

2020 POLICY BRIEF

Solid Waste Management in Kep Province



Cover image: Crab Statue in Kep (Christopher Godlove 2019)



The Asia Foundation

Introduction

Solid Waste Management as a Priority for Cambodia

Municipal solid waste management (SWM) has become a priority for the Government of Cambodia. It is estimated that in 2017 Cambodia generated over 3.65 million tons of waste, more than triple the 1 million tons generated nationally just 3 years earlier in 2014 (Modak et al., 2017; Pech, 2018). Rates of waste generation grew exponentially due to several factors such as rapid population growth, rising incomes, and increasing consumption levels (Sour, 2017; Singh et al., 2018).

Defining an Initiative

Based on the Memorandum of Understanding (MOU) between The Asia Foundation and the National Council for Sustainable Development, an in-depth study of current waste management operations in Kep was conducted. Kep was selected as a proxy as its experience is representative of challenges common to many secondary Cambodian cities. This joint initiative sought to develop a clear picture of the current system of SWM in Kep, based upon a series of first-hand interactions with a variety of stakeholders, including government officials, local inhabitants, and business representatives. Based on these findings, a recommended set of pilot activities linked to policy recommendations were designed to address Kep's specific challenges. These are presented as potential next steps, with the expectation that this approach can serve as a model applicable to other localities nationally. This policy brief describes the context, approach and findings of the study, providing an analysis of key municipal solid waste management challenges and identifying recommended solutions.

The full scoping study report ***Solid Waste Management in Kep*** can be found at: www.asiafoundation.org

Methodology

The study involved the compilation of information and waste data from a variety of sources, combined with the insights of a team of experts seeking out a first-hand view of waste management operations in Kep.

The methodology included:

- **A Desk Study**, designed to gather and organize available data related to waste management, providing a look at key components of existing waste management in Kep: collection, transport, treatment, and disposal.
- **A Field Visit** to discuss waste management challenges with authorities at sub-national level, the community, and with waste service providers.
- **A Final Scoping Study Report** summarizing analysis and conclusions in addition to offering pilot activity proposals and opportunities for policy reform.

Representatives and consultants from the National Council for Sustainable Development and the Foundation with representation from the National Committee for Sub-National Democratic Development Secretariat and the Ministry of Environment formed the basis of the technical team. One of the challenges to developing an understanding of waste management in Kep is the lack of operational and management-related data, common to municipal waste management operations across Cambodia. When data was lacking, effort was made to facilitate understanding by relying on data from other comparable urban waste management contexts. Building upon this solid understanding, the team developed a framework for analysis and a point of departure for the development of a series of targeted pilot activities designed to facilitate the development of more responsive waste management policies.

Findings

Solid Waste Management in Kep

Tourism plays an important role in Kep's economy. This requires special consideration of the impact that visitors have upon waste generation, as well as the impact of poorly managed waste on perceptions of Kep as a tourist destination. Commercial activity linked to tourism is a major source of waste generation in Kep, followed by market activity at one of Kep's 4 municipal markets.

Several important findings were noted:

- Rising waste generation rates recorded at 45 to 51 tons per day in 2018
- Of all waste disposed to the dumpsite, organic waste accounts for up to 70%
- Incomplete and irregular collection of waste, especially in residential areas
- Under-resourced collection and disposal operations
- Low recovery rates of dry recyclable materials, plastics, and metals, resulting in almost all of this type of waste being disposed in the landfill
- Women and informal sector waste workers contributing to overall waste management operations, especially recycling
- High incidence of marine waste, mostly plastics, along seafront and on beaches
- High rates of open burning and illegal dumping contributing to negative impacts on air, water, and land

Demographic Background and Tourism Statistics in Kep Province	
Number of Communes/Sangkats	05
Population	40,470 (5,671 urban) (UNDP, 2019) ¹
Households in province	8,917
Restaurants, hotels and other entertainment facilities	12 hotels/57 guesthouses/22 bungalows/59 other entertainment facilities/ 30 restaurants (PDoT, 2019) ²
Tourists	1,676,509 ³
Key Features of Municipal Solid Waste (MSW) in Kep Municipality	
Volume of waste per day (average)	45 to 51 tons generated (PDoE, 2018) ⁴ ; 25 tons disposed to landfill ⁵
Volume of waste per day (peak tourist season)	55 tons ⁶
Service provider	Poung Sokhim (operations startup 2015)
Operational start-up of the Public Works, Transportation, Hygiene, Environment, and Public Order Office	Established
Accountability line of service provider	<ul style="list-style-type: none"> ● Contract with municipal authorities ● Contract with provincial authorities and Provincial Department of Economy and Finance
Service provider personnel	29 workers, 2 fee collectors, 1 General Manager
Service provision coverage	50%
Monthly fee collection	\$2.45 (small house) - \$30 (large hotel)
Landfill	Damnak Chang'aeur Village, Sangkat Prey Thom, Kep City, Kep Province
Distance to landfill	11.5 km from city center

Table 1: Demographic background, tourism statistics, and solid waste data

1 United Nations Development Programme

2 Provincial Department of Tourism

3 Provincial authority meeting in April 2019

4 Provincial Department of Environment

5 Waste collection company meeting in April 2019

6 Consultative meeting in Kep in May 2019

Governance Challenges to Solid Waste Management Reform in Kep

Globally, waste management systems face the challenge of ensuring good waste system governance. This waste system governance constitutes the frameworks that incorporate the components required to deliver effective waste management outcomes. The basic components of good waste system governance include operational and investment planning (ETAGIW Consortium, 2012; Hansen et al., 2002), financial management and oversight (Lohri et al., 2014; Yoshino et al., 2018), environmental management and regulatory compliance (Dri et al., 2018; SALGA & Department of Environmental Affairs of Republic of South Africa, 2015), and Monitoring and evaluation (M&E) of system management and operational performance (Olukanni et al., 2019).

Waste management is decentralized in Cambodia. The legal foundation for this decentralization of waste management oversight is through Sub-decree No. 113 on 'Management of Garbage and Solid Waste of Municipalities' (2015), with several regulations to support its reinforced implementation (RGC, 2015). With the enactment of the sub-decree, SWM is left to authorities at the district and municipal levels.

This decentralization tends to add an additional layer of complexity in the effort to attain balanced governance of waste services. Based on Sub-decree No. 113, local municipal authorities are expected to take responsibility for waste management, yet, as witnessed in Kep, the reality is a combination of shared local and provincial oversight, as both provincial and municipal authorities enter into contracts with a private waste collection service provider. This is an issue of non-compliance to Sub-decree No. 113 in terms of arranging the contract with waste collection service providers.

Other challenges are related to the limited enforcement and M&E by provincial and/or district/municipal authorities of contractual implementation; the uncoordinated M&E efforts among key ministries, including the Ministry of the Interior, the Ministry of Environment, and the Ministry of Economy and Finance on SWM at the subnational level; and a lack of data on

the current status of waste management contractual arrangements at both the provincial and district/municipal authority levels.

Insufficient funding for the sector is also an important factor. Under-resourced systems combined with a private operator model relying exclusively upon fee-based cost recovery drives service coverage towards the larger, more lucrative waste generators, leaving significant gaps in coverage and producing unsatisfactory results for the community as a whole.

Thematic Priority Areas for Solid Waste Management Improvement in Kep

Drawing on the observations described above, several key thematic priority areas for improvement have been identified. These include:

- **Waste collection** – Waste collection in Cambodia only covers limited amounts of all waste generated (Sour, 2017). This can be attributed to several factors, including limited accessibility to waste collection services, an adherence to traditional disposal methods such as open burning, or a lack of understanding or attention to the environmental impacts of illegal dumping. This has potentially negative health impacts due to reduced air quality, exposure to waste attracting vermin, polluted drinking water, and reduced soil fertility due to their proximity to dump sites (Engel et al., 2016).
- **Marine waste** – The result of uncollected waste resulting from low collection rates and poor disposal, marine waste is commonly associated with lighter wastes like plastics, flowing via streams and rivers to the sea. This results in marine litter accumulation along beaches and in the ocean (Marine Litter Solutions, 2019). Other less understood impacts of marine waste relate to the effect of ocean plastics on fish and other marine life, threatening their livelihood and the fishing industry (Barboza et al., 2018).
- **Organic waste** – Organic waste represents a significant portion of overall MSW generation

in Kep and offers a good starting point to consider opportunities for waste treatment (Sang-Arun et al., 2011). Organic waste can be treated in a variety of ways; the composting of this waste offers a straightforward and low-cost technique most adopted in a developing economy context. But organic waste is often associated with odors and methane production, represents a significant environmental risk in terms of water and soil pollution, and affects population health (Ferronato et al., 2019) that needs to be taken into account.

- **Recycling** – Dry recyclables – plastic bottles, metals, cardboard, paper – represent another growing component of waste in Kep, and one that needs attention and consideration of the opportunities for future investment. The recovery of dry recyclables is an option and serves to remove resources that have value for reuse within other value chains and potential income for collectors; reduce volume, taking up less space in landfills; and divert waste away from landfills, incineration, and dumping.
- **Decentralized waste management** – Developing a practical solution to waste management challenges in Kep requires an approach that considers the constraints within which the existing system operates, including with limited availability of both financial resources and skilled workers. Decentralized treatment of municipal solid waste offers smaller communities, like Kep, a low-cost investment model that also provides an opportunity to integrate local waste sector workers - both formal and informal - within these systems. This may represent potential income for informal waste collectors and a collection cost saving to government.
- **Landfill** – The existing landfill in Kep requires upgrades to incorporate environmental safeguards that protect land and water.

Pilot Concepts

The 5 pilot concepts represent a truly holistic approach designed to address the essential components required to move Kep towards effective SWM solutions.

The 5 proposed pilot concepts include:

1. **Governance** – This approach is designed to address challenges posed by an incomplete decentralization process where overlaps in government authority and oversight may contribute to an inefficient SWM system. This concept will incorporate a focus on M&E for management and operational improvement.
2. **Decentralized technology and systems** – This approach is based on a theory of waste management that advocates for treatment of waste using small-scale, low-tech, and low-cost treatment approaches close to the point of generation. This concept is readily applicable to decentralized use at a neighborhood or district level.
3. **A full waste collection service coverage and landfill improvement** – This approach focuses on a targeted effort to expand waste collection coverage by mapping unserved or underserved waste collection areas and identifying steps for expansion, accompanied by implementation of environmental safeguards at the Kep landfill.
4. **Role of informal sector** – This approach is designed to initiate dialogue between the municipal authorities and informal waste workers. Through ongoing discussions and agreements, the municipal authorities can support the informal waste workers to work towards solutions that will benefit the whole community, including better separation and recovery of recyclable materials.
5. **Education and awareness** – This approach focuses on the development of awareness campaigns adapted to a Cambodian context, seeking engagement with different levels and segments of society. This activity also focuses on the development of educational messages centered around themes that reflect local values, history, and culture, and connects them to SWM.

Pilot Focus	Aspects	Participants	Objective	Financial/ Economic Considerations	Resources Required
1. Governance	<ul style="list-style-type: none"> - Current MSW management does not correspond to vision described in Sub-decree No. 113, Inter-ministerial Prakas No. 073 on Using Sanitation Service Fund to Implement Function of Managing Solid Waste and Wastewater of Municipalities of Sub-National Authorities and other related regulations - Limited support and M&E from national level 	<ul style="list-style-type: none"> - District/ municipality, provincial authority (including PDoEF and PDoE) - National government (through Technical Working Group - TWG) 	<ul style="list-style-type: none"> - Clear oversight for waste management in conformance with regulations - More systematic coordination and oversight from the national level 	<p>Costs: short term expenses of bringing system into compliance</p> <p>Benefits: medium and long-term efficiency gains</p>	<ul style="list-style-type: none"> - Designated participants from each authority - Technical assistance to support transition-Mechanism/formal relation between development partners and official state mechanism (e.g. the TWG)
2. Decentralized technology and systems	<ul style="list-style-type: none"> - Direct resources and knowledge to underserved residential areas with low collection rates 	District/ municipality, provincial govts and private operator	Implement small-scale community-based waste management activities	<p>Costs: capital and training costs to implement systems</p> <p>Benefits: low-cost alternative to centralized systems</p>	<ul style="list-style-type: none"> - Defined area for focus - Technical assistance for analysis feasibility - Resources for pilot implementation
3. A full waste collection service coverage and landfill improvement	<ul style="list-style-type: none"> - Re-orient existing waste service contracts taking into account lessons learned 	District/ municipality, provincial govts and private operator	Establish pilot methodology that addresses low rates of waste collection and landfill and focus on easy-to-implement improvement opportunities	<p>Costs: implementation costs of service expansion and site improvement</p> <p>Benefits: reduced environmental and health costs for authorities and inhabitants</p>	<ul style="list-style-type: none"> - Defined areas for focus - Technical assistance for analysis/ feasibility - Resources for pilot implementation
4. Role of informal sector	<ul style="list-style-type: none"> - To date, sector governance includes only minor considerations of the social impacts of managing waste 	District/ municipality, provincial and national govts, facilitating organizations, informal sector	Establish forum for dialogue on collaboration model between formal and informal sectors	<p>Costs: implementation costs of launching programmatic approach to informal engagement</p> <p>Benefits: some opportunities for revenue sharing from recovered materials and improved livelihoods for marginalized populations</p>	<ul style="list-style-type: none"> - Governmental support for dialogue and action - Resources for facilitated dialogue - International informal sector expert support
5. Education and awareness	<ul style="list-style-type: none"> - Government reliance on private operator services affords little opportunity for awareness and education outreach due to funding constraints 	District/ municipality, provincial govts, private operator, community stakeholder organizations, facilitating organization	Develop model to create waste awareness within targeted population groups	<p>Costs: implementation costs of launching programmatic approach to educational engagement</p> <p>Benefits: returns on investment over medium and long-term from improved behaviors of population</p>	<ul style="list-style-type: none"> - Governmental support for community dialogue - Resources for activity and material development

Table 2: Elements of five conceptual pilot activities proposed for Kep

Key Policy Recommendations

The below policy recommendations seek to address multiple objectives simultaneously but are centered around several basic concepts, including green growth, environmental sustainability, circular economy, improved livelihoods, and cost effectiveness. The key policy recommendations with the linked pilot concepts include:

1. Strengthen Public Works, Transportation, Hygiene, Environment, and Public Order Office within Kep Municipal Administration: This action serves to reinforce municipal accountability for waste management at the local level while permitting the development of municipal personnel's understanding of duties and SWM operations. This act is also a focus on ensuring a successful transition of oversight for waste management services to Kep Municipal authorities, especially the newly established office with enough personnel and budget.

Pilot activity under: Governance

2. Institutionalize M&E that supports ongoing decentralization and operational improvements via focused data management: To ensure operational efficiency and strong system performance, an enhanced focus on M&E must be adopted. This focus should be applied to both management and operations in the form of financial and administrative performance of the Public Works, Transportation, Hygiene, Environment, and Public Order Office, in coordination with national and provincial oversight, as well as linked to monitoring of operational performance of local SWM operations. Comprehensive understanding of waste composition and quantity is vital for operational and investment planning and decision making in waste management, especially in the determination of the appropriate handling and management of different waste streams.

Pilot activity under: Governance

3. Identify resources required to meet SWM goals and develop revenue enhancement strategies responsive to those needs: In parallel with the strong focus on M&E, Kep provincial and municipal authorities must ensure that resources are sufficient to support SWM objectives through local partnerships. This will require analysis of alternative funding mechanisms to support MSW operations. At present, operations in Kep rely on a fee collection scheme managed by a private operator, resulting in service most focused on the needs of large commercial generators. To adequately address waste management at a community level, funding for waste operations must be expanded and diversified.

Pilot activity under: Governance

4. Pilot a public-private partnership model, which includes economic incentives, in order to promote waste separation at source as a part of circular economy: Well-designed economic incentive schemes have been found effective in promoting awareness of waste recycling and increasing participation in separation waste at source. Kep Municipal Administration could achieve this by testing an existing model of a Waste Bank. Residents are paid based on the amount of dry recyclable materials (plastics, metal, aluminum) they deposited. Another model could be an integration of informal waste workers into the existing waste management system. Collection efforts of both formal and informal workers can significantly reduce disposal rates to landfill while supporting improved livelihoods for vulnerable populations. Kep Municipal Administration should establish dry recyclable collection points and work with informal waste workers to create a collaborative approach for collection and sale of recyclables for conversion into new products and sources of energy. Partnerships with recycling depots and/or private sector should be a part of these two models to channel the materials to the recycling facilities.

Pilot activity under: Education and awareness and role of informal sector

5. Launch partnership to pilot the integration of anaerobic digestion of biowaste from Kep's markets, permitting diversion of organic waste from final disposal site, and conduct a feasibility study on possible on-site composting: Markets and other institutional food service and food processing operations produce large quantities of organic waste. Organic waste serves as a feedstock to the bio-digestion process, a process which simultaneously reduces waste volumes while producing biogas. Markets in Kep offer an opportunity to pilot a partnership with the National Biodigester Program in support of the sustainable treatment of Kep MSW. Organic waste also provides another opportunity for producing compost for agriculture. Kep Municipal Administration should conduct a feasibility analysis for on-site composting in the areas with poor access to waste collection service.

Pilot activity under: Decentralized technology and systems

6. Create roadmap for achieving a full waste collection service coverage in Kep: Establishing a full waste collection service coverage is essential to addressing the waste management challenges faced in Kep. The effort for a fully expanded collection coverage will assist Kep Provincial Administration to address open burning and marine plastics. Establishing clear milestones and the steps needed to reach them offers a path to successfully achieving this goal.

Pilot activity under: A full waste collection service coverage and landfill improvement

7. Endorse action plan to secure landfill and implement low-cost operational improvement practices designed to reduce environmental impacts: Kep should direct attention to an upgrade of operations at the landfill. Kep Municipal Administration should improve site access. Operational changes, such as reducing waste burning, ensuring consistent waste placement, and regular application of cover material, should be made to mitigate environmental impacts.

Pilot activity under: A full waste collection service coverage and landfill improvement

8. Support targeted awareness initiative to educate inhabitants on the importance of proper waste disposal, the health and environmental hazards of open burning, penalties for improper disposal: Only through the support and engagement of local inhabitants can real progress towards improved waste management be accomplished. Strong signals from local leaders will convey this message by demonstrating a commitment to action. This may involve beach clean-up events led by local officials, events linked to waste separation, reduced use of plastic, or commitments to anti-burning and illegal dumping.

Pilot activity under: Education and awareness

Conclusion

Demographics and trends in economic growth combined with increased tourism play a significant role in identifying the current and future waste management needs of Kep. It is clear that one of today's biggest challenges to improving waste management in Kep is not technological, but rather related to the sector's overall governance. This overlying governance challenge permeates, resulting in unclear lines of budgetary and management authority, as well as duplication of efforts and confusion of roles and responsibilities of the authorities at levels to comply with existing legislation.

Some of the guiding concepts that must remain in the forefront include:

- Complete decentralization and full compliance with Sub-decree No. 113 on Management of Garbage and Solid Waste of Municipalities;
- An emphasis on building capacity of local officials to ensure they have the tools needed to take up and effectively perform waste management responsibilities;
- Support to the development of mechanisms that ensure resources flow to needed investments in the sector; and
- Creation of strong frameworks, including M&E measures, and data collection and management system, that permit the tracking of both technical and managerial performance.

The unique strength of this initiative lies in bringing together diverse points of view from various levels of government combined with The Asia Foundation's prior engagement in Cambodia on SWM policy relevant work. The findings presented within this policy brief offers a starting point for discussion about opportunities to address the SWM challenges in Kep and suggests the key policy recommendations linked to the 5 pilot concepts that can eventually be applied to the other cities in Cambodia.

References

- Barboza, L. G. A., Vethaak, A. D., Lavorante, B. R., Lundebye, A. K., & Guilhermino, L. (2018). Marine Microplastic Debris: An Emerging Issue for Food Security, Food Safety and Human Health. *Marine pollution bulletin*, 133, 336-348.
- Dri, M., Canfora, P., Antonopoulos, L., & Gaudillat, P. (2018). *Best Environmental Management Practice for the Waste Management Sector*. Retrieved from <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/best-environmental>
- Engel, H., Stuchtey, M., & Vanthournout, M. (2016). *Managing Waste in Emerging Markets*. Retrieved from <https://www.mckinsey.com/business-functions/sustainability/our-insights/managing-waste-in-emerging-markets>
- ETAGIW Consortium. (2012). *Preparing a Waste Management Plan: A Methodological Guidance Note*. Retrieved from https://ec.europa.eu/environment/waste/plans/pdf/2012_guidance_note.pdf
- Ferronato, N., & Torretta, V. (2019). Waste Mismanagement in Developing Countries: A Review of Global Issues. *International journal of environmental research and public health*, 16(6).
- Hansen, W., Christopher, M., & Verbuecheln, M. (2002). *EU Waste Policy and Challenges for Regional and Local Authorities*. Retrieved from https://www.ecologic.eu/sites/files/download/projekte/1900-1949/1921-1922/1921-1922_background_paper_waste_en.PD
- Lohri, C. R., Camenzind, E. J., & Zurbrugg, C. (2014). Financial Sustainability in Municipal Solid Waste Management – Costs and Revenues in Bahir Dar, Ethiopia. *Waste management*, 34(2), 542–552.
- Marine Litter Solutions. (2019). *What Causes Marine Litter?* Retrieved from <https://www.marinelittersolutions.com/about-marine-litter/what-causes-marine-litter/>
- Modak, P., Pariatamby, A., Seadon, J., Bhada-Tata, P., Borongan, G., Thawn, N. S., & Lim, M. B. (2017). *Asia waste management outlook*. Retrieved from http://wedocs.unep.org/bitstream/handle/20.500.11822/27289/Asia_WMO.pdf?sequence=1&isAllowed=y
- Olukanni, D. O., & Nwafor, C. O. (2019). Public-Private Sector Involvement in Providing Efficient Solid Waste Management Services in Nigeria. *Recycling*, 4(2).
- PDoe. (2018). *2018 Data and Information about Solid Waste Management in Kep (Khmer)*.

- PDoT. (2019). *Data Collection on Hotels, Guesthouses, Bungalows, Restaurants, and Other Entertainment Facilities for the First Quarter of 2019 (Khmer)*.
- Pech, S. (2018). *Waste Production Continues to Rise*. Retrieved from <https://www.khmertimeskh.com/539241/waste-production-continues-to-rise/>
- SALGA, & Department of Environmental Affairs of Republic of South Africa. (2015). *Defining the Role of Local Government in Environmental Management and Establishing the Costs of Performing Environmental Management Functions*.
- Sang-Arun, J., & Chau, K. H. (2019). *A Guide for Technology Selection and Implementation of Urban Organic Waste Utilization Projects in Cambodia*. Retrieved from <https://www.files.ethz.ch/isn/143827/IGES2011-Promoting-OWU-Cambodia-printed.pdf>
- Singh, R. K., Premakumara, D. G. J., Yagasa, R., & Onogawa, K. (2018). *State of Waste Management in Phnom Penh, Cambodia*. Retrieved from https://www.ccet.jp/sites/default/files/2018-07/State%20of%20Waste%20Management%20in%20Phnom%20Penh%2C%20Cambodia%20_w
- UNDP. (2019). *Factsheet: Status of Solid Waste Management in Cambodia*. Retrieved from https://www.kh.undp.org/content/cambodia/en/home/library/environment_energy/factsheet--status-of-solid-waste-management-in-cambodia.html
- Yoshino, N., & Taghizadeh-Hesary, F. (2018). *Sustainable Funding Schemes for the Development of Waste Management Projects in Asia*. Retrieved from <https://www.asiapathways-adbi.org/2018/06/sustainable-funding-schemes-for-the-development-of-waste-management-projects-in-asia/>

Authors:

Christopher Godlove

Kimchoeun Pak

Funding source:

The Asia Foundation

© Copyright 2020 The Asia Foundation and the National Council for Sustainable Development.

All rights reserved. No part of this report may be reproduced without written permission from The Asia Foundation and the National Council for Sustainable Development.

Acknowledgements

The Asia Foundation would like to express our sincere thanks to our consultants, Mr. Christopher Godlove and Dr. Kimcheoun Pak, for initial write-up of the scoping report and this policy brief, and Dr. Bunrith Seng for your technical advice and input.

We would also like thank the National Council for Sustainable Development, the Ministry of Environment, and the National Committee for Sub-National Democratic Development for your collaborative contribution to the study. Your invaluable advice, feedback, and willingness to review facts for accuracy are greatly appreciated.

We would like to acknowledge the important contributions of the Foundation's fellow colleagues who reviewed the scoping study report and this policy brief for providing invaluable comments.

Lastly, The Asia Foundation is grateful to the additional experts the research team consulted with and all the relevant stakeholders in Kep where research was conducted. Without you generously sharing time knowledge, and information with the research team, the report and this policy brief would not have been possible.



General Secretariat of National Council for Sustainable Development

Address: 3rd floor, Morodok Techo Building, Lot 503, Tonle Bassac,
Chamkarmon, Phnom Penh, Cambodia.

Tel: (+855) 89 218 370

Website: <https://ncsd.moe.gov.kh/>



Ministry of Environment

Address: Morodok Techo Building, Lot 503, Tonle Bassac,
Chamkarmorn, Phnom Penh, Cambodia.

Tel: (+855) 23 213 908 / 220 369

Website: <https://www.moe.gov.kh/>



National Committee for Sub-National Democratic Development Secretariat

Address: Located in Ministry of Interior's Compound (Building T),
Norodom Boulevard, Sangkat Tonle Basak, Khan Chamkar Morn,
Phnom Penh, Cambodia.

Tel: (+855) 23 720 038 / 720 061

Website: <http://ncdd.gov.kh/>



The Asia Foundation

The Asia Foundation

Address: House No. 59. Oknha Peich (St 242) Phnom Penh, Cambodia.

Tel: + 855 (23) 210-431

Website: <https://asiafoundation.org/>

