%	29%
	Is medical waste disposed separately in the disposal site and buried or burned?	Yes	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
	Occupation health and safety (SWM+FSM)											
	% of desludging services completed with PPE gear	PPE gear available, 2 nos	PPE gear available, 1	PPE gear available 50 nos	PPE gear available, 2	PPE gear available, 5 nos	PPE gear available 60 nos	PPE gear available, 2 nos	PPE gear available, 60	PPE gear not available	PPE gear available 0	
	% of SWM services completed with PPE gear	PPE gear available, 318 nos	PPE gear available, 72 Nos	PPE gear available 120 nos	PPE gear available, 187	PPE Gear available, 128 nos	PPE gear not available	PPE gear not available,	PPE gear not available,	PPE gear not available	PPE gear available 270	
	Regulations											
	Is there a regulation for standard design of containment	Yes	Yes	yes	Yes	YES	Yes	Yes	Yes	Yes	Yes	Yes
	Gaps											
	% of service providers practicing manual emptying	54%	75%	92%	82%	73%	65%	96%	95%	94%	85.80%	75%

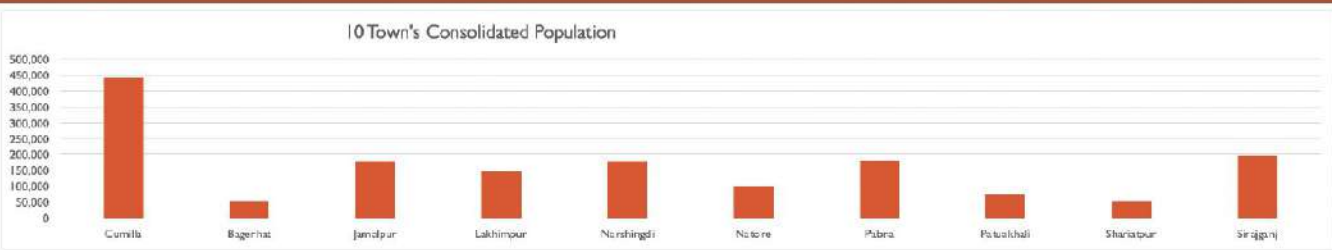
PRELIMINARY ASSESSMENT

DATA READINESS OF AIIB TOWNS

Data from the DPHE Sanitation Dashboard will be utilized to map the data readiness of all 25 towns – simultaneously, assessing the data availability for in-depth CWIS assessment. TA Hub has developed standard set of survey tools required to collect data for assessments across all CWIS requirements - and will assess the survey requirements across all the 25 towns.

POPULATION

City Corporation/Paurashava	Population (2020)
Cumilla	444,831
Bagerhat	53,670
Jamalpur	178,293
Lakshimpur	146,523
Narsingdi	178,825
Natore	101,411
Pabna	180,388
Patuakhali	74,320
Shariatpur	54,176
Siraganj	198,461
TOTAL	1,610,901



AREA

City Corporation/Paurashava	Area
Cumilla	53.04
Bagerhat	7.53
Jamalpur	53.28
Lakshimpur	27.09
Narsingdi	14.75
Natore	14.84
Pabna	27.27
Patuakhali	12.66
Shariatpur	24.92
Siraganj	28.49



USE OF TOILET

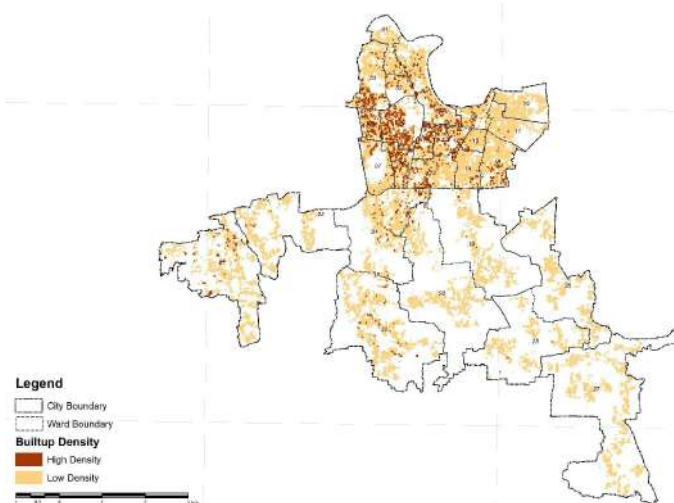
REPORT - Figure 3.1 (Q 4.1 & 4.2)

City Corporation/Paurashava	Own toilet(%)	Others Toilet(%)	Own Toilet (Population x %)	Others Toilet(Population x %)
Cumilla	97.06	2.94	43175259.54	1307802.01
Bagerhat	98.5	1.5	5286536.113	80505.62608
Jamalpur	98.5	1.5	17561828.29	267439.0096
Lakshimpur	97.87	2.13	14340440.03	312099.0831
Narsingdi	98.02	1.98	17528461.7	354074.2111
Natore	98.51	1.49	9990038.959	151103.0154
Pabna	98.57	1.43	17760371.29	257955.2191
Patuakhali	97.26	2.74	7228397.085	203637.7546
Shariatpur	99.25	0.75	5376938.223	40631.77499
Siraganj	98.08	1.92	19465011.84	381044.2774
Average	98.16	1.838		

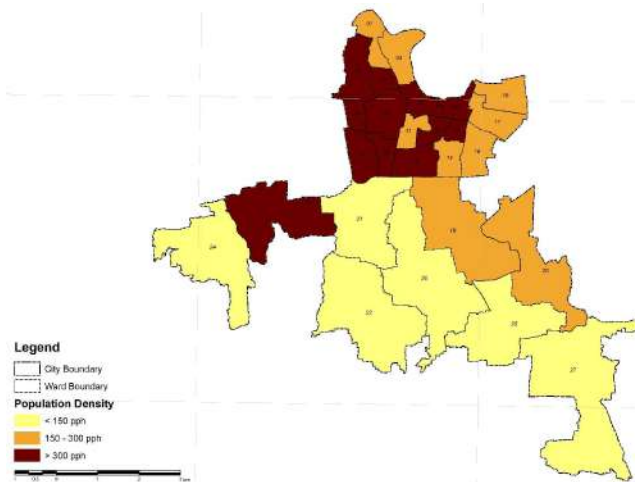
IMIS: CWIS PLANNING MODULE

Based on the selection of the representative towns, an in-depth analysis will be conducted using the IMIS CWIS Planning Module. The module puts an emphasis on **evidence-based planning and decision making** & will make recommendations on the ground reality

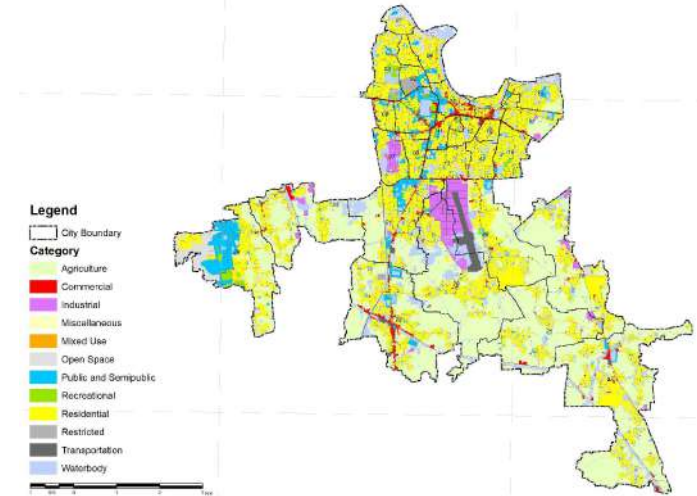
BUILT-UP DENSITY



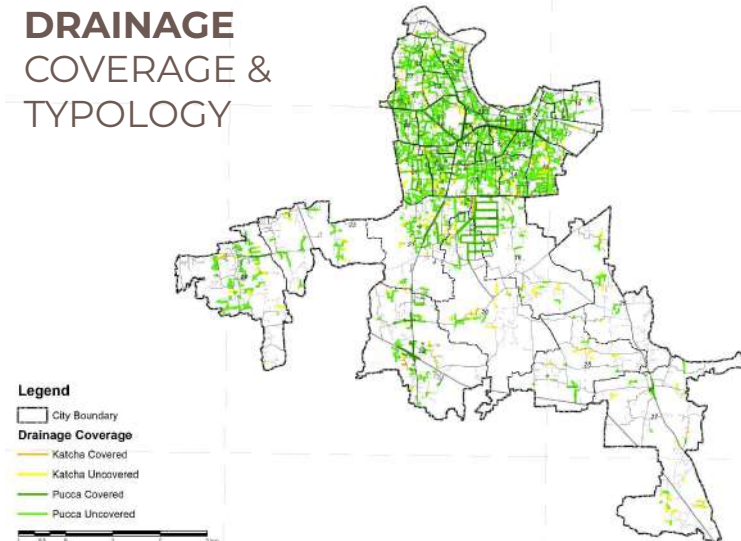
POPULATION DENSITY



LAND USE PATTERNS



DRAINAGE COVERAGE & TYPOLOGY



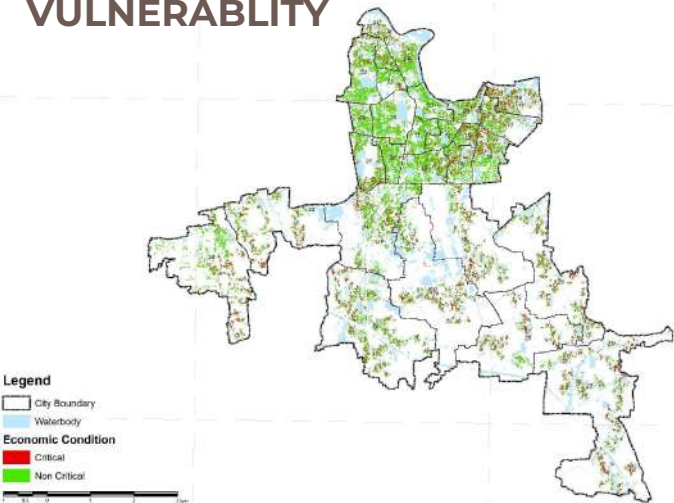
SETTLEMENT TYPOLOGY

- High population density and high built-up density (core parts of city) are more towards sewerage
- low population density and low built-up (outskirts and scattered) are more suitable for FSM interventions.

IMIS: CWIS PLANNING MODULE

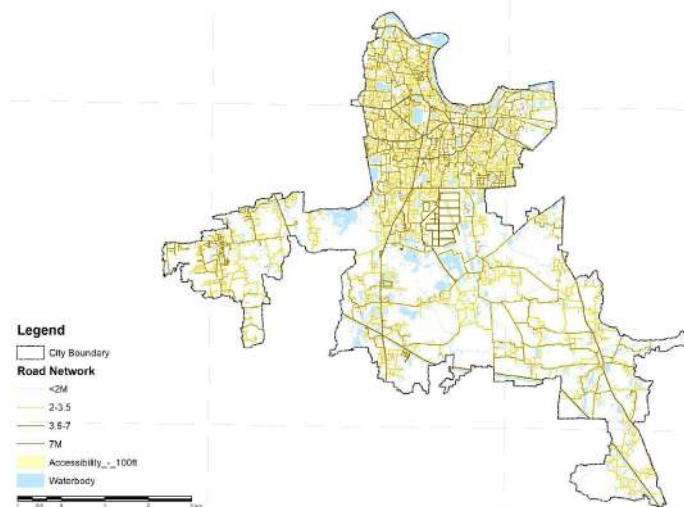
Based on the selection of the representative towns, an in-depth analysis will be conducted using the IMIS CWIS Planning Module. The module puts an emphasis on **evidence-based planning and decision making** & will make recommendations on the ground reality

ECONOMIC VULNERABILITY

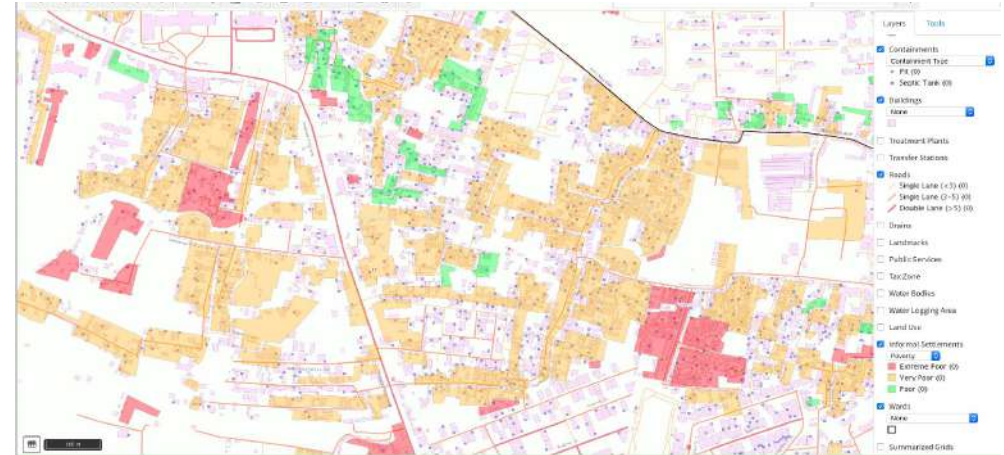


Economic vulnerability reflects upon **user paying capacity** and demands for more of subsidized sanitation services to these groups

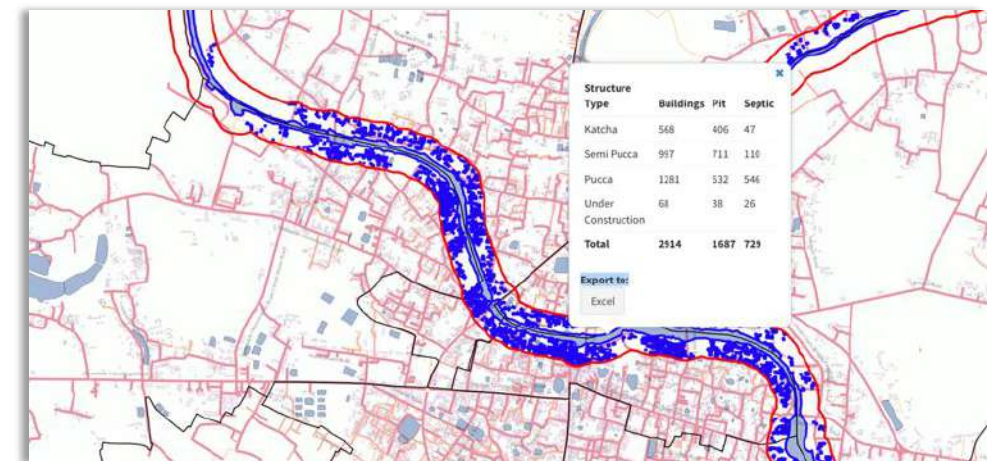
ACCESSIBILITY | ROAD NETWORK



INFORMAL SETTLEMENTS



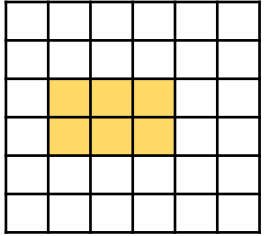
TYPES OF CONTAINMENTS ARE THERE WITHIN 100 M AROUND A RIVER ?



IMIS: CWIS PLANNING MODULE

STAGE 1

SEWERAGE ZONE



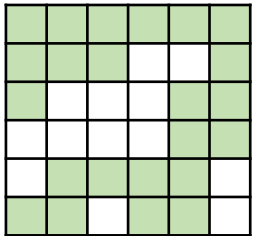
Identify the settlements suitable for sewerage

Sub-parameters

- High population density
- High non-residential built-up density
- Piped water supply coverage
- Having adequate road width

STAGE 3

FAECAL SLUDGE MANAGEMENT



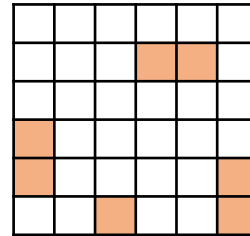
Identify settlements for FS management – excluding both sewerage + FS + Greywater management zones

Sub-parameters

- All remaining settlements from sewerage and FS+ Greywater management
- For tank emptying /desludging operations

STAGE 2

FS + GREYWATER MANAGEMENT SETTLEMENTS



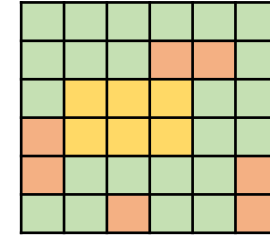
Identify the settlement which needs both grey and black water treatment *after excluding sewerage zone*

Sub-parameters

- Flood risk settlements
- Settlements close to water body
- High rise building (more than G+2)
- Institutional building
- Commercial cluster/complex including hotels

STAGE 4

FINAL SANITATION INTERVENTIONS



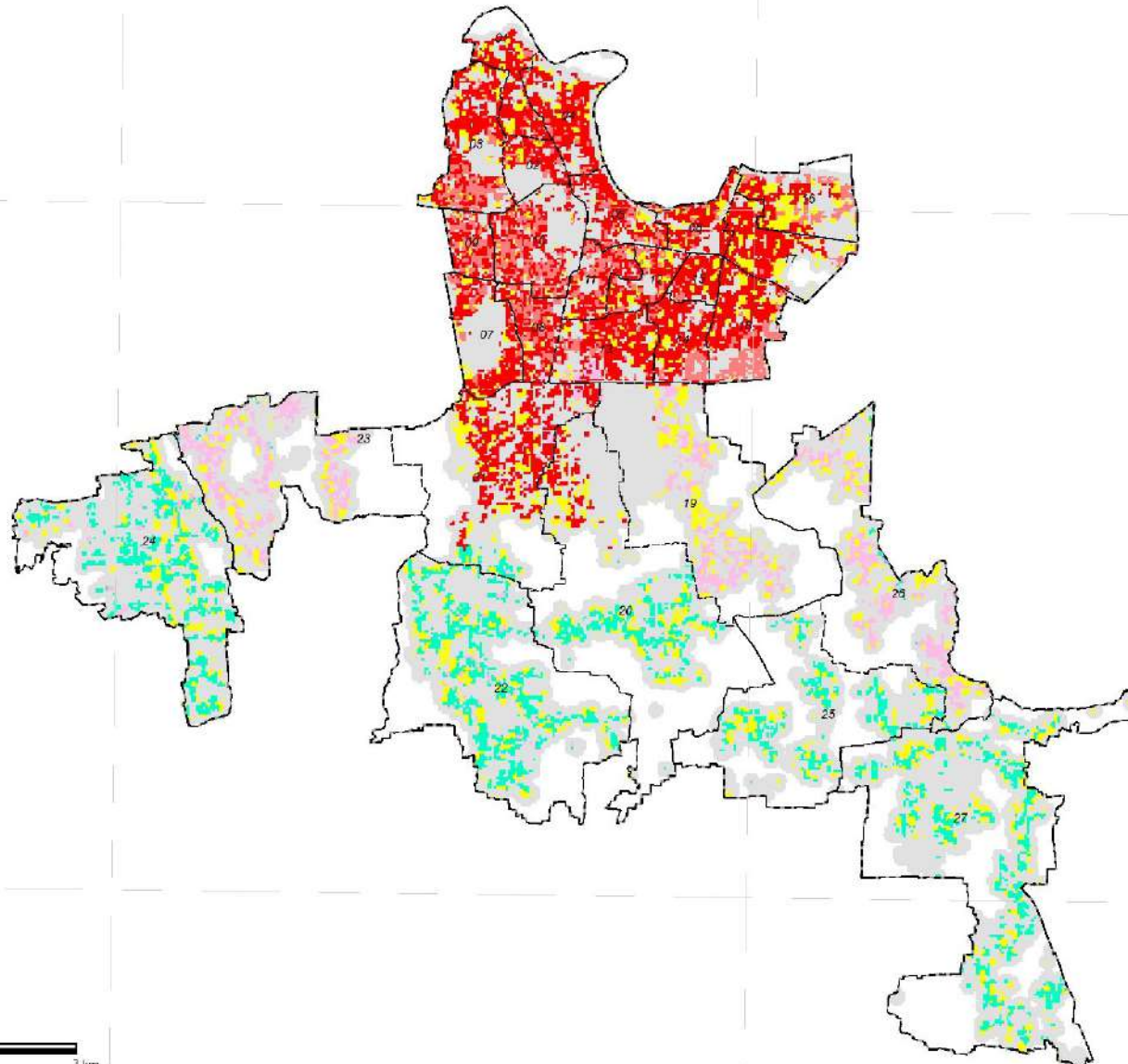
Stage I + Stage II + Stage III

Sub-parameters

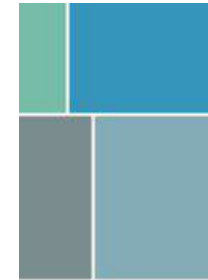
- All three stages overlay would arrive to final sanitation interventions

IMIS: CWIS PLANNING MODULE

Based on the selection of the representative towns, an in-depth analysis will be conducted using the IMIS CWIS Planning Module. The module puts an emphasis on **evidence-based planning and decision making** & will make recommendations on the ground reality



Recommendations provide based on potential combinations of sanitation interventions



Legend

- Sewerage
- Sewerage/DEWAT
- FSM
- DEWATS
- FSM/ DEWAT

FEASIBILITY FOR IMIS

	DATA REQUIRMENT	CWIS OUTCOME			CWIS FUNCTION			PLANNING	MANAGEMENT	M & E
		SF	SB	EQ	RP	AC	RPM			
URBAN DATA	Administrative boundary		√				√	a	b	
	Building footprint	√	√	√			√	a, b, c	a, b, c, d	a,c,d,e
	Road network	√	√				√	a,b,d	a,c	
	Land use	√	√				√	a,b,d	a,c,f	
	Settlements (planned)	√	√	√			√	a,b,d	a,c,f	a,c
	Low Income Settlement	√	√	√			√	a,b,c,d,e	b,c,d,f	a,c,d,e
	Contour	√	√				√	b		
	Waterlogged area	√	√				√	b		
	Area with environmentally sensitive activities	√	√				√	b,d	a,c	
	Soil	√	√				√	b		
	Water table	√	√				√	b		
	Population density	√	√	√			√	b	a, b	d
SANITATION	Storm water drainage network	√	√				√	b	a	a
	Sewerage network	√	√				√	a,b,d,e	a, b,c	a,d
	Containment	√	√	√			√	a, b, c,d,f	a, b, c, d	a,d,e
	Public services (PT/CT) with service information	√	√	√			√	a, b, c,d,f	a, b, c, d	a,d,e
	Emptying and Transportation Infrastructure and Services	√	√	√			√	a,b,c,d,f	a,b,c,d	a,b,d,e
	Treatment Plants	√	√	√			√	b	a	b, c
	Landfill site	√	√				√	b	a	
	City water supply areas		√				√	b		
REVENUE	Tax zone	√	√	√	√	√		a, b	a, b, c, d	b, d
BUSINESS OPERATION DATA - IMIS	Service provider	√	√	√				a,b,c,d,e,f	a, b	a
	Fecal sludge data (Collection and Reuse)	√				√		a,b	a	b
	Public services	√	√	√	√	√		a, b, c,d,e,f	a, b, c, d	b,c,d,e
	Customer data inc. revenue	√	√	√	√	√		a,b,c,d,e	a,b,c,d	a,b,c,d,e
	Customer feedback data	√	√	√	√	√		a,c,d,e	A,b,c,d	a, b, d
	Public service feedback	√	√	√	√	√	√	a,c,d,e,f	e	a, b, d

Note: **RP**-Responsibility, **AC**-Accountability, **RPM**-Resource Planning & Management, **SF**-Safety, **SB**-Sustainability, **EQ**-Equity

ENVIRONMENT & SOCIAL ASSESSMENT

TEN ENVIRONMENTAL & SOCIAL STANDARDS (ESS) OF WORLD BANK



ESS1

ASSESSMENT &
MANAGEMENT OF
ENVIRONMENTAL &
SOCIAL RISKS & IMPACTS



ESS2

LABOR AND WORKING
CONDITIONS



ESS3

RESOURCE EFFICIENCY
AND POLLUTION
PREVENTION AND
MANAGEMENT



ESS4

COMMUNITY HEALTH
AND SAFETY



ESS5

LAND ACQUISITION,
RESTRICTIONS ON LAND
USE AND INVOLUNTARY
RESETTLEMENT



ESS6

BIODIVERSITY
CONSERVATION &
SUSTAINABLE
MANAGEMENT OF LIVING
NATURAL RESOURCES



ESS6

INDIGENOUS
PEOPLES/SUB-SAHARAN
AFRICAN HISTORICALLY
UNDERSERVED
TRADITIONAL LOCAL
COMMUNITIES



ESS8

CULTURAL
HERITAGE



ESS9

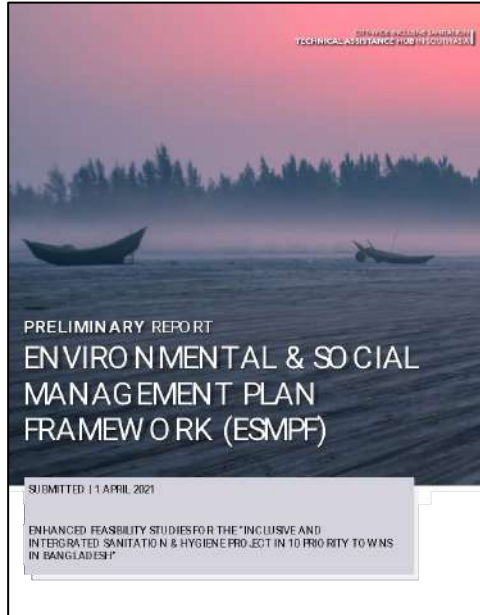
FINANCIAL
INTERMEDIARIES



ESS10

STAKEHOLDER
ENGAGEMENT AND
INFORMATION
DISCLOSURE

ESS DELIVERABLES (example)



ENVIRONMENT & SOCIAL MANAGEMENT PLAN (ESMPF)

- sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts



GENDER ACTION PLAN



LABOR MANAGEMENT PROCEDURES (LMP)

- will guide preparation of Code of Conduct (CoC), site specific labor management plan, OHS guidelines, etc.



RESETTLEMENT POLICY FRAMEWORK (RPF)

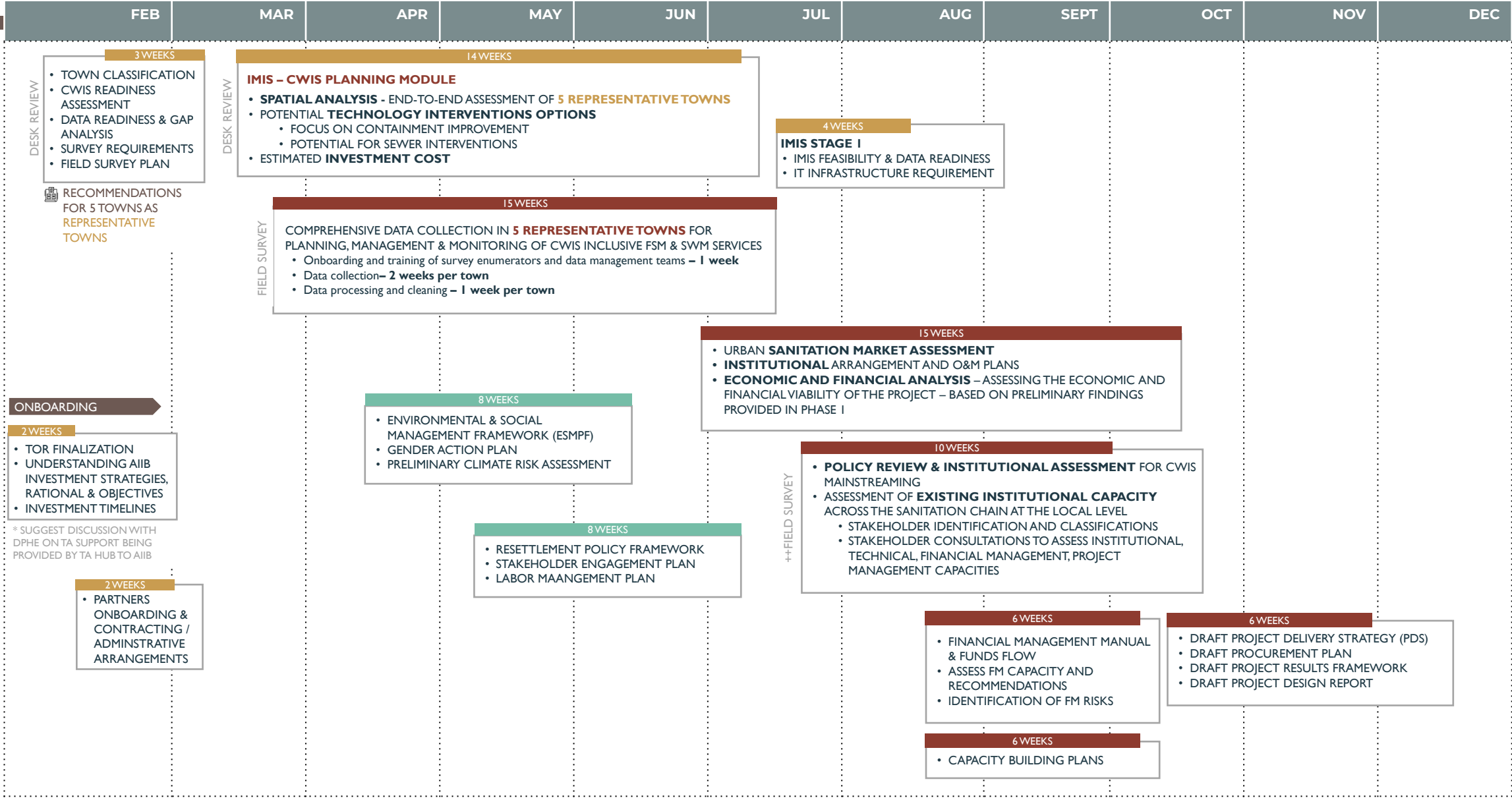
- will guide to prepare RAP once the land and impacts will be identified



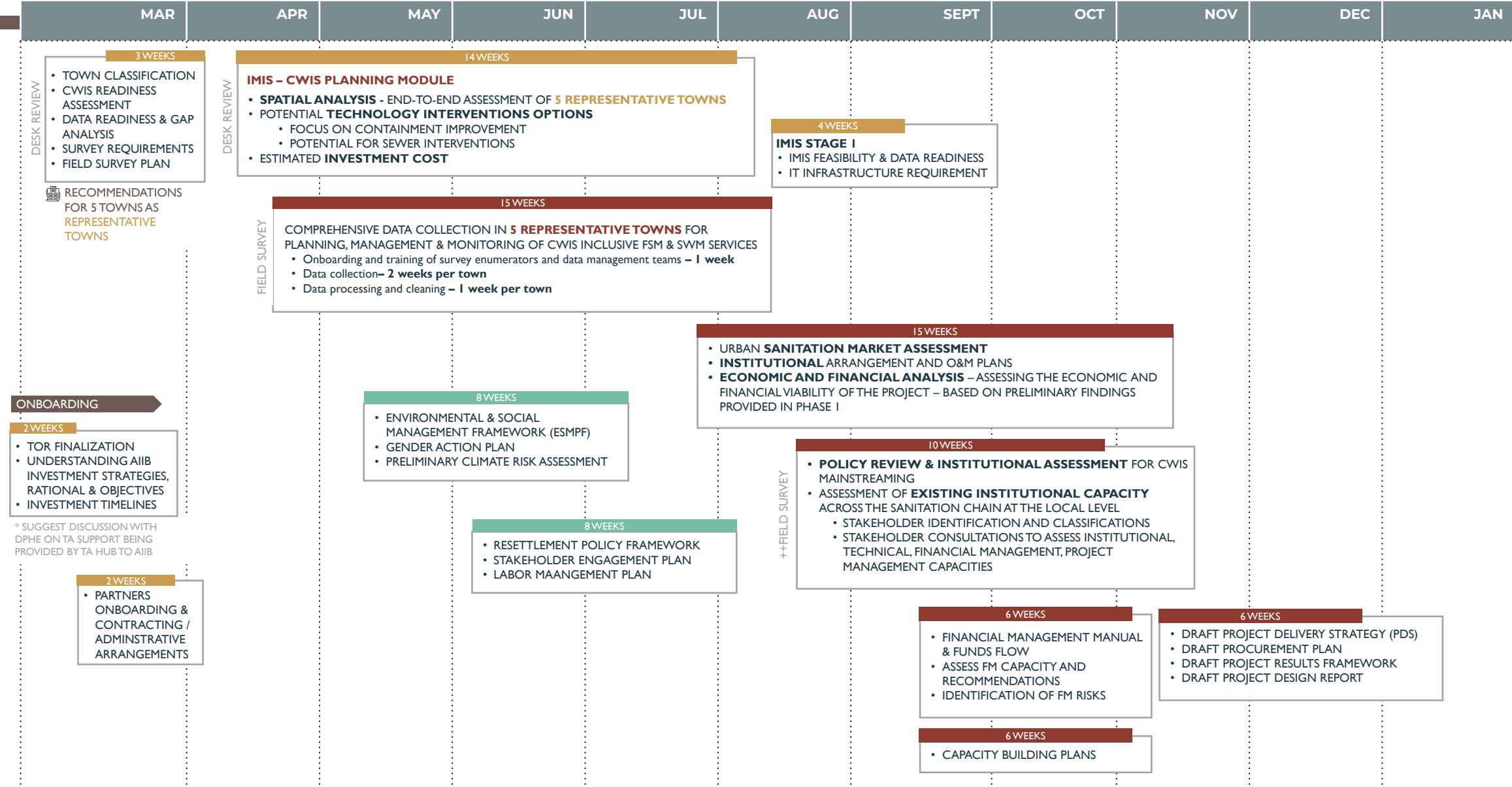
STAKEHOLDER ENGAGEMENT PLAN (SEP)

- will be updated during the detailed design stage

TENTATIVE TIMELINE



TENTATIVE TIMELINE



Citywide Inclusive Sanitation **Technical Assistance Hub**

TA Hub . South Asia