Quick Win Project – Siliguri
SUNYA - Towards Zero Waste

About Siliguri

Siliguri city is strategically located in the region called Siliguri corridor, an important link connecting mainland India with its neighbouring states and countries. It stretches across the floodplains of the Mahananda River at the foothills of the Eastern Himalayas in the Darjeeling district of North Bengal, surrounded by dense forests. Traditionally the settlement of Siliguri developed as a tea plantation and trading centre and it continues to be one.

CapaCITIES Project

Cities account for approximately two-thirds of global energy use and over 70 percent of energy-related greenhouse gas (GHG) emissions that drive global climate change. In India, increased demand for energy, infrastructure and services is putting city systems under pressure. This will be accentuated further by growing risks caused by climate variability. Poor and vulnerable segments of the city populations will be affected most. Through the Capacity Building for Low Carbon and Climate Resilient City Development project (CapaCITIES), SDC's Global Programme Climate Change will support and accelerate the Government of India's efforts for sustainable urbanization.

SUNYA-Towards Zero Waste

47 wards in Siliguri generate more than 350 tons of solid waste per day. Siliguri Municipal Corporation (SMC) employs 327 people and 280 vehicles for collecting, transferring and processing the solid waste. Primary household collection is carried out through tricycles, which deposit waste in secondary storage community bins. These bins are then transported by mechanised vehicles to an open dump site, within the city boundary. The same procedure is followed for commercial and institutional units. However, at source waste segregation is not practiced. The demand for compost is significant around the city, given the

presence of a large number of tea gardens. SMC has a 100 ton per day manual and aerobic composting facility where mixed waste is processed in minimal quantities.

The dump site is fast reaching its capacity and will be saturated within the next decade. It was thus realised that while a lot of work is needed to be done at the central processing and treatment level for the system, decentralized systems incorporating the principles of Reduce, Reuse and Recycle can support the system to a large extent. The SUNYA initiative was, thus, conceptualised under the CapaCITIES project, to ensure that minimal amount of waste reaches the dump site.

The initiative's aims to support the city in its larger objective of sustainable waste management, with a specific focus on reduction of GHG emissions from waste disposal. The CapaCITIES team along with SMC initiated solid waste segregation in two wards, namely Ward 2 and Ward 17, on a pilot scale. The two wards with approximately 7,500 households and commercial

entities were chosen in consultation with SMC. The CapaCITIES team then conducted reconnaissance surveys and preliminary discussions with stakeholders regarding the existing waste management practices. A quantification and characterization study to assess the quantity of waste being generated and the composition of waste in these wards was carried out. Various IEC activities were conducted in the two wards to generate awareness among the citizens about waste segregation and its benefits. A set of two dustbins was provided to all the beneficiaries for segregating their waste into wet and dry waste. Bins for segregated waste collection were placed in the tricycles in both the wards. All the secondary storage community bins in the two wards were segregated into wet and dry bins.

GHG Emission Reduction/ Adaptation Impact

About 350 TPD of waste is generated in Siliguri by a population of about 5 lakh, distributed 47 wards which produces approximately 5.50 kg of methane. All the waste collected is in unsegregated form and directly goes to the dump site.

The most efficient way to reduce GHG emissions from waste disposal is to reduce waste generation at the source, followed by appropriate processing and scientific disposal of reject waste. The 1 TPD compost facility being set up to process biodegradable waste from the two wards will reduce 2500 tCO_2e GHG emissions.

Beneficiaries

Project beneficiaries include citizens of Siliguri, particularly the residents of Ward 2 and Ward 17, Siliguri Municipal Corporation, waste/sanitary workers, and the informal waste collectors and aggregators.

Potential for Replication

The project has good potential for scaling-up to the remaining wards, resulting in a GHG emission mitigation impact of 86,742 tCO2e. Finances for scaling up can be mobilized under various National and State level programmes such as Swachh Bharat Mission, Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Nirmal Bangla and Green Cities Mission.

Project Investment

CapaCITIES project investment: CHF 107’355

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