

Used water Management Strategy for Kerala: Case of 10 towns in Kerala

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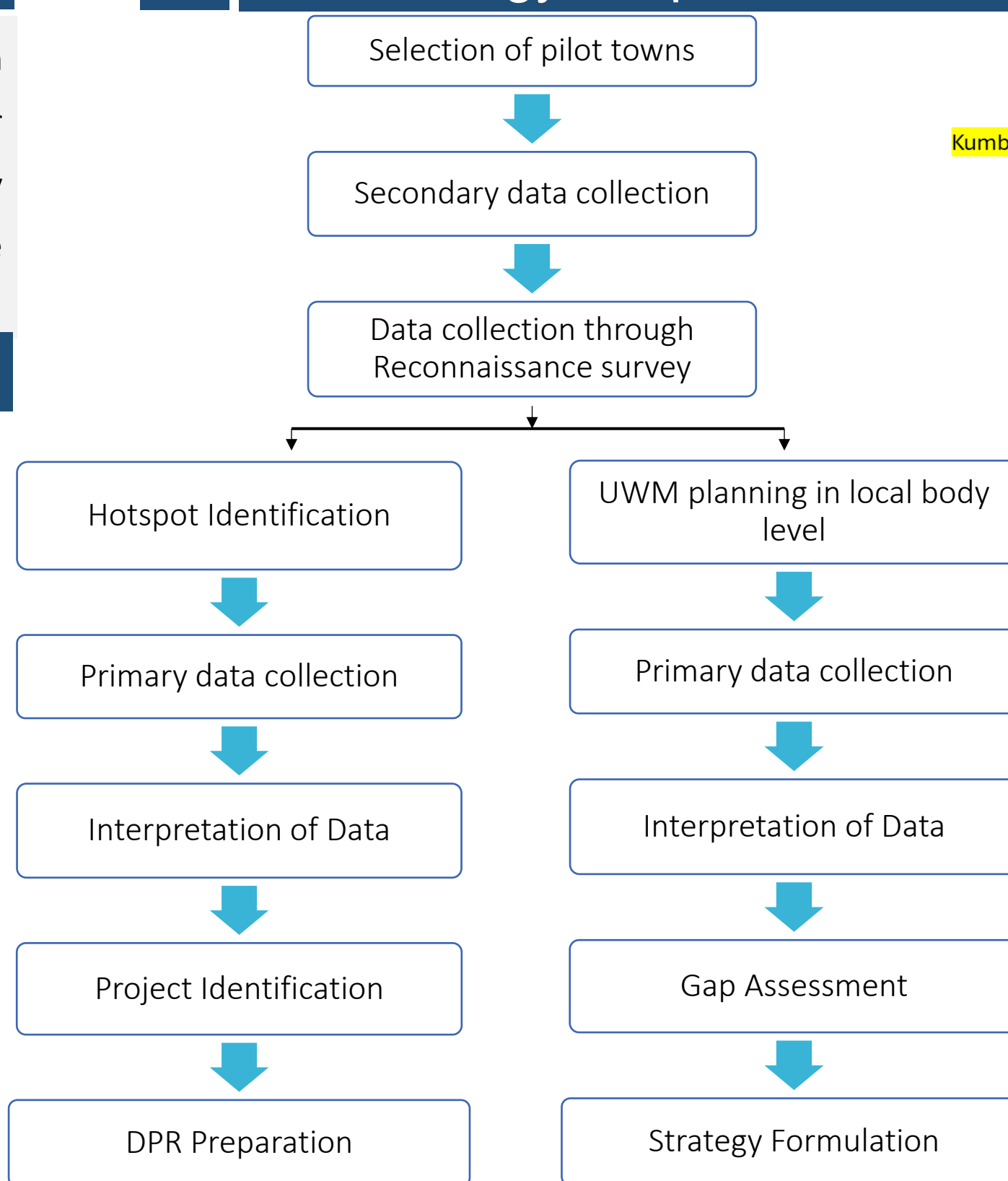
01 Background

Kerala's geography, dense population, and diverse environment create challenges in wastewater management, leading to waterborne diseases, groundwater contamination, and environmental damage. The Used Water Management Strategy offers a comprehensive framework to address these issues, ensuring sustainable solutions for public health and environmental protection.

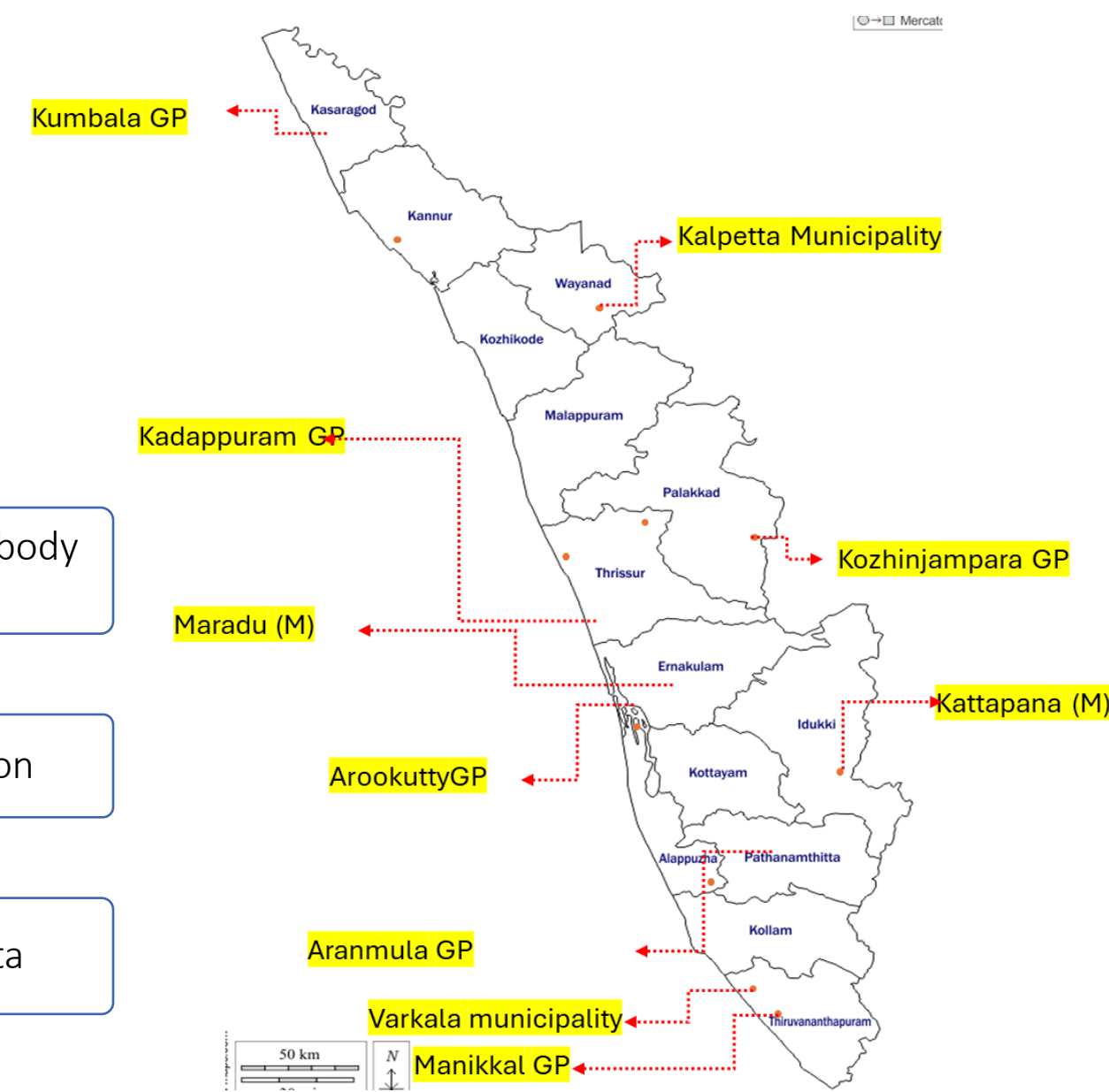
02 Problem Statement

- Untreated sewage and grey water pollute ecosystems and endanger public health
- Poor sanitation increases health risks due to faecal contamination in water sources
- The absence of standard templates and model document for UWM hinders effective project planning
- Poor Localized Planning delays UWM Projects, wasting resources and hindering Sanitation Resilience

03 Methodology Adopted

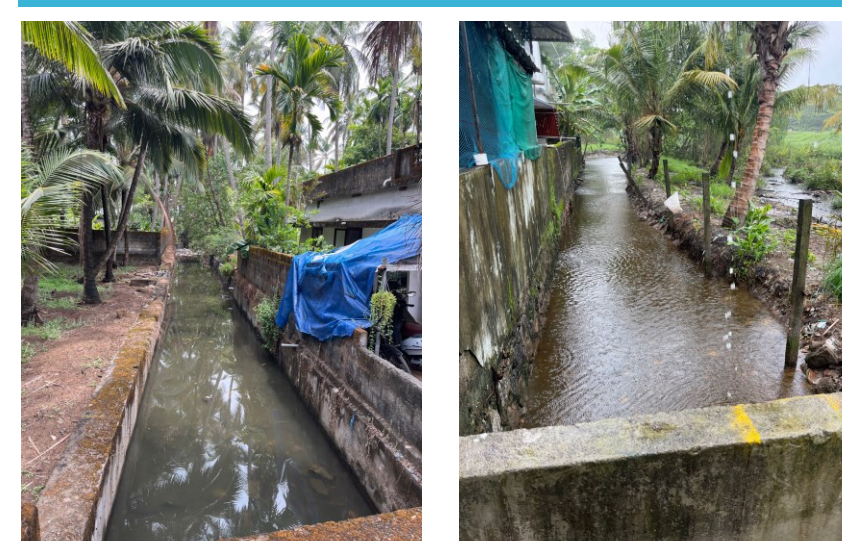


04 Pilot Towns



05 Site Conditions

Drains Carrying wastewater and backflow from backwaters



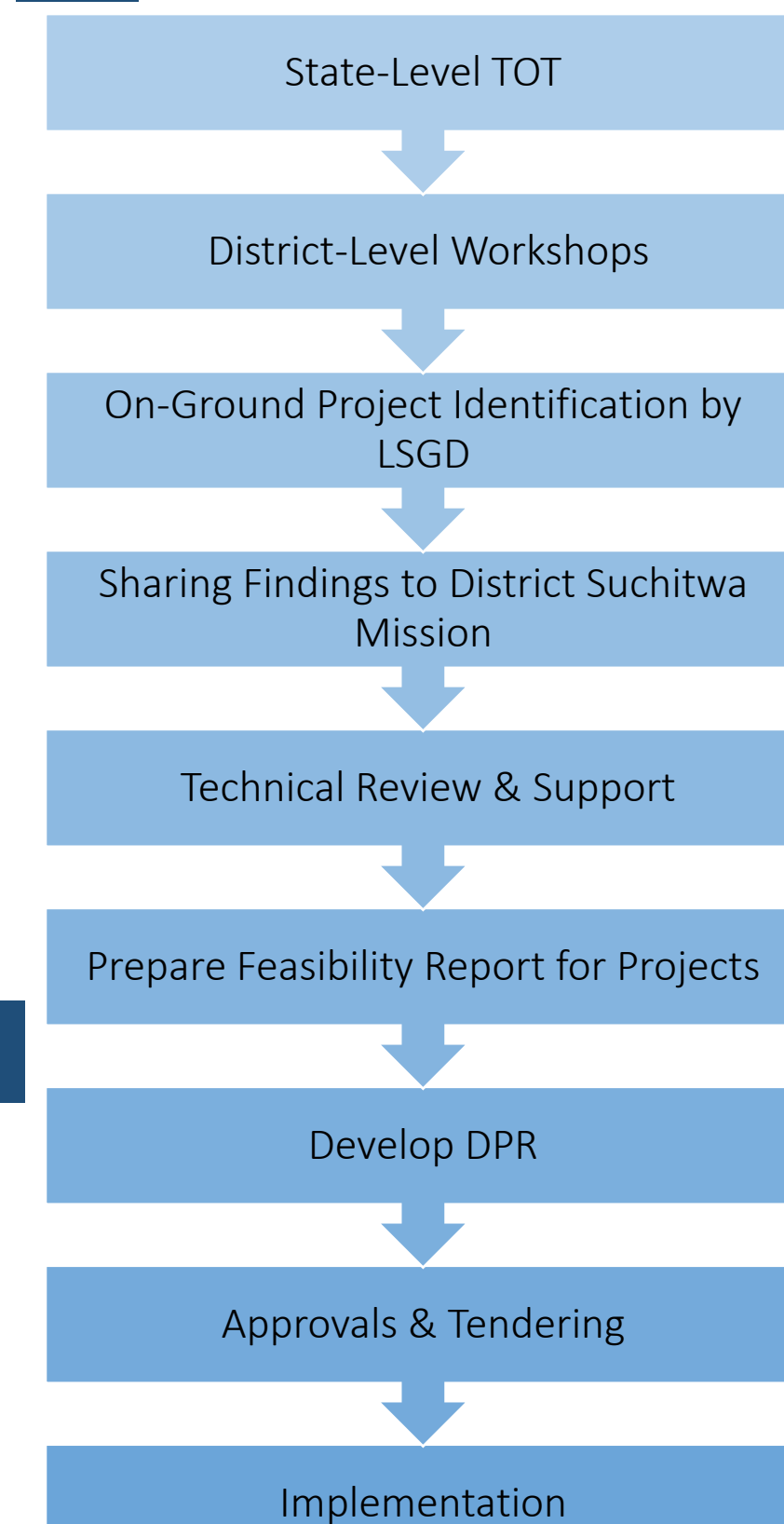
Percolation Rate Matters: Accurate Design is Key to Successful Soaking Systems



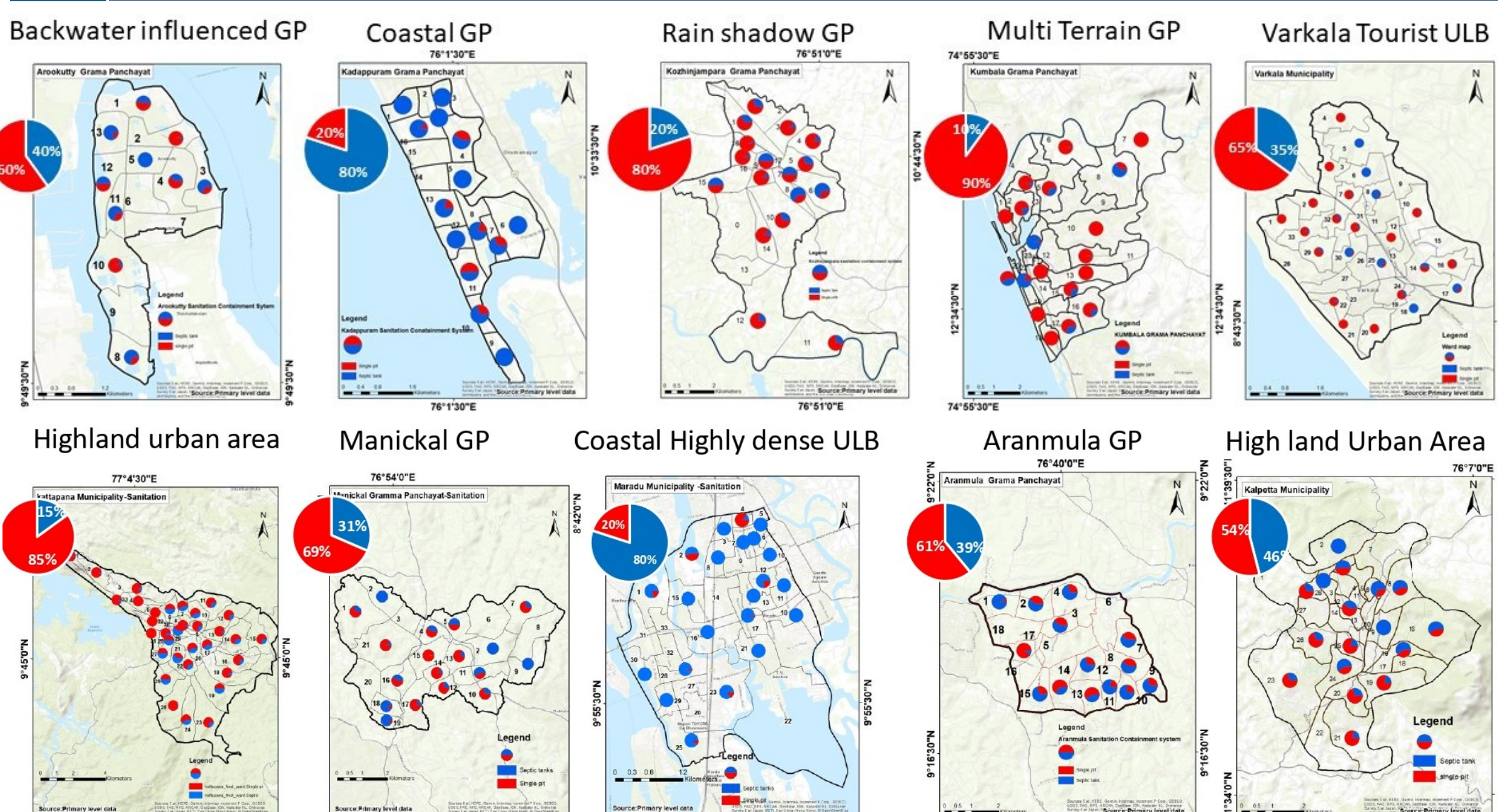
06 Existing Used Water Management Practices in Kerala

<p>Black water management Containment:</p> <p>Single pits are the most containment system in the pilot towns often confused with septic tanks</p> <p>These System typically have open bottom made of laterite or blocks</p>	<p>Septic Tank Usage in Coastal and Low-Lying Areas:</p> <p>Septic tank mostly lined in the capacity 1000 to 8000 litres .</p>	<p>Emptying and Transport of Septage</p> <p>In kerala ,sanitation workers use bikes and pumps to de sludge household containment systems, often burying the faecal sludge in open areas. PPE usage is rare and septage disposal to waterbodies were common</p>	<p>Treatment</p> <p>Treatment happened in nearby mostly in urban areas, treatment plant is scars through out the city ,most are dispersed in the environment</p>
<p>Grey Water Management</p> <p>Ignoring hydro-geology in grey water management causes ground water contamination</p> <p>Grey water is often dumped in drains or waterbodies due to failed system or convenience</p>	<p>General Contamination</p> <p>Water Supply Sources are contaminated with faecal coliform ,making them unsafe for consumption as per drinking water standards</p>	<p>Public Health Risk</p> <p>Open wells and piped water are highly contaminated, posing serious health risks due to poor treatment</p> <p>Single pits instead of proper septic tanks are the main cause of water pollution in Kerala</p>	<p>Environmental health Risk</p> <p>Wastewater and greywater disposal are polluting ecologically sensitive areas, with rivers and canals heavily contaminated by faecal coliform</p>

07 Strategy



08 Dominance of Single pit Containment system in Pilot towns and misunderstanding of septic tanks



The UWM strategy provides a flexible method for analyzing water management across states, using detailed data and microplanning to address local sanitation challenges and create sustainable, region-specific solutions.

Scan here for Details

