
# Piloting Innovation for Pasig River Cleanup: Insights from the 6-month Clearbot Pilot Study in the Philippines

**Talking points for DENR Undersecretary for Policy, Planning, and International Affairs Atty. Jonas R. Leones**

## Key messages to Deliver for Usec. Jonas R. Leones

- DENR would like to thank **ADB Philippine Country Director Andrew Jeffries** for ADB's continued partnership with the Interagency Council for Pasig River Urban Development, and the local government, Clear Robotics, ADB staff, and community partners, who have contributed to this innovative pilot and to the broader effort to rehabilitate the Pasig River.
- The Pasig River reflects the **broader solid waste and plastic pollution challenge** facing many urban areas in the Philippines. Much of what ends up in our rivers originates from land-based sources: gaps in waste segregation, collection, and diversion. This underscores the need to holistically address pollution **upstream and not just downstream**.
- This is why DENR values its collaboration with the Asian Development Bank under the **Rejuvenating Pasig River for a Livable Manila (REPALM)** initiative, which provides **integrated, cross-cutting support** aligned with DENR's mandate.
- Through REPALM, ADB is supporting DENR and partner agencies across multiple fronts:
    - **Policy reforms** under the **Blue Economy Policy-Based Loan**, aiming to enhance the plastic and solid waste value chain;

- **Digital innovation**, including the **Pasig River Digital Twin and its plastics waste use case**, to support evidence-based planning, monitoring, and prioritization of interventions;
- **Program design support** for the implementation of the **UAE Clean Rivers Grant**, helping unlock grant financing into actionable river rehabilitation and circular economy interventions;
- **Urban solid waste and river rehabilitation pilots**, including the Clearbot initiative, to test and learn data-driven and AI-enabled solutions; and
- **Integrated basin-level planning**, including updates to the **Laguna Lake Master Plan**, to ensure coherence across the Laguna Lake–Pasig River system.

- These efforts directly support DENR's statutory mandates and national policy priorities, including **Republic Act 9003**, which marks **25 years** this year, the **Extended Producer Responsibility Law (RA 11898)**, and the **National Plan of Action on Marine Litter**. Pilots like Clearbot help turn these policies into **operational, on-the-ground action**.

- The Clearbot pilot highlights the value of **public–private–development partner collaboration**. Government provides policy direction and coordination; LGUs lead frontline implementation; the private sector brings innovation and operational efficiency; and partners like ADB support piloting, financing, and learning.
- One key lesson from the Clearbot pilot is that **technology is not a silver bullet**, but when properly integrated, it can meaningfully **complement manual cleanup, community-based efforts, and existing government programs**.
- The pilot highlights the role of **AI-enabled solutions** in urban river management. Clearbot improves safety and efficiency while generating **real-time data** on waste types, volumes, and locations—information that is difficult to capture through manual collection alone.
- By linking this data with tools such as the **Pasig River Digital Twin and plastics waste use case**, agencies can better **identify pollution hotspots, prioritize interventions, and track results over time**.
- Overall, the pilot underscores the importance of **testing, adapting, and learning** when deploying AI-enabled innovation in complex urban river systems.
- Moving forward, DENR remains committed to **enabling policies**, strengthening coordination with LGUs and national agencies, and collaboration with ADB and

partners to **responsibly scale solutions** that enhance solid waste management, river rehabilitation, flood resilience, and public health protection.

- Ultimately, rehabilitating the Pasig River is a shared responsibility. DENR looks forward to continuing this collaboration to translate lessons learned into **lasting improvements for rivers, communities, and ecosystems**.