A Brief TAG Report

1. Project Background

Centre for Integrated Urban Development (CIUD), in technical collaboration with University of Lausanne and eawag from Switzerland, Centre for Environment and Development (CED) from India and in financial support from Swiss National Science Foundation under the Research for Development (R4D) program, successfully implemented the project **Participatory Training 4 Sustainable Waste Governance: South-South Knowledge Transfer Program (A R4D Transformation Acceleration Grant or TAG Project)** in the Kirtipur Municipality.

The overall objective of the project was to transfer and adjust waste technologies and governance practices from Thiruvananthapuram (Kerala, India) to different sociocultural and political contexts in Nepal and Sri Lanka through the co-creation of knowledge, capacity building and local stakeholder involvement.

Initially the key planned activities of the project were development technical basket, preparation and publication of DRR Toolkit/manual on Solid Waste management, exposure visit to Kerala (NGO partner, municipality officials), capacity enhancement on, skill Training to local NGOs and CBOs to enhance the established institution and installation of the systems as piloting. However, some planned activities such as TOT Training session for the local authorities on tech Map & Green protocol by developed by the CED as a part of cross learning of the project could not take place largely due to the travel restriction caused by the pandemic of Covid-19. Therefore, some optional activities such as production of situational videos were produced instead.

2. Key Project Activities

2.1 Making of the Situational/Analytical Videos

Two videos were produced with the key objective of assessing the current status and practices of biomedical waste management and plastic waste management of the Kirtipur municipality and other urban areas of the Kathmandu valley. The videos helped the project team in analysis of the situation of those two types of waste in the municipality and in preparing more plans from the project side as well as providing some recommendation to the municipality and other project stakeholders. The two videos were

An Outlook of Bio-medical Waste Management in Kirtipur Municipality: The video covered the current bio-medical waste management practice by the major health care centers including Bishnudevi hospital and Kirtipur hospital within the municipality, also depicting current scenario of bio-medical waste management and assessing the gaps and needs for the better management of the bio-medical wastes. The videos included the footages of interviews, onsite practices as well as facts and figures supporting the content

An Overview of Plastic Waste Management in Kirtipur Municipality The video covered the current plastic waste management practice by the households as well as other key producers of the plastic waste within the municipality, also depicting the adverse impacts of haphazard disposal and burning of the plastic waste in the human health as well as local systems. The videos included the footages of interviews, onsite practices as well as facts and figures supporting the content

Both the videos were produced in 4K and approximate duration of the videos of the long versions were 20 minutes and that of the short versions of both were five minutes. The narration was in Nepali language with English sub titles. Both short versions have been uploaded in the YouTube. Click the links below for the videos

https://www.youtube.com/watch?v=aF0yza45LeQ

https://www.youtube.com/watch?v=g8fJpSl93YI

2.2 Workshop on Wheels: A Participatory Training for Sustainable Waste Governance: A South- South Knowledge Transfer

As one of the key activities of the project, the team from Nepal (two representatives from Kirtipur municipality, two representatives from private sectors working on SWM in the municipality and three representatives from CIUD) participated in the training workshop entitled "Participatory Training for Sustainable Waste Governance" organized by CED, Kerala, India. The key objective of the workshop was to induce the participants with the innovative SWM activities carried out in Kerala to and observe best practices in the area of SWM in this Indian state. The 'workshop on wheels' was attended by the participants representing municipalities and municipal councils of Nepal and Sri Lanka and the partner organizations.

During the six-day long program, the participants were taken to different parts of Kerala to observe various waste management facilities. Furthermore, experts were made available in all the centers for the clarification on the process of the waste management. The team visited the industrial waste management facility at KEIL in Ernakulam, the bio-medical waste management plant set by Indian Medical Association go Environment (IMAGE) in Mallampuzha, a plastic recycling and recycled-plastic production factory at Kodandu, and the decentralized wastewater treatment system (DeWATS) in Alleppey. This document has been prepared to assess CIUD's key learnings from this workshop.

The six-day long training organized by the CED was very fruitful and successful. With the arrangement of direct observation and interaction program to different sectors of the waste management agencies of Kerala, the participants accumulated an extensive knowledge on the sustainable approaches of the solid waste management. The south-south learning and sharing program was the perfect blend of learnings with theoretical as well as practical knowledge with direct exposures and interactions. Since the participants were the key stakeholders of the municipality including the waste practitioners, handlers and decision makers, the 'Workshop on Wheels' had a lot of takeaways, inspirations and the motivations. The visit also helped develop a network among the participants for the interactions and knowledge sharing.

The digital version of the learning document on the visit is available at

https://ciud.org.np/wp-content/uploads/2022/11/Learning-Document_Workshop-on-Wheel_TAG.pdf

2.3 Handover of the E-Rickshaw to the Kirtipur Municipality

In order to support the municipality's centralized bio medical waste management initiation, CIUD handed over an electric rickshaw to the municipality on Dec 29, 2022. The vehicle was handed over by Mr. Subarna N Joshi, Admin and Finance Manager, CIUD, to Ms. Shuva Laxmi Shakya, deputy mayor of the Kirtipur municipality. Also, present in the program were Mr. Laxmi P Banskota, Chief Administrative

Officer, Er. Rupesh Maharjan, Chairperson of Ward 1, Mr. Hira Lal Maharjan, Chairperson for ward 2, Mr. Santaman Manandhar, Head, Department of Health, and Mr. Gyan Bazra Maharjan, WASH Focal Person Anuj Pradhan, Department of Social Development, from Kirtipur Municipality and the representatives of Lions Club/Blood Bank from Tribhuvan University.

The rickshaw, with four cabins, will be collecting four types of bio-medical wastes (pathological wastes, sharps and needles, infectious wastes and expired medicines) from one hospital and twelve health care centers of the municipality to the common facility where they will be treated before processing them further such as recycling.

The rickshaw will be operated by the municipality including human resource as well as regular maintenances.

Note: the budget reserved for the preparation of a manual and the content translator could not be fully utilized. Initially, it was thought of developing of a manual for bio-medical waste management. Later, it was realized that the Nepalese government has already developed a comprehensive manual on the topic. Later, we planned to develop a standard operating procedure (SOP) for the common facility that the municipality is starting for the bio-medical waste management. The agency which was supposed to prepare the document suggested us not to prepare it before the starting of the facility. Since it will take sometimes to initiate the facility, we were obliged to give up the idea as we could not hold the budget after December 2022. About 50% of the budget, however, has been utilized in the furnishing the e-rickshaw.

3. Key Project Outcomes and Immediate Impacts

3.1 Kirtipur Municipality's Plans and Approaches

After the workshop in Kerala, the municipality has come up with the following programs to mainstream the TAG program learning and inspiration.

Initiation on Bio-Medical Waste (BMW) Management

The municipality has prioritized bio-medical waste management. For that, the municipality is developing a centralized bio-medical waste management system. This includes the collection bio-medical wastes from one community hospital and 12 health care centers of the municipality on government owned land where municipal waste is collected, segregated and transferred.

For this plan, the municipality has the following immediate action plans and activities:

- a. Construction of a BWM management center
- b. Implementation of a biomedical waste collection system
- c. Capacity development for sanitary workers and staff of health posts
- d. Ratification of an agreement between the municipality, health care centers, scrap dealers and private sector companies for collection, treatment and disposing
- e. Management of human resources for sustainable operation
- f. Development of a guideline for biomedical waste management

The municipality is also planning to expand its bio-medical waste management system at a larger scale adding more components, such as an incinerator and other treatments units including wastewater

treatment plants, similar to the one of IMAGE in Pallakad, Kerala. The extended plan will also collect biomedical waste from privately owned health services such as private hospitals, clinics and labs.

Other Waste Management Programs of the Municipality

- a. Promotion of segregation at source. For this, the municipality is distributing waste collection bins to 2500 households
- b. Developing IEC materials
- c. Development of monitoring mechanisms
- d. Development of waste collection software (mobile based application)
- e. Organizing regular campaigns
- f. Establishing of a few community-owned composting plants
- g. Plastic waste minimization programs. This includes the collection of plastic wastes, providing alternative of the plastic bags in the household level and also establishing plastic banks where people can deposit plastic waste such as PET bottles and get a few coins in return.

3.2 CIUD's Way Forward

CIUD will be working in close coordination with the Kirtipur municipality in waste management of the municipality, also reflecting the learning from Kerala. CIUD also envisions to bring bio-medical waste (BMW) management to the national level as BMW is a serious and hazardous yet less attended kind of waste in Nepal. CIUD seeks to broaden the knowledge and capacity of local governments, private sectors, sanitation workers, etc. for comprehensive BMW at both local and national levels. Moreover, CIUD look forward to collaborating with the TAG project partners and other agencies in working more in the municipal waste management sector through technical interventions, researches and the south-south as well as north-south learning.

Challenges

The pandemic of Covid-19 obstructed to execute some of the pre-planned activities such as exchange visits from India. Instead, two situational videos were produced to assess the current practice and understanding of the plastic and bio-medical waste in the Kirtipur municipality.

Later, as the situation eased out, the Nepal team made the learning visit to Kerala, India

4. Photos

4.1 A few glimpses of Kerala visit















4.2 A few glimpses of the E-Rickshaw Handover Program









