

CSE Online Impact Workshop cum Master Class

On Capacity building initiative for Citywide Water and Sanitation Management

Theme 1: Sanitation Safety Plan, City Sanitation Plan and Citywide Inclusive Sanitation

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Training Attended: Sanitation Safety Planning, 2019

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Topic of Presentation: Sanitation Safety Planning at
Kochi Municipal Corporation

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Sanitation Safety Planning at Kochi Municipal Corporation



by

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(Alumnus-SSP Training ,September 2019)

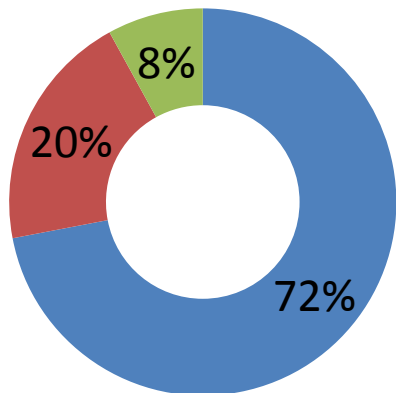
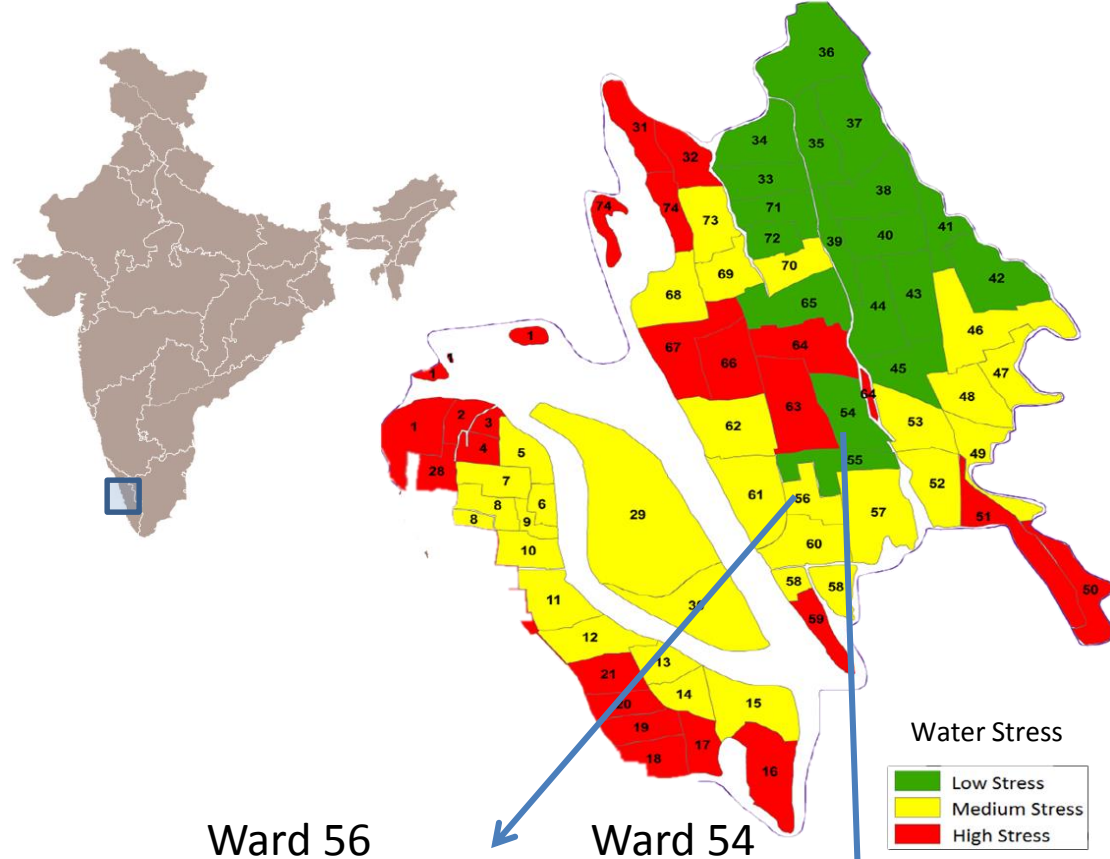
Presented at

**Online Impact Workshop cum Master Class on Capacity Building initiative for Citywide
Water and Sanitation Management**

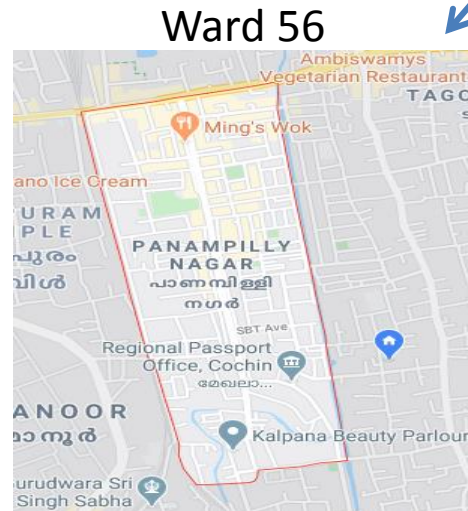
on June 30, 2020

Background

- KMC has 74 wards and a population of about 600,000.
- Two wards were selected for SSP
- These wards border urban canals within Kochi and is used to dump waste water



- Septic Tank
- WWTP
- Drain to Canal



Area= 0.79 Sq.km; Population= 7933

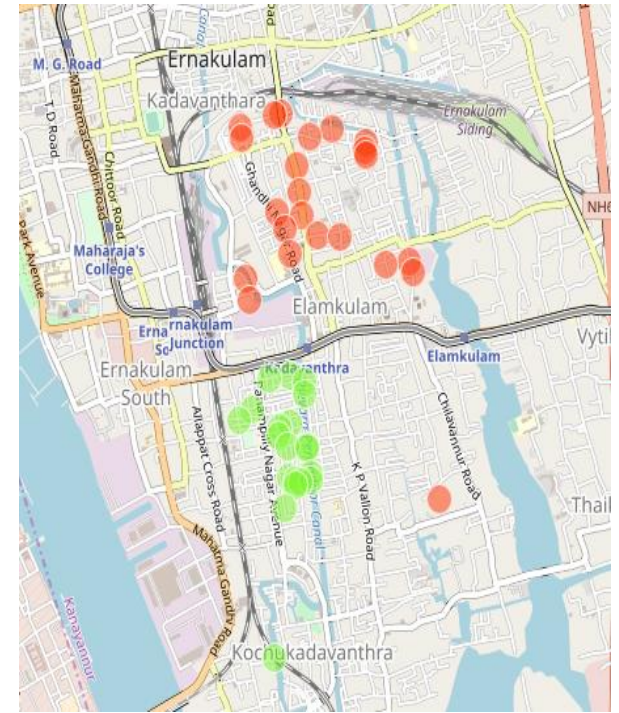


Area= 1.25 Sq.km; Population=8734

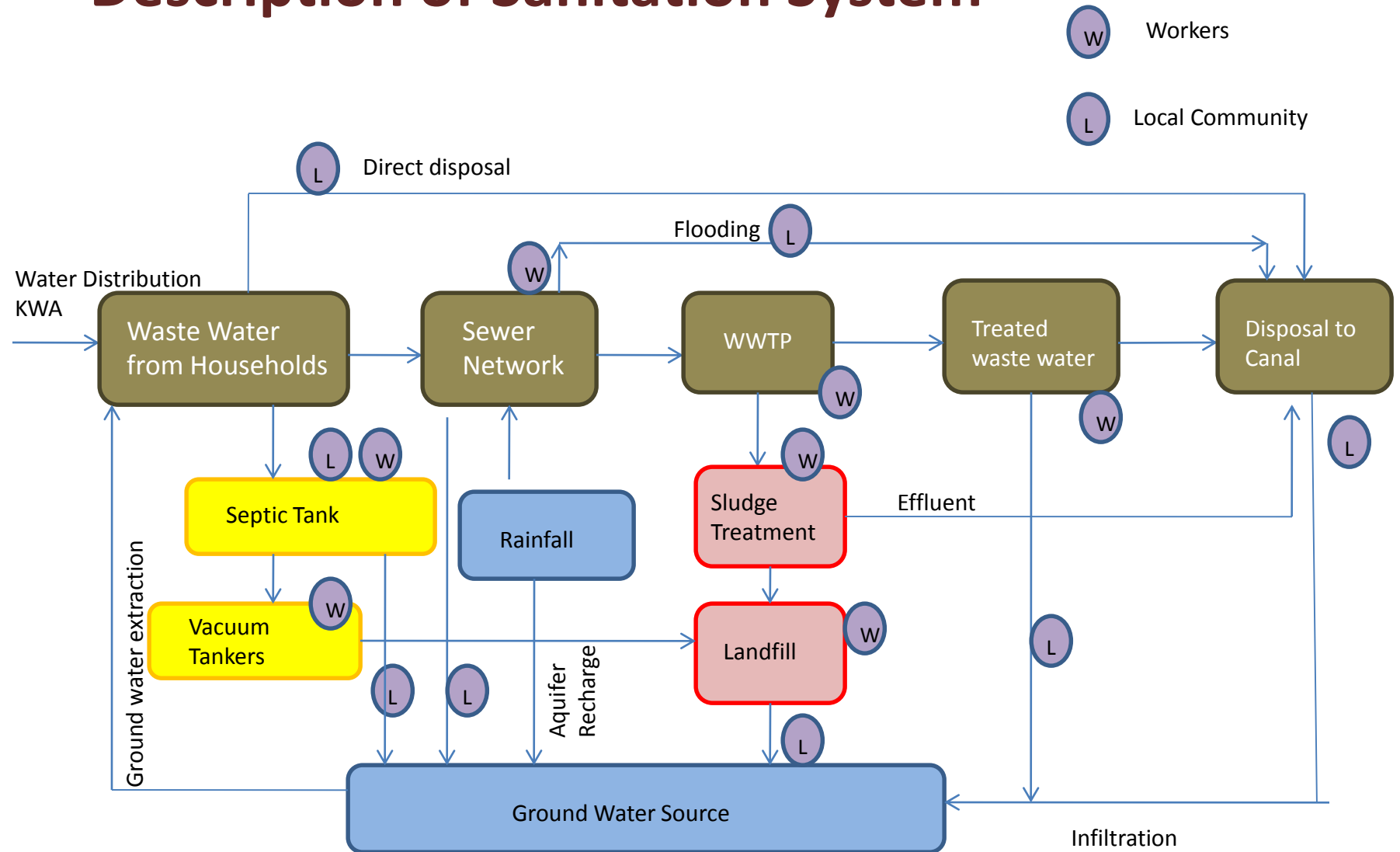
Preparation for SSP

- Ward level survey
- Setting the objectives
- Stakeholder analysis

SSP Member	Role in SSP
Corporation Council Members	<ul style="list-style-type: none"> • Enable all activities on the field • SSP improvement plan items to guide funding allocation for municipal sanitation activities
Academic Institution	Technical support, surveys, sampling waste water
Health Inspector	<ul style="list-style-type: none"> • data collection • hazard and risk assessments • improvement plans
Cooperative Hospital	<ul style="list-style-type: none"> • Health related inputs • Health risk assessment
Centre for Heritage, Environment & Development (C-HED)	Facilitating organization
Residence association	<ul style="list-style-type: none"> • To provide information • To permit sampling & survey
Kerala water Authority	• wastewater and drainage contextual information



Description of Sanitation System



Assessing Exposure Risks

SANITATION STEP	EVENT	HAZARD	EXPOSED GROUPS	LxS	RISK SCORE	COMMENTS
WWTP	Exposure to raw incoming sewage during maintenance	All microbial pathogens	Workers	5*4: 20	H	Gloves not observed during site visit
WWTP	Pump and pipe repair	All microbial pathogens	Workers	2*2: 4	L	Gloves and handwashing isn't observed
WWTP	Falling into the systems	Injury to the body	Workers	3*8: 24	H	Falling into a system has been reported
WWTP	Mosquito breeding	Microbial Pathogens and Vectors	Workers and Local Community	4*4: 16	H	Malaria has been reported by the workers and the community
WWTP	Exposure to raw sewage during flooding	Exposure to raw sewage during flooding	Local community and workers	5*4: 20	H	-
WWTP	Falling into the systems while it rains	All microbial pathogens and Bodily Injuries	Workers	4*16: 48	VH	Worker complained he fell during monsoon
WWTP	Malodours	Inhalation	Workers and local community	5*2: 10	M	Plant is overloaded and as a result there are high odours. Face masks are seldom worn
Drainage systems	Falling into drains	Bodily injury and drowning	Local community and workers	5*8: 40	VH	-
Groundwater Extraction	Leakage through systems	Microbial pathogens	Local community	3*4: 12	M	-
Landfill	Drinking water contamination through leaching	Microbial contamination	Local community and workers	1*4: 4	L	Leaching has been observed
Groundwater contamination	Ground water through leakage from drains	Microbial contamination	Local community	3*4: 12	M	This has been observed during monsoon season
Vacuum Tankers	Exposure to raw sewage	Microbial pathogens	Workers	3*4: 12	M	Handwashing and washing of equipment after emptying activities is not widely practiced
Vacuum Tankers	Bad Odour	Malodours	Workers	5*2: 10	L	Face masks are only partly effective.
Vacuum Tankers	Falling into the tanks while cleaning	All microbial pathogens and injury to the body	Workers	3*4: 12	M	An older couple complained regarding a cleaner falling into tank while cleaning (ACCIDENT)
Drainage Systems	Mixing up of waters during monsoon	All microbial pathogens	Local Community	5*4: 20	H	-
Drainage Systems	Children playing when it rains	All microbial pathogens	Local Community	5*4: 20	H	Most of them felt minor health effects
Drainage Systems	Pipe repairs	All microbial pathogens	Local Community and workers	5*4: 20	H	-
Drainage Systems	Manholes that are open	Injury to body by falling and microbial pathogens	Local Community and workers	4*16: 64	VH	Replacement of manhole covers with a new one and regular inspection
Drainage Systems	Bad odours	Malodours	Local Community	3*4: 12	M	-
Drainage Systems	Mosquito Breeding	Vector Borne Diseases	Local Community	2*4: 8	L	Malaria has been observed within residents of the society

- Once SSP team identified the high priority risks, an improvement plan was developed to protect exposure groups
- An operational monitoring plan was developed

CSE Training Impact

1. First SSP exercise in Kerala, a model for other ULGs
2. CSE training brought clarity on various SSP processes allowing its implementation at Kochi
3. Field exposure & case studies helped in adequate preparation for SSP
4. Simple measures could be identified which provide significant improvements in exposure risks
5. SSP at Kochi helped in creating awareness among elected representatives and stakeholders on the concept of safe sanitation
6. SSP provided additional thrust to ongoing canal rejuvenation initiatives at Kochi

