

# SUMMARY REPORT ON CCET WEBINAR SERIES 1: GUIDELINES FOR NATIONAL AND CITY WASTE MANAGEMENT STRATEGIES

## MOVING FROM CHALLENGES TO OPPORTUNITIES

### BACKGROUND

According to the United Nations (UN), the current global population is projected to increase from today's 7.3 billion to approximately 9 billion people by 2050, reaching as high as 11 billion by the end of the 21st century<sup>i</sup>. Correspondingly, accelerating urbanisation trends are expected to continue, resulting in more than 80 per cent of

humanity residing in cities by 2050. Together with these challenges, economic forecasts predict that rising income levels are likely to yield 3 billion new

middle class consumers in the coming decades, whose collective appetite for goods and services will result in additional pressures on the environment, including climate change, the loss of biodiversity, and the exponential generation of waste.

In this regards, sustainable waste management is getting local, national and international

attention as one of the key drivers for achieving climate change mitigation and the 2030 Development Agenda (SDGs). The World Bank estimates that 1.3 billion tons of municipal solid waste generated annually at present will increase to approximately 2.2 billion tons per year by 2025<sup>ii</sup>. Municipal solid waste landfills are



FIGURE 1: A TYPICAL LANDFILL OPERATION IN DEVELOPING COUNTRIES

the third largest source of global methane emissions<sup>iii</sup>, and open burning of garbage emits black carbon and other pollutants as well as greenhouse gases (Figure 1). Waste characteristics are also changing— shifting from mainly organic to new and emerging hazardous substances— resulting in negative impacts on both human and environmental health.

### OBJECTIVES

The 1<sup>st</sup> CCET webinar was held on 25 July 2017 at the Pacifico Yokohama Conference Center in line with the International Forum for Sustainable Asia and the Pacific (ISAP) 2017. It is aimed to provide a stepwise guideline on how national and local authorities can undertake practical and implementable actions towards the formulation and launch of their own national and city waste management strategies. Highlighting lessons based on the UN Environment and CCET experience, the webinar offered participants an exciting opportunity to engage with leading waste experts and identify ways similar interventions can be applied and adapted to their own particular circumstances. It outlined a possible process and posed questions to be considered in developing waste management strategies.

Transitioning towards sustainable waste management needs increased government commitment, and strong political leadership and will. This includes establishing a clear rationale for addressing waste as a national and local priority. A key element of this process will involve emphasising integrated and holistic approaches along with the active participation

of civil society in order to change behaviours and lifestyles through the implementation of 3R practices including the separation of waste at the source, reduction of food waste, etc. In this respect, UN Environment and the Institute for Global Environmental Strategies (IGES), through the IGES Centre Collaborating with UNEP on Environmental Technologies

(CCET), have been providing technical assistance to national and local governments on the development and implementation of national and city-level waste management strategies as a primary step towards transforming from traditional waste management practices to sustainable waste management.

## PRESENTATIONS



### 1. Introduction to the Webinar: Rationale for a National and City Waste Management Strategies – Mr. Kazunobu Onogawa, Director of IGES Centre Collaborating with UNEP on Environmental Technologies (CCET)

Mr. Kazunobu Onogawa, Director of CCET,

began the webinar with an introductory presentation, first explaining briefly about the CCET, which was established under the Memorandum of Understanding (MOU) signed between UN Environment and the Institute for Global Environmental Strategies (IGES) at the UNFCCC COP20 in Lima, Peru. CCET is currently assisting three Asian Countries (Myanmar, Cambodia and Maldives) in developing national and city waste management strategies and action plans and expects to expand its activities into other countries in the coming years.

Next, Mr. Onogawa explained the rationale behind this webinar on waste management strategy, and identified three key elements (see Figure 2) that encouraged national and local governments to take action on waste management including proper

waste management, resource efficiency and international commitments/ agreements such as Sustainable Development Goals (SDGs) and Climate Agreements. In this regard, it is necessary to take a long-term view on waste in its all forms (solid, liquid and gaseous) rather than focusing only on solid

level waste management strategies based on waste hierarchy. According to waste hierarchy, reduction or avoidance of waste generation comes first, followed by reuse and recycling. When it comes to resource recovery, aerobic composting and anaerobic digestion can be

prioritised before the energy recovery from establishing incineration in developing countries considering the high portion of organic waste in their domestic waste. The residual waste is sent to a landfill site at the end of the process, but those landfills should be properly operated to protect public health and the environment.

Mr. Onogawa concluded his presentation by

highlighting the

importance of participation and commitments from all stakeholders, as well as conducting proper operations and securing at least



FIGURE 2: KEY ELEMENTS OF WASTE MANAGEMENT

waste.

Mr. Onogawa then explained about how to select proper technologies for national and city-

minimal level running costs. He also shared some information on CCET and its expected activities in the coming years, including further

support in developing national, regional and city strategies, development of knowledge products, capacity building and

networking activities on the subject, and encouraging webinar participants to join hand with those programmes.



2. Explanation on the process of strategy development, monitoring, and implementation based on the UN Environment's Guidelines - Mr. Shunichi Honda, Programme Officer, UN Environment

Mr. Shunichi Honda, Programme Officer of UN Environment, highlighted the challenges of waste management, which can be also considered as an opportunity in terms of environmental, economic and social benefits. In order to do this, he mentioned the need for proper waste management strategies (short, medium and long-term strategies) at each level of government. Key factors related to

waste management such as urbanisation and population growth should be carefully considered during strategy formulation. He also underlined the importance of considering long-term solutions in addition to immediate solutions. He further highlighted the principles of waste management from most preferred to less preferred options and introduced many items involved in the waste management chain from

handling to disposal as shown in Figure 3.

Further underscoring how to turn challenges into opportunities, he emphasised that waste challenges can provide business and job opportunities for many informal sectors or other sectors to implement sound management of waste as a business. Regarding challenges, he mentioned the need for consultation and stakeholder involvement in processes including development,

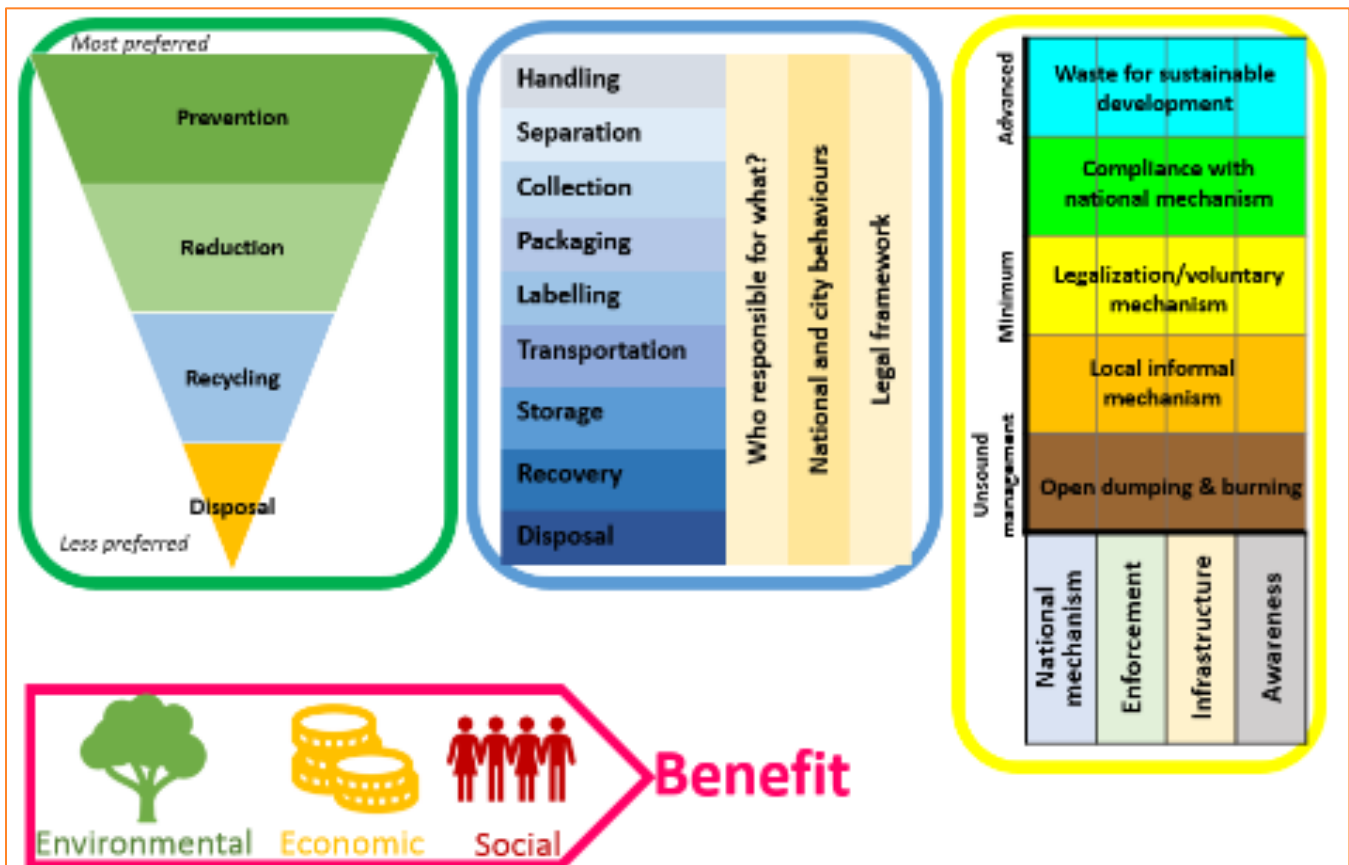


FIGURE 3: PRINCIPLES OF WASTE MANAGEMENT

implementation, review, and updates when developing national and city strategies to convert the current challenges into future business opportunities for sound management of waste. So, the key point is to introduce sound waste management within the strategies for converting challenges into opportunities. When trying to implement strategies to overcome obstacles, there should be provision to amend, revise, upgrade and update the actions/plans for waste

management strategies. He also underlined the importance of international frameworks like SDGs and relevant multilateral environmental agreement, materials published by UN Environment and international regional cooperation and programmes conducted by CCET can be very helpful as reference material for implementation of participants national and city level activities and strategies.

Finally, Mr. Honda highlighted that CCET and UN Environment have been implementing some projects to assist countries and cities to develop national and city-level strategies and, if requested, are willing to support participating countries and cities in the future to develop and implement national and city level strategies, and actions plans, and to achieve a level of sound waste management of the waste.



3. Experience of developing national and city waste management strategies in Myanmar and Cambodia – Mr. D.G.J.Premakumara, Programme Manager, IGES Centre Collaborating with UNEP on Environmental Technologies (CCET)

Mr. D.G.J. Premakumara, Programme Manager of CCET shared experience learned from the development of waste management strategies and action plans in Myanmar and Cambodia. He underlined that poor waste management does not only affect on health and environmental issues

but also on resource efficiency and good governance. He also highlighted the importance of effective strategies at both national and local level to transform from traditional waste management that depends on generation, collection and disposal to a more sustainable, resource efficient society. These strategies consist of

mission, goals, objectives, targets and action plans. It is also very important to involve not only officials but also citizens and other stakeholders during the strategy development process.

In the case of city-level waste management strategy development process in Mandalay, all the stakeholders from Mandalay

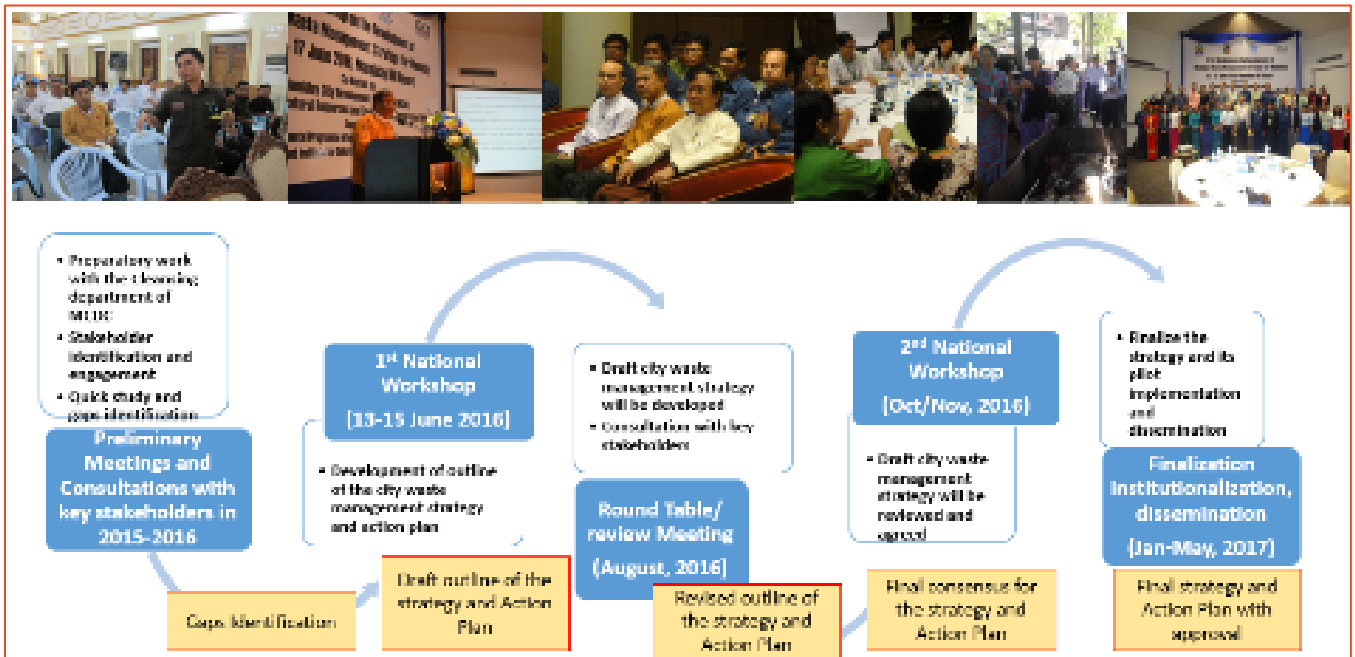


FIGURE 4: A CONSULTATIVE PROCESS OF CITY WASTE MANAGEMENT STRATEGY IN MANDALAY, MYANMAR

were invited to the table for discussion. A series of quick studies was done to understand the current situation. The output of the discussions and the quick study series resulted in a clear and common understanding of the current gaps for waste management in the city. Further, the workshop was held at the national level, which helped to draft a strategy outline and an action plan. Additionally, a series of roundtable talks and technical meetings were conducted with all the stakeholders for specific subjects i.e. composting, landfill management, waste to energy etc.. Based on discussions, the strategies and action plans were revised. Then, a larger consultation workshop was held where the draft was further discussed and a consensus was taken of all

stakeholders. After that, the city finalised the city waste management strategies for future actions. In the case of national waste management strategies development in Cambodia, all stakeholders from different cities were invited for discussion. Although the processes are similar in both countries, the strategies are more context-based and adaptive to the local needs, capacity and resource availability of each country.

Finally, Mr. Premakumara concluded that for proper waste management, there should be more focus on waste hierarchy. He also highlighted that national and local government strategies should not focus on treatment as a first approach but more attention should be paid on waste avoidance and recovery at the

beginning to generate the highest return with the limited resources available in developing countries. He also stressed that four major proposed policy tools can be identified in both case study countries - waste separation at source; waste charging (pay-as-you-produced); producer responsibility (better design); and landfill disposal bans of some selected waste types (organic, industrial, medical etc.) - and these tools are highly effective.

He also underlined the importance of public awareness, public education and partnership, legislation, technology, effective institution/finance and capacity as well as political commitment and leadership for proper implementation and monitoring of national as well as city level waste strategies.



FIGURE 5: A PARALLEL EVENT IN MEDAN CITY. PHOTOS FROM GRAHA KIRANA

## OUTCOMES AND WAYS FORWARD

Over 20 participants, including national and local government officials, academics, and representatives from research

institutes, non-governmental organizations (NGOs) and consulting companies, from 15 different countries joined the

webinar. In addition, about 60 officials from the cities and regional government of North-Sumatra also took part in the

webinar via a special training session organised by the Environmental Protection Agency (EPA) of North-Sumatra Region and the Graha Kirana in Medan City<sup>iv</sup>.

According to feedback from participants, the webinar was helpful for them to gain new knowledge and awareness on sustainable waste management and key factors for successful implementation of national and city waste management strategies, especially in the developing country context. The webinar was also successful in providing both conceptual and policy guidelines with practical experience from two case study countries of Myanmar and Cambodia.

Further, the results of the webinar evaluation survey (Figure 6) identified that most of participants were satisfied with the effectiveness of the presentations,

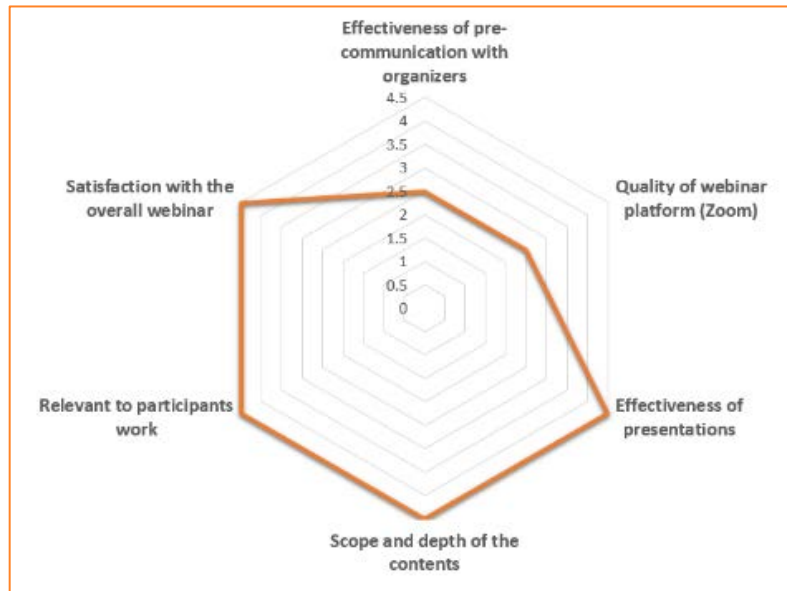


FIGURE 6: RESULTS OF THE EVALUATION SURVEY OF WEBINAR

the scope and depth, and relevance to the participant's daily work. However, results show that the quality of webinar platform and the pre-communication between the participants and organisers need to be improved for future events.

The participants also proposed some subject areas and topics to be considered in future webinars, such as, (i) addressing other types of waste (hazardous waste, e-

waste, medical waste, industrial waste) in addition to municipal waste in the strategies (ii) a training programme on a specific subject, such as waste separation, collection, transport, composting, bio-gas, waste to energy, and final disposal training module for national and city officials,

(iii) financing mechanisms and project proposal writing to international funding, and (iv) organisation of in-person training in addition to a webinar, to have face-to-face contact for a more interactive session.

<sup>i</sup> UN (2015): World Population Prospects: The 2015 Revision, key findings and advanced tables, UN DESA.

[https://esa.un.org/unpd/wpp/publications/files/key\\_findings\\_wpp\\_2015.pdf](https://esa.un.org/unpd/wpp/publications/files/key_findings_wpp_2015.pdf)

<sup>ii</sup> World Bank (2012): What a Waste: A global review of solid waste management,

<http://www.worldbank.org/en/news/feature/2012/06/06/report-shows-alarming-rise-in-amount-costs-of-garbage>

<sup>iii</sup> Global Methane Initiative(2011): Landfill Methane: Reducing Emissions, Advancing Recovery and Use Opportunities,

[https://www.globalmethane.org/documents/landfill\\_fs\\_eng.pdf](https://www.globalmethane.org/documents/landfill_fs_eng.pdf)

<sup>iv</sup> <http://www.grahakirana.com/blog/post/yayasan-pendidikan-graha-kirana-mengadakan-ccet-webinar-series-1>



**For More Information**

UN Environment - International Environmental Technology Centre (UN Environment-IETC), 2-110 Ryokuchi Koen, Tsurumi-ku, Osaka 538-0036 Japan, Phone: +81-6-6915-4581

IGES Centre Collaborating with UN Environment on Environmental Technologies (CCET), 2108-11 Kamiyamaguchi, Hayama, Kanagawa 240-0015 Japan, Phone: +81-46-855-3830 Fax: +81-46-855-3809