



CASE STUDY — Asia, Latin America, the Caribbean

Building Local Government Capacity for Improved Solid Waste Management Systems

Case in Brief

For the world to be successful in preventing the estimated 11 million metric tons of plastic that flow into the ocean each year, most of it from land-based sources, improving on-the-ground waste management services performed by local governments will be critical. Despite their importance, local governments often do not have the institutional capacity—the knowledge and skills, or the infrastructure and financial resources—to plan, build, and operate effective solid waste management systems. **USAID's Clean Cities, Blue Ocean program seeks to build local government capacity so they are equipped to manage their waste systems and advance local circular economies.**

One way the program is doing this is through a USAID-developed tool, the Solid Waste Capacity Index for Local Governments (SCIL, pronounced SKILL), which provides a first step in building a more robust and effective solid waste management system. The SCIL enables local governments to self-assess their strengths and weaknesses—resulting in a set of scores that are used to develop an actionable plan to improve the areas that need it most. The SCIL has been piloted in four languages in more than 17 cities across seven countries; with larger cities working with their sub-districts to conduct further SCIL assessments.

Asia, Latin America, The Caribbean

Dominican Republic, Indonesia, the Maldives, Peru, Philippines, Sri Lanka, Vietnam



At a Glance

Waste generation rates will more than double over the next 20 years in low-income countries¹

2 billion

people worldwide still lack access to solid waste collection²

All across the world, waste management is almost always the responsibility of local governments



A Material Recovery Facility in the City of Paranaque, the Philippines. Photo: Clean Cities, Blue Ocean

Background

Around the world, waste management is the responsibility of local governments. Few local government services are as visible in our daily lives – and important – as waste management. Yet many local governments lack the institutional capacity and resources necessary to successfully plan, build, and operate the on-the-ground waste management services that prevent ocean plastic pollution. These services require strong local institutions that are empowered and capable of implementing national regulations and plans; demonstrate leadership and transparency in planning and implementing waste programs; and value the importance of proper waste management for overall community health and well being.

Local governments face capacity challenges with respect to service delivery, particularly when waste operations or infrastructure are insufficient to meet local needs. The World Bank estimates that low-income countries only collect about 48 percent of waste in cities.³ However, local governments are obligated to properly manage waste for all of their citizens—arguably one of the most visible services with the greatest direct impact on people’s lives—in order to meet the environmental and health standards for the communities within their jurisdiction.

Local governments are also facing exponentially rising costs to manage their cities’ growing volumes of waste. Globally, waste management costs are projected to reach \$375 billion by 2025 (up from approximately \$205 billion in 2012) and are projected to be highest in poorer countries.⁴ Local governments need adequate financial skills to be able to understand the full costs of operating a solid waste management system—to determine if their funding is sufficient to provide effective waste services.

“Local governments need to be strong, empowered, and capable to implement solid waste management regulations, plans, and operate effective and efficient local systems. That is why Clean Cities, Blue Ocean centers its approach on supporting cities and other local governments—strengthening their staff and systems using a series of tools.”

– Clare Romanik

USAID’s Lead Ocean Plastics and Urban Advisor

1 Kaza, Silpa; Yao, Lisa C.; Bhada-Tata, Perinaz; Van Woerden, Frank. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development. Washington, DC: World Bank.

2 United Nations Environment Program. 2015. Global Waste Management Outlook.

3 Kaza, Silpa et al. 2018. What a Waste 2.0: A Global Snapshot of Solid Waste Management to 2050. Urban Development. Washington, DC: World Bank.

4 Ibid, 2018.

Our Approach

A core tenet of USAID's local systems approach to build a circular economy is that municipalities make thoughtful and strategic considerations in their solid waste management planning process—and that planning processes are based on data-driven analysis and the local context.

The Solid Waste Capacity Index for Local Governments

Clean Cities, Blue Ocean has developed several tools to help local governments achieve milestones for sustaining a sound solid waste management system. To understand local capacity and develop a plan for its improvement the program designed the SCIL assessment tool. The SCIL enables local governments to do a self-assessment of a city's current capabilities and pinpoint areas of improvement, and provides a roadmap to make the process of strengthening the city's waste system less overwhelming.

The SCIL provides a methodical and distilled, yet comprehensive, approach for local governments to easily assess their capacity. In a SCIL assessment the following six areas are assessed and scored, with equal time and consideration given to each as critical components of a well-functioning system:

-  **1 Planning** – Is there a well-developed and comprehensive plan for the system that meets the needs of the local government's citizens?
-  **2 Policy and Legal Framework** – Do local laws and policies fulfill local government's responsibilities in accordance with national legal requirements, strategy, and policy?
-  **3 Financial Management** – To what extent are systems in place to administer, budget, and track all waste system expenses and revenues?
-  **4 Service Delivery** – Is there infrastructure and protocols in place to deliver to all its citizens reliable, equitable, and environmentally sound services for all waste?
-  **5 Human Resources** – Are there effective and equitable human resources, structures, and processes in place to competently and safely deliver waste management services?
-  **6 Community Engagement** – To what extent has the local government engaged stakeholders (including women) in planning and implementation and incorporated their input into the design and monitoring of the system?



Clean Cities, Blue Ocean provides technical assistance

to local governments in ten countries and more than 25 cities across Asia, the Pacific Islands, Latin America, and the Caribbean—to build their capacity in solid waste management planning and to ensure sufficient opportunities for recycling.

In each of the countries, USAID's approach works to ensure that local governments:

- have a clear understanding of and are able to improve their capacity to manage waste;
- have robust solid waste management plans in place;
- are able to comply with national waste management policy and regulations; and
- understand the cost of expanding and improving service delivery and can identify the necessary funding and investment needed.

The SCIL assessment process consists of a few basic steps.

Develop the SCIL Implementation Group

The SCIL process is initiated with the formation of a local SCIL Implementation Group—a designated group of local government staff representing multiple agencies. In many cases, these representatives are department heads or directors of agencies responsible for specific components of the local waste management system. A SCIL assessment process requires the participation of local government staff but seeks to make the best use of their time by giving them a way to focus on key elements of the solid waste system based on their knowledge and existing resources.

Answer Questions and Gather Documentation

Throughout the assessment, the SCIL Implementation Group works as a team to break down extremely complex systems into workable parts through a six-component approach for planning, policy and legal frameworks, financial management, service delivery, human resources, and community engagement.

By answering a series of “yes” or “no” questions and by gathering the relevant documentation to verify responses to those questions, the tool provides local governments with a SCIL score. The SCIL numerical score can also be used to evaluate and transparently report a city’s status with respect to its capacity, and—when done again over time—can provide a monitoring and evaluation tool to measure progress.

The SCIL assessment, however, is much more than a score, since the process, itself, brings teams from various departments together, fostering collaboration and mutual strategizing of solutions, and building capacity and ownership of the process. The “yes” answers show where they have capacity already. The “no” answers show where capacity needs to be built.

Identify and Prioritize Recommendations

From this, the SCIL Implementation Group can analyze the data and develop a roadmap that includes recommendations to highlight priority improvements in the six key capacity areas. The process and results provide valuable information to local governments on where they need to invest to increase their capacity. This could include training needs, as well as policy and operational changes, such as including public engagement activities or increasing worker protections. SCIL findings also inform opportunities for technical support, and areas that may need improvement in the cities’ existing or future solid waste management plans.

Develop Roadmap

The process and results are then written into a formal report that is presented to the local government’s decision-makers for approval. With this process, it helps to institutionalize the recommendations and sets the stage for justifying future budget and policy support that will be needed to implement the top priority recommendations.

“From the SCIL assessment, we expected to get a comprehensive picture of Phu Quoc’s solid waste management system and evaluate it to understand links and identify gaps. During the assessment, we realized we were only focusing on regulation, collection, and transportation of waste, and not considering policy, planning, or community engagement.”

– Doan Van Tri

*Head of Environmental Group,
Phu Quoc City Department of
Natural Resources and Environment*

Clean Cities, Blue Ocean has developed several other technical support tools to support local governments in implementing these recommendations.

USAID-developed Tools to Address SCIL-identified Gaps

Solid Waste Cost-of-Service Analysis (COSA) - Guidelines for Local Governments and the Companion Tool

- Helps local governments determine the cost of operating their current and future solid waste management systems
- Estimates current vs. ideal solid waste expenditures
- Provides the information necessary to determine service rates and fees

Funding Options for Solid Waste Systems in Low- and Middle-Income Countries

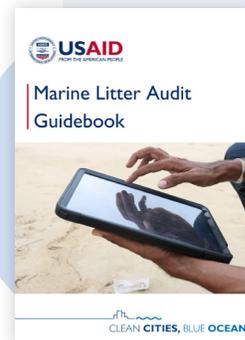
- Identifies potential funding options for system costs identified through the COSA that may pay for or help offset both capital and operating costs

Marine and Street Litter Audit Guides

- Provides a standardized methodology for measuring the extent of litter on beaches and streets
- Enables local governments to pinpoint litter hotspots to inform strengthened waste management plans and develop/deploy appropriate solutions

Rapid Appraisal Facility Tool

- Enables local governments to gather data on and assess current waste facilities' capacity and performance, using simple surveys and the option to create geospatial maps



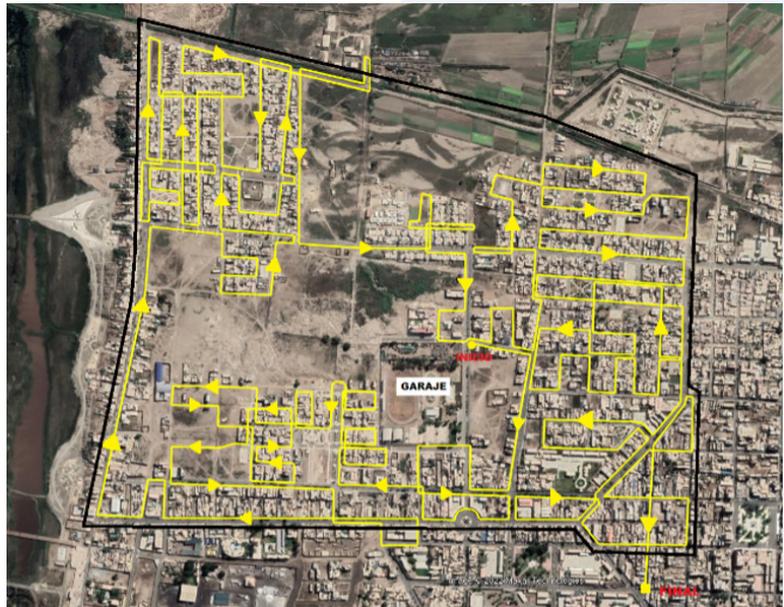
SCIL in Action

In Clean Cities, Blue Ocean's focal countries, local governments tend to score highest in the areas of policy and legal frameworks; lowest in the areas of financial management, community engagement, and planning. This is understandable given that policy and legal frameworks are usually adopted before systems are put in place. In a number of countries, national legislation is already established that local governments can replicate, leading to higher scores in this area; however, oftentimes local governments lack the financial resources and technical capacity to design, implement, and enforce the systems and services to comply with these policies. Community engagement and planning have also frequently scored low, with few instances of cities involving the community in the planning process.

Expanding service collection through route optimization

The city of Pisco, Peru, produces nearly 70 metric tons of waste per day. This waste often accumulates in 'hot spots' — areas where waste collection services are thin or non-existent. Before the SCIL, Pisco's waste management services only covered 80 percent of the population and no formal routing system for waste collection existed. The SCIL assessment identified optimizing collection routes as key to reducing hotspots and improving waste management overall. The SCIL also identified the need to increase community participation and to involve the informal recycling sector in the planning process, since many communities were uninformed on the waste collection schedules or on the collection of recyclables.

As a result of the SCIL, the city of Pisco—with support from Clean Cities, Blue Ocean—prioritized waste collection routes in close coordination with the city government and neighborhoods—developing routing plans for all eight districts in the city. The new routes expanded waste services to an additional 12,786 residents using the same collection vehicles—with the same workers in less time—that now provides 100 percent waste collection coverage. A communication plan was also developed and implemented to improve coordination between the local government, the neighborhoods, and informal waste workers.



TOP
Trash collectors picking up waste along new collection routes in Pisco, Peru, optimized through USAID's support to identify and improve critical gaps in local waste management.
Photo: Clean Cities, Blue Ocean

ABOVE
Proposed optimized route in one area in Pisco, Peru.

Improving waste services through a more comprehensive, inclusive solid waste management plan

The City of Parañaque, located in the southern region of Metro Manila, in the Philippines has experienced rapid urban growth over the last decade, contributing to a larger share of the country's plastic waste. A SCIL assessment was conducted in 2021 and identified several areas of improvement that were not currently included in the city's 10-year solid waste management plan, including greater engagement with city stakeholders, improved data collection for performance monitoring, and strengthened financial data and management tools. The City is currently working to update their 10-year plan and develop a budget for implementation in order to measure progress and priorities. The updated plan is expected to be more inclusive through the direct engagement with groups not traditionally included in waste management planning, including homeowners' associations, recycling facilities, and informal waste collectors. More rigorous data collection and monitoring will help identify gaps in service delivery, as well as highlight activities that are working well, to boost citizens' satisfaction and their willingness to pay for services. A review of the financial management system, such as budget development protocols, will increase financial efficiencies, transparency, and improve overall data management across the city.

Impacts of SCIL Assessments

USAID has piloted the SCIL tool in four languages across seven countries in Asia, Latin America, and the Caribbean. The SCIL Toolkit was publicly launched in December 2022.

SCIL assessments are a tangible way of expressing local waste management capabilities for communities of all sizes. USAID partner countries are beginning to incorporate SCIL findings into their planning frameworks so they can start implementing the recommendations at the local level.

In addition to pinpointing exactly where local governments can strengthen their capacity to ensure sustained waste management services, the SCIL process has resulted in numerous related benefits:



A Material Recovery Facility in the City of Parañaque, the Philippines.
Photo: Clean Cities, Blue Ocean

Milestones to Date

LATE 2019

After the program's launch, the Clean Cities, Blue Ocean team conducted Initial Solid Waste Management Assessments across its focal country engagement sites, leading to the development of the SCIL.

END OF 2022

The SCIL had been piloted in seven countries and more than 17 cities, beginning with Parañaque City in Metro Manila, Philippines.

DECEMBER 2022

The SCIL Toolkit was officially launched to the public for use in cities around the world.

- **Creates a guide to build capacity**

Completing the SCIL process itself builds capacity and serves as a communication tool to engage staff—empowering municipal staff but also making them more aware of their roles in waste management. It facilitates intra- and inter-agency relationships, bringing together staff (from each of the six components) that otherwise do not have the opportunity to align their work and respective roles in the system.

- **Enhances solid waste management planning**

The SCIL guides local governments in their solid waste management planning and budgeting processes and provides a means of prioritizing their scarce resources—the tool helps local governments to save money and resources. The SCIL also challenges staff to consider current implementation models and pursue solutions to challenges in managing waste. Completing multiple SCILs demonstrates progress over periods of time.

- **Increases understanding of the complexities of building circular economies**

The SCIL increases local government understanding that managing waste and building circular economies is much more than service delivery. Completing an assessment enhances awareness of the six SCIL components, their interconnectedness and complexities, and that areas covered by the assessment questions are critical to the overall waste system.

- **Builds trust and accountability of local and national governments**

The SCIL creates transparency and builds trust within local governments through a collaborative working environment, and creates incentives for national governments to become involved in and learn from the SCIL process—to support other communities and cities develop comprehensive solid waste management plans.

“Questions from the assessment really challenged us to think about things we hadn’t considered. So, we’re already thinking about adding several new components to our solid waste management plan. We now realize that we can do more on waste reduction and reuse.”

– **Terrence Rivera**

*Senior Environmental
Management Specialist of
Parañaque City’s Environment and
Natural Resources Office, Philippines*

By the Numbers

17+

SCILs completed in seven countries with local governments in communities as small as 15,000 people and as large as 3 million people

300+

local individuals have already collaborated on SCILs, **increasing their capacity** to plan, build, and operate effective solid waste management systems

Key Recommendations

USAID's Clean Cities, Blue Ocean developed and piloted the SCIL assessment tool to support communities and cities across the developing world to improve their solid waste management systems—and reduce the amount of plastic entering our ocean. Key takeaways from the pilots revolve around the importance of knowledge building, ongoing collaboration, tailored capacity building, and local government commitment.

Foster cross-government collaboration

Building the institutional capacity of local governments requires strong cross-government collaboration. The SCIL assessments Clean Cities, Blue Ocean facilitated found those more successful with the full participation and successful collaboration across government departments—when different government agencies worked well together as a group.

Local leadership is essential to success

The buy-in, leadership, and engagement of local governments is essential—not just from one government agency but from all of the agencies involved in the solid waste management system. Local governments must be committed to taking action—and managing adaptively—to reach solutions; there needs to be ongoing collaboration and iterative discussions across all agencies involved.

Identify capacity gaps as a knowledge building opportunity

An assessment process that involves multiple staff representing various local government agencies—in this case the SCIL's Implementation Group—encourages staff to work together across departments, building trust and knowledge within the team, and learning from each other on the interconnectedness and complexities of a solid waste management system.

Tailor technical assistance based on the local needs and capacity gaps

Local governments share common challenges in managing their waste but each city will require localized solutions that are specific to their context and community needs. The SCIL helps identify and prioritize those capacity gaps but also determines what is financially and technically feasible to address.

Related Resources

USAID's SCIL Toolkit consists of the SCIL Assessment Implementation Guide, an Excel-based assessment tool, an SCIL orientation presentation, and SCIL survey preparation documents. The toolkit is also accompanied by a six-part SCIL Primer—a preparatory training series to familiarize local governments with the assessment components and their importance and expand awareness and use of the assessment.



[Download accompanying SCIL Toolkit components](#)

SCIL Assessment Tool
SCIL Factsheet
SCIL Assessment Implementation Guide
SCIL Orientation Presentation
SCIL Primer

SCIL Surveys

1. Planning
2. Policy and Legal
3. Financial Management
4. Service Delivery
5. Community Engagement
6. Human Resources

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