

UN ENVIRONMENT AND UN-HABITAT JOINT EXPERT GROUP MEETING ON WASTE SDG INDICATORS 11.6.1, 12.4.2 and 12.5

Consolidated Meeting Summary

Organization

The Expert Group on Waste SDG Indicators met in Geneva at the International Environment House from 22-24 January 2018. The meeting was jointly organized by UN Environment and UN Habitat. The Expert Group included 39 participants: 20 from international or donor organizations, 10 from national and local government and 9 from academia or other institutions.

The meeting agenda covered aspects related to the methodological development of SDG indicators 11.6.1, 12.4.2 and 12.5.1. Specifically, these SDG indicators are elaborated below:

- *11.6.1 Proportion of urban solid waste regularly collected and with adequate final discharge out of total urban solid waste generated, by cities*
- *12.4.2 Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment*
- *12.5.1 National recycling rate, tons of material recycled*

The final agenda of the meeting is shown in Annex I and the list of participants is included in Annex II

Main Outcome of the meeting

The Expert Group participants provided feedback toward the methodological development for SDG indicators 11.6.1, 12.4.2 and 12.5.1. This feedback will be used by UN Environment and UN Habitat to refine and develop statistical methodologies for measuring these SDG indicators.

Action item 1: UN Environment will finalize an initial draft methodology for SDG indicator 12.4.2 and 12.5.1 by end-February 2018. The Expert Group agreed to review the draft methodology to ensure that the discussion at the meeting is well reflected and to provide additional comments.

Action item 2: UN Habitat will refine the methodology for SDG indicator 11.6.1. The Expert Group agreed to review the refined methodology to ensure that the discussion at the meeting is well reflected and to provide additional comments.

Summary of conclusions from the meeting

Overarching recommendations

Harmonization and comparability

- There should be harmonization in the approach for measuring 11.6.1 on urban solid waste, 12.4.2 on hazardous waste and 12.5.1 on recycling. Additionally, that these indicators should also be considered in the broader context of the SDGs in terms of using harmonized language and definitions to the extent possible. It was agreed to exclude mineral wastes from all denominators
- All indicators should provide a phased approach which will provide guidance for countries and cities with little expertise in monitoring waste to begin to develop a waste monitoring system, while at the same time providing guidance for those wishing to move up the ladder in terms of improving existing waste monitoring systems.
- The importance of maintaining a consistent time series for the purpose of analysis must be considered and mitigated when introducing methodological improvements.

Calculating generated waste and filling data gaps

- For all three waste indicators the denominator should be based on waste generated, where 'generated' is defined not by collection but by an estimate of how much waste is produced during the time frame being measured.
- UN Habitat and OECD each have definitions but none are true reflections of municipal boundaries in the context of waste management and thus this area needs more work. Additionally, city data for all indicators would massively increase the reporting burden thus there is a need to consider either just national data or using the representative city approach of UN Habitat.
- The global reporting for all three indicators should include country and city data which is supplemented by modeled or estimated data. The methodology should provide transparent guidance for countries on estimation methodologies. Additionally, it is beneficial to utilize academic and other experts to fill data gaps with estimates.
- A material flow approach was recommended as a method for capturing waste generation, waste flows and circular economy in a single statistical framework. The material flow account would also provide benefits in terms of linking the waste related indicators to the other SDG indicators on domestic material consumption (under SDG target 8.4 and 12.2).

11.6.1 Urban Solid Waste recommendations

- Municipal solid waste refers to collected waste, but for the purpose of the SDGs it is more logical to look at generated waste not only collected waste.
- Ideally the definition of a city should include both administrative boundaries and other built up areas, particularly due to the fact that rapid urbanization, which often occurs outside administrative boundaries, is a large concern in terms of waste management.
- Clear guidance on which cities should be included in national aggregates or how to select representative cities for this indicator are needed.
- Splitting this indicator into two indicators related to collection rate and safe disposal may provide additional information to policy makers. Additionally, adding information on the frequency of collection may be useful.

- The terms “adequate” and “regulated” are not well defined in national legislation. Perhaps the wording should shift to “controlled”.
- In the methodology, it would be useful to provide information on meaningful disaggregation of the data, including separating waste by type.
- JICA and UN Habitat will work together to provide guidelines on an estimation procedure for estimating waste generation and consult with the Expert Group participants.
- Rewording 11.6.1 as “Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated, by cities” was suggested.

12.4.2 Hazardous Waste recommendations

- There was consensus to use the Basel convention definitions. It would be useful to better understand hazardous waste generation by economic sector if possible.
- For some types of hazardous waste, for example e-waste, it could be relatively straightforward to estimate hazardous waste generation, but for other types of waste it is more complicated. This is especially true due to the fact that hazardous waste is often not properly collected.
- The Basel reporting previously included a question on generation of hazardous waste at the national level, but this is no longer included and thus a method for estimating and collecting figures on hazardous waste generation should be considered in the methodology.
- The Basel convention includes an option to add hazardous waste which is defined as hazardous in national legislation, but this may disrupt the comparability of the SDG indicator across countries. It is therefore recommended that for global reporting on those types of waste listed in Annex VIII of the Basel Convention should be included.
- If wastes are exported for the purpose of treatment then this would be part of the treated volume in the methodology.
- Recycling should be included in the scope of treatment, as long as recycling is recommended in the convention.
- Ideally hazardous waste should be presented by type of treatment, but not all countries will have the capacity for this level of reporting.
- The term “environmentally sound management” may work best for this indicator; guidance already exists on environmentally sound management of hazardous waste.
- There remains a need to better understand how the data reported to the UN Statistics Division compares to the data reported through the Basel Convention.

12.5.1 Recycling

- A material flow approach is necessary for capturing recycling rate in a way that will provide information on circular economy and recycling vs. consumption (as the aim is to prevent waste generation and to increase recycling and reuse).
- The current indicator will focus only on recycling, although it was agreed that there is a need to consider better measures for measuring repair and reuse.
- It would be useful to link this indicator to 11.6.1 to understand city level recycling if possible; however, material flow data is not available at city level and thus this issue requires additional research. However, recycling is not necessarily taking place in cities, often this happens outside the cities. It is difficult to link recycling data to data on waste generation on this level.
- It is essential to capture informal sector recycling in the indicator. In order to achieve this there is a need to look both at the recycling by material type and also recycling by consumer

- The relevant definitions of the Basel Convention should be applied to this indicator to describe the term “recycling”, including cross-checking with the EU definition. The UNSD/UNEP and OECD/Eurostat questionnaires should also be consulted/used since they define recycling.
- Composting and use of biomass for feed and producing biofuel could be included in the definition/scope of recycling.
- Energy recovery through incineration should not be included as recycling.
- Construction waste and other inert materials will not be included in either the numerator or denominator of recycling.
- Recycling will include any materials exported for the purpose of recycling, but will not include imports for recycling.

ANNEX I – Final Meeting Agenda

UN ENVIRONMENT AND UN-HABITAT JOINT EXPERT GROUP MEETING ON WASTE SDG INDICATORS 11.6.1, 12.4.2 and 12.5

Venue: Room No.3 at the International Environment House, Geneva, Switzerland

Date: 22-24th of January, 2018

Purpose: To discuss issues in monitoring and reporting for waste SDG indicators on 11.6.1 on urban waste, 12.4 on hazardous waste and 12.5 on recycling rate jointly with key global experts in the field

DAY 1: Introduction of Waste SDG Indicators and Global Waste Statistics Framework

Time	Topic	By
09:00-09:30	Registration of participants	
09:30-10:00	Opening Session Chair: Jillian Campbell & Jacqueline Alvarez	
	- Opening remarks from UN Environment - Opening remarks from UN-Habitat - Introduction of participants	Jillian Campbell (UN Environment) Graham Alabaster (UN-Habitat) Participants
10:00-11:30	Introducing Waste SDG Indicators Chair: Jillian Campbell	
	- Introducing 11.6.1 – works done so far and key issues - Introducing 12.4.2 & 12.5 – works plan and key issues - Synergies between indicators and joint monitoring and capacity development	Nao Takeuchi (UN Habitat) Reka Soos (RWA Group) Nao Takeuchi & Jillian Campbell
11:30-11:45	Tea/Coffee break	
11:45-13:00	Existing Statistics Systems on Waste Chair: Graham Alabaster	
	- Basel Convention - OECD waste statistics - Eurostat waste statistics	Tatiana Terekhova (BRS Secretariat) Myriam Linster (OECD) Karin Blumenthal (Eurostat)
13:00-14:00	Lunch	
14:00-15:00	Continued	
	- UNECE Task Force on Waste Statistics - UNSD/UNEP Environmental Statistics	Michael Nagy (UNECE) Marcus Newbury (UNSD)
15:00-15:15	Tea/Coffee break	
15:15-16:45	Group Work: Terminology and scope	
	Group 11.6.1 on municipal solid waste	Nao Takeuchi (UN-Habitat)
	Group 12.4.2 on hazardous waste	Tatiana Terekhova (BRS Secretariat)
	Group 12.5.1 on recycling rate	Réka Soós (RWA Group)
	Group presentation and discussion for the overlaps between indicators	
16:45-17:00	Summary of Day 1	Jillian Campbell

DAY 2: National Reporting Systems for Waste Statistics and Efforts by Development Partners

Time	Topic	By
09:30-10:30	National Monitoring and Reporting Systems for Waste Statistics Chair: Tatiana Terekhova	
	- Netherlands - Bosnia	Kees Baldé (Statistics Netherlands/ UNU-VIE SCYCLE) Ševala Korajčević (Bosnia NSO)
10:30-10:45	Tea/Coffee Break	
10:45-12:30	Waste Measurement on the Ground and Data Validation by Development Partners Chair: Nao Takeuchi	
	- Waste measurement method and data collection in projects with partner countries - Revisiting estimates of MSW generation per capita and their reliability - Efforts in Waste SDG Indicator Monitoring through African Clean Cities Platform	Ellen Gunsilius (GIZ) Kosuke Kawai (NIES Japan) Eiko Kojima (JICA)
12:30-13:30	Lunch	
13:30-15:00	Methodological discussion on 12.4.2 and 12.5.1 Chair: Jillian Campbell	
	- Presentation by RWA Group on the current approach and challenges on the monitoring methodology on 12.4.2 and 12.5.1	Réka Soós (RWA Group)
	Open Discussion	
15:00-15:15	Tea/Coffee break	
15:15-17:15	Group Work – Learning from Countries Experiences	
	Group 1 Group 2 Group 3	
17:15-17:30	Summary of Day 2	Nao Takeuchi

DAY 3: Possible Methodological Solutions for Waste SDG Indicators

Time	Topic	By
09:30-11:00	<i>Ongoing Efforts and Recommendations</i> <i>Chair: Graham Alabaster</i>	
	<ul style="list-style-type: none"> - Wasteaware indicators - Recommendation for methodology for monitoring and capacity development - EAWAG experience and recommendations 	Andy Whiteman (RWA Group) Costas Velis (University of Leeds) Imanol Zabaleta (EAWAG)
11:00-11:20	Tea/Coffee Break	
11:20-12:30	<i>Circular Economy, Recycling and Material Flow Approach</i> <i>Chair: Michael Nagy</i>	
	<ul style="list-style-type: none"> - Presentation on Waste in Material Flow Accounts - Priorities and challenges for measuring and monitoring informal and BoP recovery activities in the framework of the SDGs - Tracking e-waste flow and recycling 	Jillian Campbell (UN Environment) Anne Scheinberg (Springloop) Kees Baldé (Statistics Netherlands/ UNU-VIE SCYCLE)
12:30-13:30	Lunch	
13:30-15:30	<i>Discussion: Global methodology challenges</i> <i>Chair: Andy Whiteman</i>	
	Questions <ul style="list-style-type: none"> - Monitoring methodology and overlaps between 11.6.1, 12.4.2 and 12.5 - Availability and reliability of data - Data collection methodology on the ground - What capacity development is needed - How to ensure consistent interpretation of methodology on the ground 	
15:30-15:45	Tea/Coffee break	
15:45-16:00	<i>Closing session</i> <i>Chair: Jillian Campbell</i>	
	<ul style="list-style-type: none"> - Summary of workshop - Way forward 	

ANNEX II – Final List of Participants *(in no particular order)*

	Name	Position	Organization	Contact
1	Ms. Jillian Campbell	Statistician, Sustainable Development Goal Data and Information Unit, Science Division	UN Environment	Jillian.Campbell@unep.org
2	Ms. Nao Takeuchi	Waste Management Expert, Urban Basic Services Branch	UN-Habitat	nao.takeuchi@un.org
3	Mr. Graham Alabaster	Chief of Waste Management, Urban Basic Services Branch	UN-Habitat	graham.alabaster@unhabitat.org
4	Ms. Karin Blumenthal	Teamleader waste statistics, Environment statistics and accounts, sustainable development	Eurostat	Karin.Blumenthal@ec.europa.eu
5	Ms. Ellen Gunsilius	Senior Advisor, Concepts for sustainable SWM, e-waste management, Division Climate Change, Environment & Infrastructure	GIZ	Ellen.Gunsilius@giz.de
6	Mr. Steffen Blume	Project Manager, Concepts for sustainable SWM, e-waste management, Division Climate Change, Environment & Infrastructure	GIZ	steffen.blume@giz.de
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8	Ms. Eiko Kojima	Environmental Management Group, Global Environment Department	JICA	Kojima.Eiko@jica.go.jp
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11	Ms. Aditi Ramola	Technical Project Manager	International Solid Waste Association (ISWA)	aramola@iswa.org
12	Ms. Anne Scheinberg	Global Recycling Specialist	Springloop Cooperatie	anne@springloop.nl
13	Mr. Imanol Zabaleta	Department of Sanitation, Water and Solid Waste for Development	Swiss Federal Institute of Aquatic Science and Technology (EAWAG)	Imanol.Zabaleta@eawag.ch
14	Mr. Rob Gillies	Managing Consultant	Eunomia Research & Consulting	Rob.gillies@eunomia.co.uk
15	Mr. Andy Whiteman	Director, Wasteaware, Resource and Waste Advisory Group	RWA Group	andy@rwagroup.net
16	Ms. Réka Soós	Director, Regional Environmental Center, Resource and Waste Advisory Group	RWA Group	reka@rwagroup.net
17	Ms. Diana Gheorghiu	Environmental and Health & Safety, Regional Environmental Center, Resource and Waste Advisory Group	RWA Group	diana@rwagroup.net

18	Mr. David C. Wilson	Independent Waste and Resource Management Consultant, Visiting Professor in Waste Management at Imperial College	Imperial College London	waste@davidcwilson.com
19	Mr. Costas Velis	Lecturer in Resource Efficiency Systems at the School of Civil Engineering	University of Leeds	c.velis@leeds.ac.uk
20	Ms. Ševala Korajčević	Head of Transport, Environment, Energy and Regional Statistics Department	Agency for Statistics of Bosnia and Herzegovina	sevala.korajcevic@bhas.gov.ba; bhas@bhas.ba
21	Mr. Velimir Jukić	Director	Agency for Statistics of Bosnia and Herzegovina	velimir.jukic@bhas.ba; bhas@bhas.ba
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24	Ms. Irina Talamoni	Technical Advisor, Hazardous Wastes Direction	Ministerio de Ambiente y Desarrollo Sustentable de Argentina	italamoni@ambiente.gob.ar
25	Mr. Prakash Kowlessar	Independent waste expert	Mauritius	pkowlessar@hotmail.com
26	Ms. Tatiana Tugui	Manager at Environmental Pollution Prevention Office	Ministry of Environment and Natural Resources of Moldova	tuguitatiana@ymail.com; tatiana.tugui@epo.md
27	Ms. Justina Grigaraviciene	Waste Prevention and Management Strategy Division, Waste Department	Ministry of Environment of Lithuania	justina.Grigaraviciene@am.lt justina.grigaraviciene@gmail.com
28	Mr. Kees Baldé	Researcher / Associate Programme Officer	Statistics Netherlands / United Nations University	balde@unu.edu
29	Mr. Michael Nagy	Statistician, Environment and Multi-domain Statistics Section, Statistical Division	United Nations Economic Commission for Europe (UNECE)	michael.nagy@unece.org
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31	Ms. Tatiana Terekhova	Programme Officer, Governance Branch	Secretariat of the Basel, Rotterdam, and Stockholm Conventions	tatiana.terekhova@brsmeas.org
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33	Ms. Jacqueline Alvarez	Science and Risk Team Leader, Chemicals and Health Branch, Economy Division	UN Environment	jacqueline.alvarez@un.org
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36	Ms. Mijke Hertoghs	Europe Office focal point/Regional Subprogramme Coordinator for Chemicals and Waste	UN Environment	mijke.hertoghs@un.org
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38	Ms. Delphina Cuglievan	SAICM Secretariat, Chemicals and Health Branch, Economy Division	UN Environment	delphina.cuglievan@un.org
39	Mr. David Marquis	Consultant, SDGs Data and Information Unit, Science Division	UN Environment	david.marquis@un.org

Statistics

Total number who attended at least one full session: 39

International and donor agencies 20

of which UN 14

UN Environment Sci. Div.	2
Econ. Div.	5
BRS Secr.	2
Europe Office	1
UN-Habitat	2
UNSD	1
UNECE	1

of which non-UN 6

OECD	2
GIZ (Germany)	2
Eurostat	1
JICA (Japan)	1

Government agencies 9

NIES (Japan)	1
EAWAG (Switzerland)	1
Bosnia & Herzegovina NSO	2
Costa Rica MoE	2
Netherlands NSO	1
Argentina MoE	1
Moldova MoE	1
Lithuania MoE	1

NGO/Consultancy/Independent 7

RWA Group	3
ISWA	1
Eunomia	1
Springloop Cooperatie	1
Mauritius Independent Expert	1

Academia 2

Imperial College London	1
University of Leeds	1

N.B. NSO National Statistics Office
MoE Ministry of Environment