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TOWARDS A PLASTIC WASTE-FREE FUTURE IN HANOI, VIETNAM

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KEY MESSAGES

- China's 2018 ban on waste trade has made Vietnam and many other Southeast Asian countries a main recipient of plastic waste.
    - Vietnam registered an increase of 175,000 tons of imported plastic waste in the first nine months following the ban in China.
    - COVID-19 has reinforced the use of single plastic and waste accumulating in Vietnam (domestically and internationally).
- The informal sector remains paramount in waste picking and recycling, however, is volatile in regards to effectiveness, profitability, and safety.
- Proposed solutions for the City of Hanoi include: (1) Creating enabling and clear domestic and international plastic waste trade policies; (2) Stringent enforcement and monitoring of plastic waste policy; (3) Providing integrated solid waste management services that encourage sorting plastic wastes at source; (4) Increasing public and private investments to modern plastic recycling infrastructure; (5) Improving integration of the informal recycling sector.

BACKGROUND INFORMATION

A study by Andrady, et.al (2015) found that most of the plastic pollution in oceans originates in Asia.The top polluting countries are China (28%), Indonesia (10%), Philippines (6%), Vietnam (6%), and Thailand (3.2%). It was estimated that Vietnam generates 3.27 million tons of plastic wastes annually, however, only 20% of these are recycled and 8-16% are disposed of in landfills (Yeoh, 2020).

Plastic wastes pose a wide array of environmental issues and health risks that largely affect ecosystems and populations. Improper waste handling and treatment put the informal sector, which dominates Vietnam's recycling industry, at risk of acquiring various health problems from being constantly exposed to toxic fumes and mixed wastes that contain pathogens. Practices such as the burning of plastics and wastewater discharge to waterways also cause air and water pollution.

To address concerns over plastic pollution, the national government enacted several policies anchored on the *Law on Environmental Protection 2014* and *Law on Environmental Protection Tax* which outlines provisions on waste reduction, separation at source, collection and treatment, and scrap importation. In 2018, *Decision No. 491/QD-TTg* modified the National Strategy on Integrated Solid Waste Management 2025-2050 to include the following targets: 100% use of environment-friendly packaging in trade centers and supermarkets by 2025; 90% collection rate for municipal solid wastes; and improved recycling rate by 90% for industrial wastes and 80% for municipal solid wastes. Moreover, the National Action Plan on Maritime Plastic Waste Management commits to a 75% reduction of plastic debris by 2030.

Yet, Vietnam also deals with plastic wastes imports. It registered an increase of 175,000 tons in imported

plastic wastes in the first nine months of 2018 following the plastic waste trade ban by China. In response, *Directive No. 27/CT-TTg* was issued as an urgent measure to strengthen the management of importation and use of scraps. This was elaborated by the National Technical Regulations on Environment for Imported Plastic Scraps (QCVN 32:2018) which specified the requirements in importing plastic scraps including details on compulsory commitments, types of plastics, pre-cleaning, classification, and labeling (Nguyen, 2019).

Local governments such as Phu Quoc, Da Nang, and Hue are also stepping up efforts to heed the call of the national government to beat plastic pollution by issuing their regulations, constructing waste treatment facilities, and engaging their communities in clean-up activities.

However, stakeholders look up to big cities and huge plastic waste generators like Hanoi and Ho Chi Minh to deliver transformative impacts. During the *City-Business Ideator Workshop* in Hanoi by the Ambitious City Promises (ACP) project, Hanoi's Department of Natural Resources and Environment (DONRE) shared that the city is targeting to ban single-use plastics by 2025. To realize this, DONRE has partnered with the Department of Industry and Trade to encourage commercial establishments to replace nylon bags with environment-friendly packaging instead.

Further, the COVID-19 pandemic has exacerbated the issue over the sustainability of these measures' genuine impact as the use of single-use plastic surged following efforts to curb infections.

PROBLEM DEFINITION

The worsening plastic pollution in Hanoi, and Vietnam on the whole, is rooted in the following problems: a throwaway culture by a growing urban population, weak participation of citizens in waste management efforts, inadequate recycling infrastructure, and lack of integration of the informal sector in waste management.

A 2018 study[1] found that of Vietnam's 27.8 million tons of wastes annually, 46% are municipal solid wastes. About 70% of the municipal solid wastes are shared by the country's big cities, including Hanoi. Projections show an annual increase of 10-16%. Hanoi's plastic wastes account for 7-8% of its total 4,000-5,000 tons of the daily waste generation rate, according to MONRE (Global Recycling, 2020).

The growing urban population coupled with the cheap price and convenience offered by plastic products is cultivating a throwaway culture. Hanoi's Nam Son Waste Treatment Complex, built-in 1990, remains the largest landfill in the city and was expected to have a lifespan of 20 years. Instead, it has already undergone several expansions to accommodate the growing plastic waste as recycling rates remain poor.

In a 2019 survey conducted by WWF Vietnam in Hanoi and Ho Chi Minh, only 31% of households sort their wastes (Lampard, 2020). Unsorted wastes make recycling difficult and costly, and consequently unattractive for technology and infrastructure investment. Furthermore, there are only a few functional and proper recycling facilities available.

The plastic recycling industry in Vietnam is also dominated by the informal sector. Family-run recycling businesses have become common in villages. However, these small-scale recycling businesses are not given enough attention and are largely unregulated, oftentimes employing obsolete technologies and manual labor for their recycling processes. While plastic waste supplies are high, the majority of these are low-value plastics that cannot be recycled. Plastic waste trade prices can also be volatile resulting in weak profitability and unstable recycling businesses by the informal sector.

1 A Study by the Netherland's Ministry of Foreign Affairs, Dutch consultancy group CREM, and Partners for Innovation.

KEY FINDINGS

Studies have shown that the life cycle analysis of using recycled plastics instead of virgin plastics alone can reduce greenhouse gas (GHG) emissions generation by 20-50% (Yeoh, 2020). The draft Promise of Hanoi (low emission development strategies) has identified a reduction of waste disposal to landfills, improved composting, and plastic recycling as among the city's priority measures. Such efforts are estimated to contribute to 76,000 tCO2e by 2030. To realize this target and to achieve a sustainable and transformative impact of interventions, the foundations for effective solid waste management, particularly for plastic wastes, need to be laid out.

Plastic waste policies

A comprehensive analysis of plastic waste stream data is imperative in informing plastic waste management policy changes across all levels of government. As Hanoi seeks to ban single-use plastics and the national government intends to ban plastic waste import by 2025, robust data on the plastic waste stream will allow for clearer policy directions and cost-effective strategies that safeguard the social well-being, environmental protection, and economic interests of Vietnam.

Sorting plastic wastes at source

Plastic wastes require proper sorting and cleaning to be qualified for recycling. As a good example of developing new solutions, the Hanoi city government's partnership with URENCO for the "Waste Sort at Source – Smart waste collection" initiative engages citizens to support the sorting and recycling of reusable materials at the source. The pilot is taking place in the Hoan Kiem district intending to expand throughout Hanoi by 2025.

Investments in plastic recycling infrastructure

Infrastructure investments are usually allocated for disposal facilities (e.g., incinerators, landfills). Urban areas like Hanoi have limited space available for the construction of additional landfills. Therefore, it is equally important to devote public and private resources for plastic recycling infrastructure to divert plastic wastes and prolong the lifespan of existing landfills.

The informal recycling sector

The informal recycling sector has been filling the recycling gap in Vietnam. Still, their potential remains untapped. Formalizing this sector will allow for better safeguards on labor and health conditions, environmental protection, and job stability for thousands of citizens.

Stakeholder partnerships

Information dissemination and education campaigns across different stakeholder groups can be more cost-effective with the active involvement of different stakeholders. The Hanoi City Promise's Stakeholder Engagement Platform is one mechanism to encourage participation and amplify the advocacy for sustainable production and consumption of plastic products.

POLICY RECOMMENDATIONS

At the National Government Level:

- Revisit the specific provisions on waste reduction, separation at source, collection and treatment, and scrap importation of the *Law on Environmental Protection 2014* and the *Law on Environmental Protection Tax* to amend and adopt a circular economy model for waste management.

- Explore the adoption of a phased implementation of *Extended Producer Responsibility (EPR)* policy to support the achievement of plastic waste reduction targets and improve the recycling rate in Vietnam. Applicable EPR fees may also be used to allocate resources for modern recycling infrastructure and technologies.

- Formalize the role of informal recyclers as crucial actors in the plastics value chain in Vietnam. Enact policies and programs that provide modern and environment-friendly recycling technologies and practices, improve technical skills, as well as safeguard better and safe work conditions and job stability.

- Conduct a comprehensive analysis of Vietnam's plastic waste stream to inform policy enhancements to the following: *Decision No. 49/QD-TTg: Modified National Strategy on Integrated Solid Waste Management 2025-2050, National Action Plan on Maritime Plastic Management, Directive No. 27/CT-TTg,* and *National Technical Regulations on Environment for Imported Plastic Scraps (QCVN 32:2018)*. Effective policies and action plans focus on outlining specific plastic waste classification as well as management (sorting, collection, handling, treatment, recycling, disposal) protocols for producers and consumers. Furthermore, a clear delineation of roles and responsibilities as well as coordination protocols among relevant ministries (environment, trade and industry, customs) needs to be provided.

- Set up a national database of accredited recycling companies and manufacturers to facilitate better coordination among recycling industry actors and easier reintegration of recyclable plastics into the value chain.

- Develop product-centric strategies and introduce eco-design standards (e.g., design for disassembly/recyclability) to maximize the recycling potentials of the materials.

At the Local Government Level:

- Translate relevant national policies and plans into local regulations and action plans with particular attention to stricter regulation and enforcement of plastic waste reduction, segregation at source, and recycling.

- Conduct regular capacity-building activities for policymakers, technical staff, and enforcers to enhance appreciation, knowledge, and skills in embedding circular economy models in the city's waste management strategies.

- Increase allocation of municipal budget to plastic waste recycling infrastructure and job opportunities for informal recyclers.

- Proactively foster partnerships with the private sector to increase investments in recycling technologies and strategies that allow for better reintegration of collected recycled plastics into the plastics value chain.

- Mobilize different stakeholders (e.g., academia, youth groups, women's union, CSOs, business entities) in information dissemination and education campaigns of the local government in reducing plastic wastes. Provide a regular platform for dialogues and research opportunities to fill gaps in implementing sustainable plastic waste management interventions, particularly in developing alternatives to plastic packaging.

CONCLUSIONS

Plastic waste leakage to the environment is an urgent global issue that requires interventions across the entire plastic value chain. Southeast Asian countries which are cited to be the origin of most of the plastic pollution in our oceans are given the spotlight to influence and drive solutions at the national, regional, and global levels. The transboundary nature and complexity of the issue requires innovative and progressive policy (e.g., EPR, plastic waste trade agreements) and infrastructure solutions.

Due to very visible nature and direct mandates on solid waste management, local governments such as the City of Hanoi, play a crucial role in the containment and prevention of plastic waste leakage. Robust plastic waste data builds an informed basis for translating national policies and stricter enforcement of existing local policies. It also guides targeted and sustainable infrastructure investments such as recycling facilities that enable circularity in the plastics value chain as well as result in climate and development co-benefits. Finally, effective implementation of all interventions only becomes meaningful if behavioral change towards a more sustainable consumption and production patterns is realized. Therefore, a continuing multi-stakeholder collaboration to facilitate a continuous flow of relevant information for joint actions is also instrumental.

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The purpose of the policy brief series under the IKI Ambitious City Promises project is to support more informed evidence-based decision-making on the priority areas within the project cities or their respective national governments. It is targeted at the policy-makers and the government officials who are involved in developing and/or executing the climate action plan.

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