



Solid Waste Management in Kochi and Vilnius



Background

Kochi and Vilnius are cooperating to develop an efficient waste management process in the Indian city. The Urban Cooperation Local Action Plan is focusing on the development of a baseline report on solid waste management for Kochi city, incorporating best practices from Vilnius.

Executive Summary

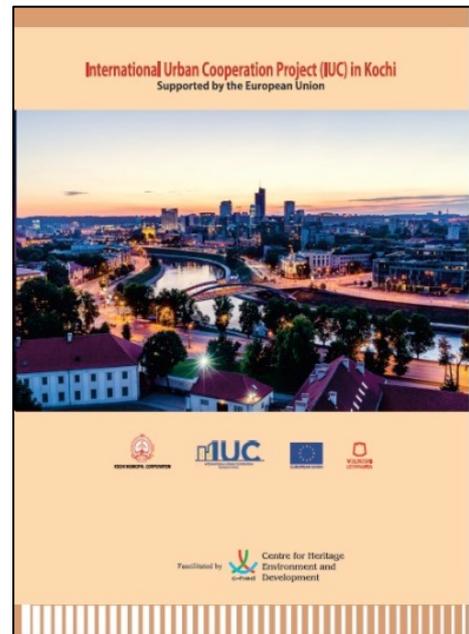
Kochi, is a major port city on the south-west coast of India bordering the Laccadive Sea. It is part of the district of Ernakulam in the state of Kerala and is often referred to as Ernakulam. Kochi is the most densely populated city in Kerala. As per census of 2011, it has a corporation limit population of 633,553. The city has an area of 107.13 Km².

Vilnius is the capital of Lithuania and its largest city with a daily population of around 600,000 and an area of 401 km². It is the seat of Lithuania's national government and the Vilnius District Municipality and is situated in south-eastern Lithuania at the confluence of the Vilnia and Neris Rivers. Vilnius is known for the architecture in its historic town, declared a UNESCO World Heritage Site in 1994.



Both cities have signed the partnership agreements with IUC – India following which exchange visits were made respectively in November 2018 and March 2019. As part of the IUC programme, Kochi Municipal Corporation is working with Vilnius city on solid waste management.

The key challenge in Kochi is absence of a modern and scientific solid waste management system. Both the cities have made significant progress with regards to identification of specific issues and availability of multiple options as potential solutions to these issues. Accordingly, a Local Action Plan focusing on the development of a baseline report on solid waste management in Kochi is being developed.



Kochi Mayor has said, *“We are very excited about this project where the experts from Vilnius and Kochi can work together on solid waste management issues. We are really looking forward to a fruitful and long-lasting partnership between the two cities”*

Vilnius Mayor on the occasion of the visit of Kochi delegation to Vilnius has said, *“We look forward to a productive cooperation between the two cities and are dedicated to making this partnership a success”*

Challenges and Solutions

The waste treatment practices of a city have major impacts on human health, air quality, climate, water quality, ecological, aesthetic and development dimensions. Kochi is the industrial and commercial capital of the state of Kerala. There is a rapid increase in waste generation in the city due to increasing population by migration from other areas. For example, the surrounding water bodies like the river Kadambayar is getting polluted and life under water is getting affected.

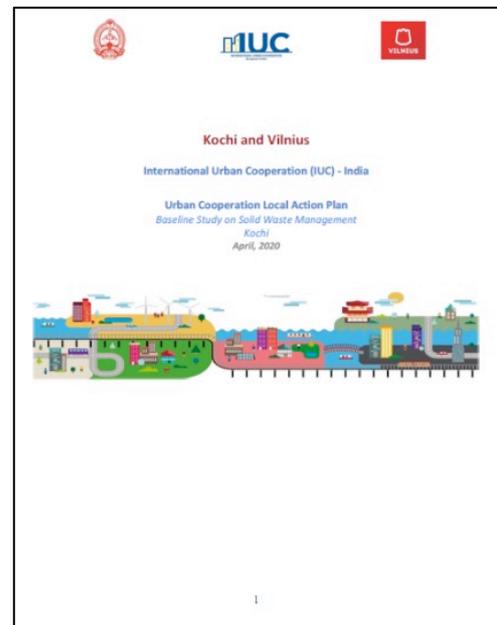




Total solid waste generated from Kochi city is 326 tons per day (tpd) out of which 229 tpd is biodegradable waste and 97 tpd is plastic / non-biodegradable waste. There is also a significant amount of waste comprising of inert waste, tree cutting and construction waste. Out of the 326 tpd of waste, only 207 tpd is collected.

Kochi Municipal Corporation follows the guidelines given in Solid Waste Management rules, 2016 of Government of India for the collection, transportation and other waste processing activities. For example, Kochi is installing over 700 underground and semi-underground container platforms. An important need at this stage is related to the development of a Baseline Waste Management Study in order to provide a better understanding of the status of solid waste management in the city and set the framework for future actions.

The city of Vilnius has introduced a number of best practices with regards to the management of solid waste. The system of collection and transportation of municipal waste and a dual fee for collection of municipal waste started in May 2018. Vilnius took further steps and waste containers were weighted to ensure that users pay for the actual quantity of the disposed waste in 2020. Vilnius uses video surveillance cameras to monitor the activities of waste holders and waste carriers. There is also a deposit system, which allows higher recycling targets. For example, before the deposit system introduction, PET bottles recycling was below 33%, and now it has reached more than 50%. Inspired by all these interventions, Kochi aims to integrate some of these measures into its solid waste handling and management practices.



In line with the above the cooperation will focus on the development of a Baseline Waste Management Study that will include:

- Policies, governance structures, organisational structure, quantities, characteristics (physical & chemical) and handling of solid waste management.
- Estimation of the amount and type of waste that will be generated over the next 2 decades in line with the urban development plan, demographics, proposed plans and national norms.
- International experience (with a focus on the EU and especially Vilnius) on similar processes.



It is also expected that experts from Vilnius will visit Kochi for delivering relevant workshop on best practices regarding solid waste management. Kochi city is keen on developing a company or a Special Purpose Vehicle under the Kochi Municipal Corporation to handle collection, segregation and transport of all kinds of waste. Capacity building and technical support is of utmost importance.

Results and Impact

Kochi and Vilnius after successfully undertaking visits to each other have a very good understanding about their respective cities. This has enabled them to utilise the available resources in the best possible way. The Baseline Study will provide the city with:

- A precise baseline estimation regarding solid waste generation
- A review the various technical interventions and worldwide best practices

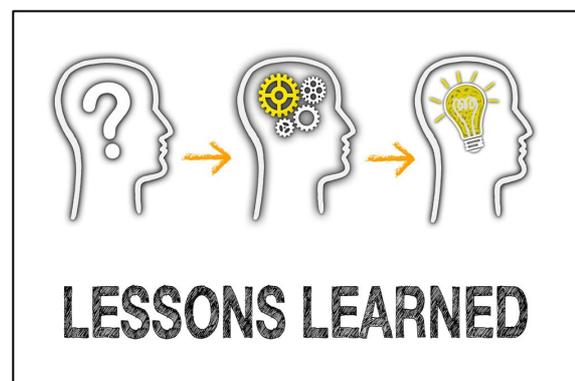
Furthermore, capacity building and enhancing technical skills are expected through participation in a technical workshop to be delivered by Vilnius city in Kochi. All the relevant technical personnel involved in the management of solid waste in Kochi city may be trained on specific topics concerning solid waste management.

The cooperation is mainly related to circular economy as well as jobs and skills in the local economy. These areas of cooperation are mainly related to SDG's 3, 6, 11, and 13.



Lessons Learned

- Committed leadership is instrumental in forming new relationships and experiencing new and innovative tools and technologies.
- Provision of dedicated technical resources could make the overall process of implementing specific initiatives easier.





- There is a strong need to focus on a specific topic of cooperation and building the relations based on a concrete methodology.
- Synergy with horizontal and vertical institutions and organizations is very important to avoid overlaps and benefit from others experience.
- Convergence with various other programs and relevant institutions/departments is also very important.

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About IUC

The International Urban Cooperation (IUC) programme enables cities in different global regions to link up and share solutions to common problems. It is part of a long-term strategy by the European Union to foster sustainable urban development in cooperation with the public and private sectors, as well as representatives of research and innovation, community groups and citizens. Through engaging in the IUC, cities will have the chance to share and exchange knowledge with their international counterparts, building a greener, more prosperous future. The IUC programme is an opportunity for local governments to learn from each other, set ambitious targets, forge lasting partnerships, test new solutions, and boost their city's international profile. Its activities will support the achievement of policy objectives as well as major international agreements on urban development and climate change, such as the EU Urban Agenda, the UN Sustainable Development Goals, and the Paris Agreement.



