UNSD/UNEP Questionnaire on Environment Statistics – results and uses of the data collection and relevance to SDG indicators; raw data agreeing with international standards; work on 11.6.1, 12.4.2 and 12.5.1 statistics

Environment Statistics Section
United Nations Statistics Division (UNSD)

Prepared for the Eighth Expert Group on Environment Statistics

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Outline

1. **The value of country data with relevance to SDG indicators**

2. **Raw data agreeing with international standards**

3. **Collaboration at the international level**

UNSD/UNEP Questionnaire on Environment Statistics
Waste

- R1: Generation of waste by source

- R2: Management of hazardous waste

- R3: Management of municipal waste

- R4: Composition of municipal waste

- R5: Management of municipal waste – City data

- R6: Electronic waste

United Nations Statistics Division (UNSD) and United Nations Environment Programme
QUESTIONNAIRE 2020 ON ENVIRONMENT STATISTICS

Section: WASTE

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Results and use of waste data as relevant to SDG indicators

Hottest current interest is mostly via Sustainable Development Goal-related mandates from key stakeholders shown below and on next slide

Indicator 11.6.1 (Tier II): Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal solid waste generated by cities

- Custodian agencies: UN-HABITAT, UNSD
- Metadata [link]

Indicator 12.4.2 (Tier II): Hazardous waste generated per capita and proportion of hazardous waste treated, by type of treatment.

- Custodian agencies: UNEP, UNSD
- Metadata [link]

Indicator 12.5.1 (Tier II): National recycling rate, tons of material recycled.
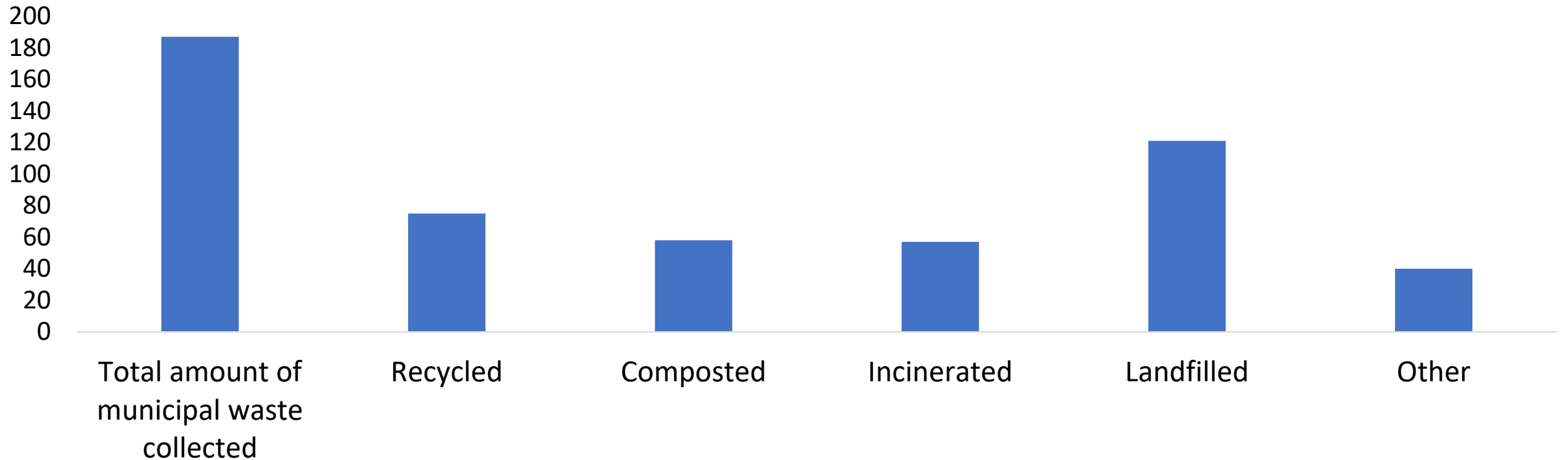
- Custodian agencies: UNEP, UNSD
- Metadata [link]

…and also continued interest from academia, researchers, journalists, etc.

SDG indicator 11.6.1 What proportion of municipal solid waste generated is managed in controlled facilities?

- 81 countries, but more importantly 207 cities have provided data at city level for at least one of: Total amount of municipal waste collected; amount recycled; amount incinerated; amount landfilled). These four variables were first collected in 2008.
- Data for 173 cities (latest year available) were disseminated in 2020 following the 2018 collection cycle.
- Although there are 187 responses for "Total amount of municipal waste collected", the year of the response may vary. For a country to have values in a recent year for all variables shown (or at least for all shown excluding "other") is far less likely.

Count of responses to individual variables

SDG indicator 11.6.1 What proportion of municipal solid waste generated is managed in controlled facilities?

- While the Questionnaire continues to request data from country NSOs and Ministries of Environment, UN-HABITAT, as a co-custodian of this SDG indicator, continues with a complementary approach that involves working closely at individual city level (refer to metadata link in slide 4 for details of that method).
- These data have been collected via the Questionnaire since 2004 and possibly also in 2001 and 1999.

NSO or Ministry of Environment within country

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Country data made available at:

https://unstats.un.org/unsd/envstats/qindicators

https://unstats.un.org/unsd/envstats/country_files

https://unstats.un.org/unsd/envstats/snapshots/

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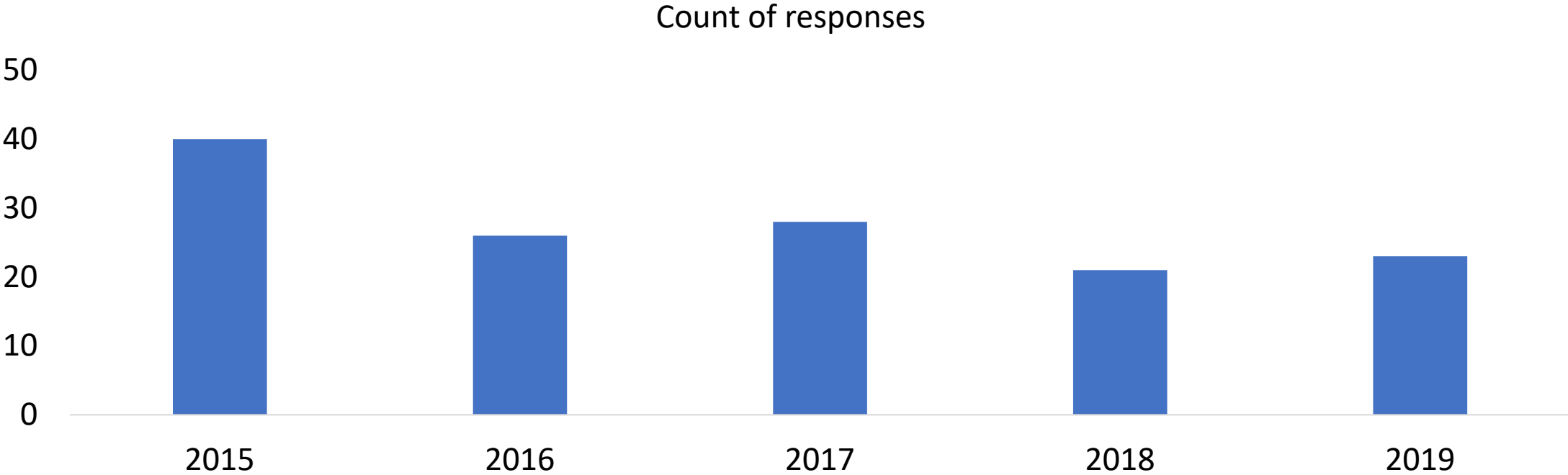
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Indicator 78 of the Draft Global Set on Climate Change Statistics and Indicators: Population served by municipal waste collection

What percentage of population is served by municipal waste collection?

- 75 countries have provided data to the Questionnaire on this variable which is requested as a percentage alongside "urban" and "rural" populations in the Questionnaire.
- Count of responses vary from year to year.
- Because it's an indicator which is directly collected via the Questionnaire, the typical steps of combining variables or statistics to move from data to indicator are not required (or it could be viewed that these additional steps are done within-country before providing data to the Questionnaire).
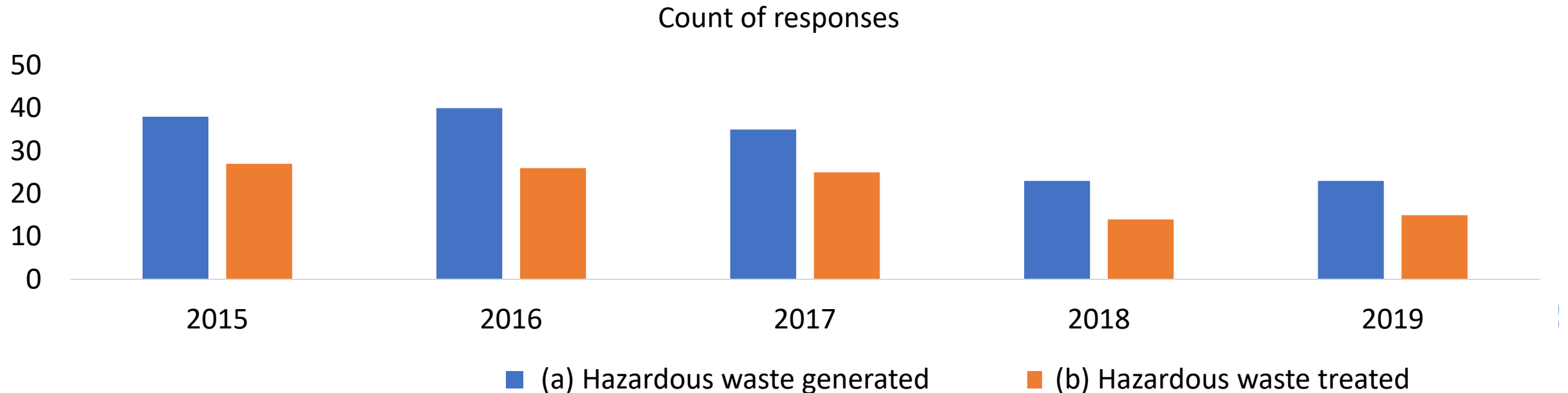
Count of responses

SDG indicators: 12.4.2 (a) Hazardous waste generated per capita.
12.4.2 (b) Proportion of hazardous waste treated by treatment type.
How much hazardous waste is generated per capita in a given country? What proportion of hazardous waste generated is actually treated?
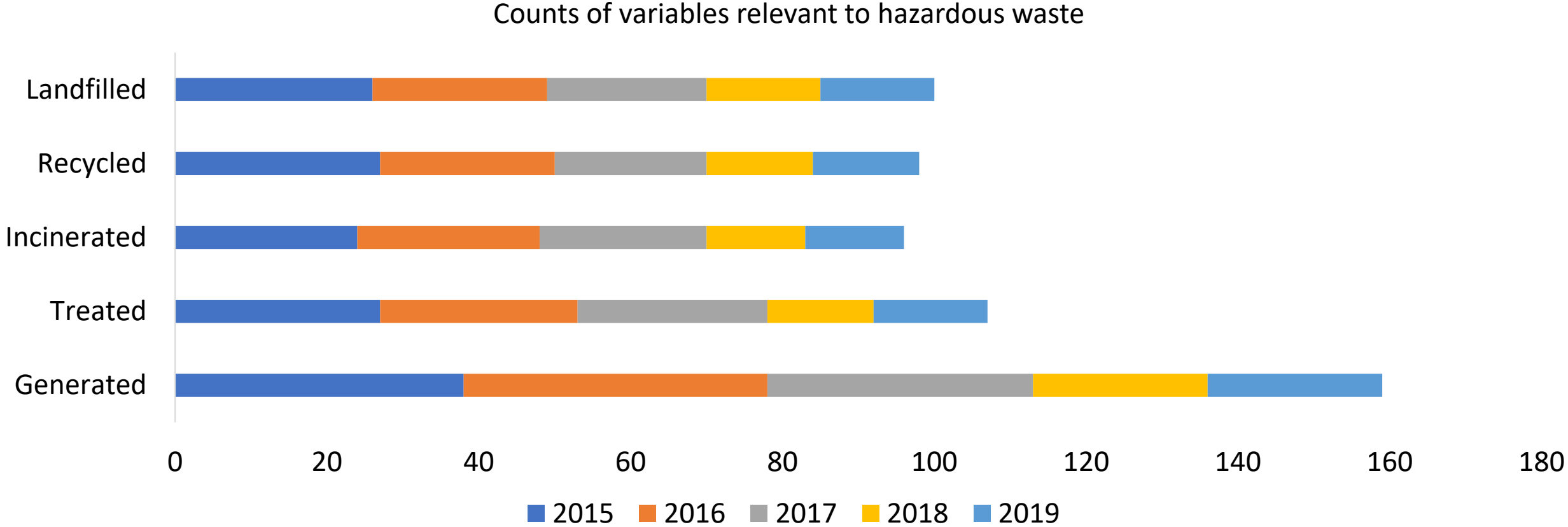
- Just over 70 countries have provided data to the Questionnaire for each of the variables, "hazardous waste generated" and "hazardous waste treated". UNSD disseminates it as a time series alongside an additional 30 or so countries who provide data to the Joint OECD/Eurostat Questionnaire

- Since population data is readily available, the policy question concerning indicator 12.4.2(a) can be answered for a number of countries per the data provided by countries to the Questionnaire.

- For 12.4.2(b), the same two variables are needed in the same year for a given country, meaning availability of data is more challenging. UNSD only publishes data as reported by countries, and makes no estimations.

Count of responses

Legend: ■ (a) Hazardous waste generated ■ (b) Hazardous waste treated

SDG indicator 12.4.2 (b) Proportion of hazardous waste treated by treatment type. What proportion of hazardous waste generated is actually treated?

- Treatment methods of hazardous waste and their respective counts of responses per year are shown below:
- Of course, data may not be available for a given treatment method AND for hazardous waste generated in the same year which means in such cases, the indicator still cannot be calculated.

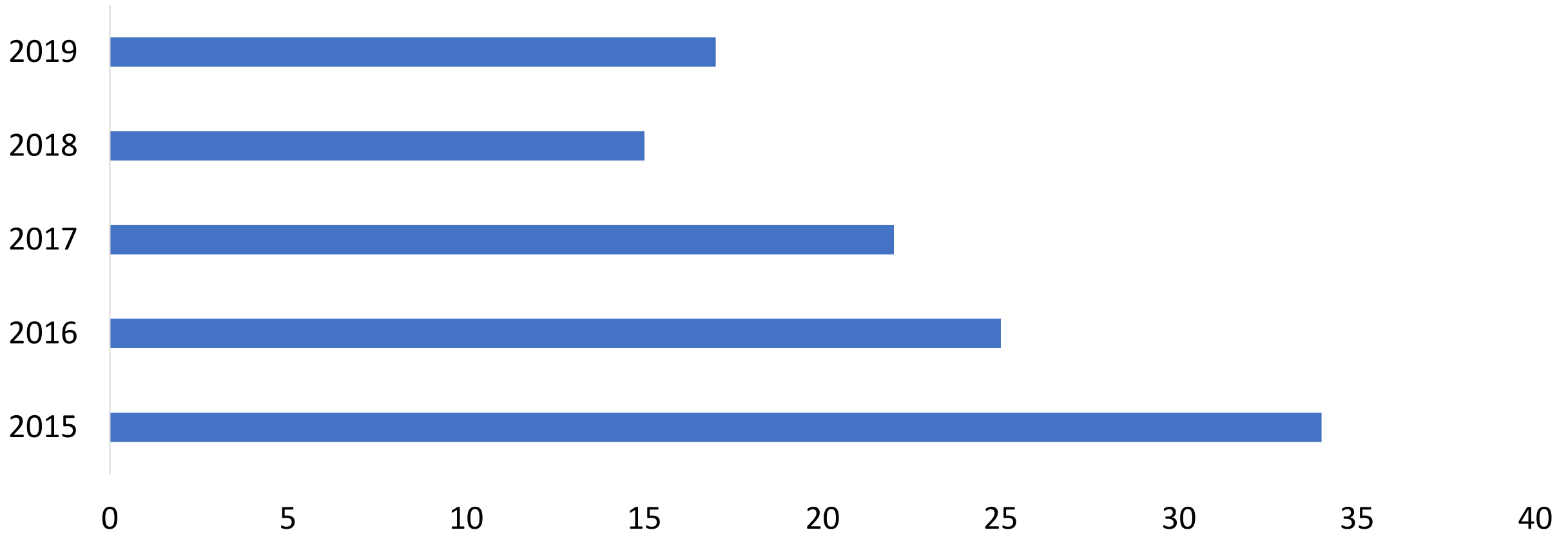Counts of variables relevant to hazardous waste

SDG indicator 12.5.1: National recycling rate What proportion of waste is recycled in a given country?

- 62 countries collected via the Questionnaire can have this proportion calculated, or at the very least, a proxy of it. e.g. "municipal waste recycled" upon "municipal waste managed".

Count of countries who provided data that can calculate this indicator

Efforts to get raw data to agree with methodologies stated in the Questionnaire

- Oftentimes, UNSD will help a country with raw data check if it can be made agreeable with the definitions stated in the Questionnaire.
- Necessary conditions: 1. A stated unit of measurement (often preferably metric (e.g. tonnes, kilograms, hundreds or thousands of tonnes; *if in volume [e.g. metres cubed], an accurate conversion factor of volume to mass is required)*; 2. a stated time period (preferably the calendar year, though this could be a country's financial or business year. 3. an as accurate as possible description of the content.
- If, when these three conditions are met, a footnote explanation is necessary, UNSD will always add it.

DAILY TONAGE OF WASTE DUMP AT LOCATION A				
2018	CITY X		CITY Y	
	No	Tons	No	Tons
COMPACTOR	20	400	3	30
DONKEY CART	130	26	30	6
MINI-TRUCKS	4	2	2	1
PICK-UP TRUCK	4	0.8	4	0.8
TRUCK (6-10)	9	45	3	15
SKIPS	5	20		
TRACTORS	2	1		
TRYCYCLE	10	0.5		
Total		495.3		52.8

Table R3: Management of Municipal Waste		
Line	Category	Unit
1	Total amount of municipal waste generated	1000 t
2	Municipal waste collected from households	1000 t
3	Municipal waste collected from other origins	1000 t
4	Total amount of municipal waste collected (=2+3)	1000 t
5	Municipal waste imported for treatment/disposal	1000 t
6	Municipal waste exported for treatment/disposal	1000 t
7	Municipal waste managed in the country (=4+5-6)	1000 t

Dialogue with international partners

- Regarding SDG indicator 12.3.1 (b): Food waste index, the variables, "organic material"; and "food waste and garden waste" are included in table R4. UNSD is engaging in dialogue with UNEP, OECD, Eurostat on this question.

Table R4: Composition of Municipal Waste
• If the

Line	Category	Unit	1990
1	Paper, paperboard	%	
2	Textiles	%	
3	Plastics	%	
4	Glass	%	
5	Metals	%	
6	Other inorganic material	%	
7	Organic material	%	
8	*of which* : food waste and garden waste	%	
10	TOTAL	%	100

- Related terminology : organic material, organic waste, biodegradable waste, biowaste, food waste, garden waste
- Data in this field is known to be difficult to collect on an annual basis.

Response Counts

	2014	2015	2016	2017	2018	2019
Organic material	17	23	17	21	12	10
of which food and garden waste	3	7	4	7	4	5

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Collaboration for food waste (SDG indicator 12.3.1(b): Food waste index)

- UNSD is currently in consultation with the UNEP for consideration of adding variables concerning food waste to the Questionnaire.
- This could mean the addition of a new table with variables that would satisfy demand for this SDG indicator.
- Any addition of variables (and possibly a new table) will involve consultations with other stakeholders including countries.
- The experience of incorporating the most recently added table, Table R6: E-Waste Generation and Collection, will be considered. In that experience, a pilot Questionnaire was sent to 42 countries in 2017 prior to two e-waste variables (aggregates of "total e-waste collected" and "total e-waste generated") being added in the 2018 round of the Questionnaire. Following that result, breakdowns of e-waste (e.g. "large equipment", "temperature exchange equipment", "small e-waste", etc.) were added in the 2020 round of the Questionnaire. As with the experience of adding new wastewater variable in 2013, countries' provision of data is expected to gradually build over the years.
- Methodology for this indicator is available at:
https://unstats.un.org/sdgs/metadata/files/Metadata-12-03-01B.pdf

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Thank You!

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