

## A Comprehensive Community Health Assessment of Water and Sanitation Conditions in Low-Income Coastal Settlements

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### Description

Access to clean water and adequate sanitation is fundamental to community health, yet many low-income coastal settlements continue to struggle with poor infrastructure, contamination risks and limited public health awareness. Community Health Assessment (CHA) provides a structured method for identifying environmental risks, understanding population needs and developing targeted interventions that improve living conditions and reduce disease burden.

Low-income coastal communities are uniquely vulnerable due to their geographical location. Frequent flooding, saltwater intrusion and inadequate drainage systems contribute to water contamination and poor sanitation. CHA begins with an environmental scan that examines water sources, waste disposal systems, presence of stagnant water and susceptibility to natural hazards. In many coastal areas, households rely on shallow wells or rainwater collection systems, both of which are prone to contamination from surface runoff and unregulated sewage discharge.

A critical component of CHA involves assessing community knowledge, attitudes and practices related to water hygiene. Surveys and focus group discussions reveal gaps in understanding about boiling water, proper storage and safe waste disposal. Many residents are familiar with the risks of contaminated water but lack the resources or infrastructure to implement safer practices consistently. For example, boiling water may be considered too costly due to fuel expenses, while sealed storage containers may be unaffordable for low-income families.

Health facility records provide valuable insights into disease patterns. Common illnesses in these settlements include diarrheal diseases, parasitic infections, skin conditions and outbreaks of dengue fever due to poor waste management and mosquito breeding sites. CHA teams collaborate with local clinics to analyze incidence rates and identify high-risk neighborhoods. This helps prioritize interventions for the most vulnerable households, particularly those with young children and elderly members.

Stakeholder engagement is vital to the success of community health assessments. Local leaders, fishermen's associations, women's groups and youth volunteers contribute local knowledge and help mobilize participation. Their involvement ensures that proposed interventions

are realistic, culturally acceptable and community-owned. During assessment workshops, community members often highlight overlooked issues such as illegal waste dumping, inadequate public toilets, or inconsistent water supply schedules.

CHA also evaluates existing sanitation infrastructure. Many coastal communities rely on improvised septic tanks or open pit latrines, which leak into groundwater during the rainy season. Public toilets may exist but are poorly maintained, overcrowded, or lacking in privacy, discouraging use. Waste management systems are often informal, with household garbage disposed of near beaches or waterways. These observations guide recommendations for improving sanitation facilities, enhancing waste collection services and promoting environmentally safe practices.

Another important aspect of CHA is identifying local strengths and opportunities. Many coastal communities have active volunteer groups, school-based clubs and informal neighborhood watch teams that can be mobilized for environmental cleanups, dengue prevention campaigns, or hygiene promotion sessions.

The assessment process concludes with the development of an action plan that includes specific, measurable goals. Short-term interventions may involve installing water filtration units, repairing communal toilets, or organizing hygiene training sessions. Long-term strategies include advocating for government investment in water infrastructure, improving drainage systems and establishing community-led waste management programs. Continuous monitoring and periodic reassessments help track progress and adjust strategies based on evolving needs. Overall, CHA provides a holistic view of water and sanitation conditions and highlights pathways to improving health outcomes in vulnerable coastal populations.

### Conclusion

Community health assessments are essential for identifying environmental risks, understanding community needs and guiding effective water and sanitation improvements in low-income coastal settlements. By engaging local stakeholders, analyzing health data and developing realistic action plans, CHAs support sustainable interventions that reduce disease burden and enhance overall well-being.