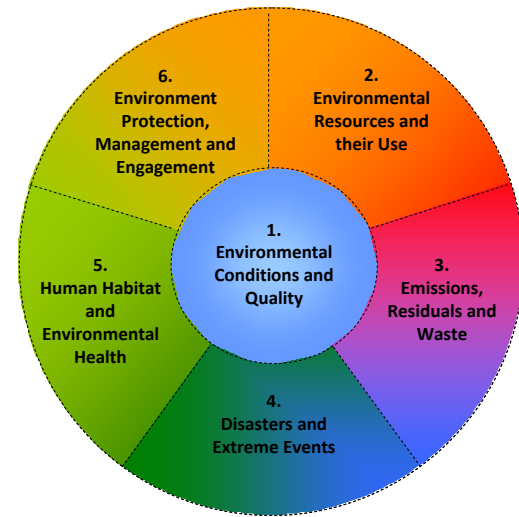


PILOT TESTING OF UNSD/UN ENVIRONMENT QUESTIONNAIRE ON ENVIRONMENT STATISTICS



*Joint Task Force on Environment Statistics and Indicators
Geneva, Switzerland
29-30 June 2017*



There are two pilots

- Pilot Questionnaire 2017 on Electronic Waste (e-waste)
 - Pilot Questionnaire 2017 on Water Quality
-
- The idea is to advance methodology in these two challenging fields
 - Bodies collaborating with UNSD in this exercise: Eurostat, the OECD, the United Nations Economic Commission for Europe (UNECE), United Nations Environment and the United Nations University (UNU)
 - Hereafter I refer only to: Pilot Questionnaire 2017 on Water Quality



The pilot sample

- $n = 40$
- Selection criteria:
 - country NOT recipient to the UNECE e-waste pilot.
 - countries with a participant of the Expert Group on Environment Statistics.
 - countries with whom UNSD has a counterpart who speaks English.
 - countries with an identified focal point for the 2016 round of the UNSD/UNE Questionnaire on Environment Statistics (as of Nov. 2016).
 - countries who replied to the 2013 round of the UNSD/UNE Questionnaire on Environment Statistics.



Timing and communications with NSOs and MOEs

2nd half of 2016:UNSD
in discussions with
collaborative partners



Early March 2017:
both pilots sent at
once to NSO focal
points.



7 April 2017: Initial
requested deadline by
which several
responses received

April 2017: Default
extension offered to
Friday, 16 June



23 June 2017:
92.5% corresponded
on Questionnaire



September 2017:
Summary report of
findings to follow
data validation.



UNSD maintaining rapport with NSOs

- UNSD is well suited to conduct such pilot exercises
- Good rapport with NSOs (and MoEs) and many of their environment statistics sections/statisticians
- Personally know many of the respondents to the pilots (via capacity building work, EGES, etc.)
- Content of pilots is closely related to UNSD's regular data collections



Water quality pilot

- Demand driven
- Per dialogue between UNSD and UN Environment
- Highly relevant to SD Goal 6: Ensure availability and sustainable management of water and sanitation for all
 - SDG indicator 6.3.2: Proportion of bodies of water with good ambient water quality.
- [Step-by-step monitoring methodology for indicator 6.3.2](#) used as source for dialogue and content of questionnaires.
- UNSD undertook global data collections on water quality in 1999, 2001 and 2004 and never since until 2017 for this pilot.
- Conjecture regarding suitable frequency, spread, aggregation level of water quality data collection.



Water quality pilot

- Requests data on water quality of rivers, lakes and groundwater bodies based upon monitoring data collected at monitoring locations.
- Variables (see examples of Terms at right) selected based upon [Step-by-step monitoring methodology for indicator 6.3.2](#)

Term

Biochemical Oxygen Demand (BOD5)

Dissolved Oxygen (DO)

Electrical Conductivity

pH

Orthophosphate (OP)

Total Oxidised Nitrogen (TON)

Faecal Coliforms (FC)

Chlorophyll-a (Chl-a)

Nitrate



Feedback from countries on water quality

- “Translate it into French, please” (x2)
- “(Water quality) variables requested are not a part of the national statistical plan.”
- “Coordinating with line ministries is taking time...”
- “We do not have a water quality database yet... first steps for creation of one have only started in recent months.”
- “In order to be able to submit the data as required (at an aggregated level), we will have to compile all the data for all boreholes and summarize it in a single table. This will require a lot of additional work and will not be representative, because the borehole water quality varies from one region to another.”
- Averaging of all our country’s rivers’ qualitative data is not recommended because the dynamics of the natural resources and geographical environment interdependence is different, accordingly river chemical and biological quality indicators is different as well.”



Examples of water quality pilot tables

Table WQ1: Water Quality of a selected river		
Line	Category	Unit
1	Dissolved Oxygen (DO)	mg/l O ₂
2	Electrical Conductivity (EC)	µS/cm
3	Total Oxidised Nitrogen (TON)	mg/l NO ₃ + NO ₂ -N
4	Orthophosphate (OP)	mg/l PO ₄ -P
5	pH	-
6	Biochemical Oxygen Demand (BOD5)	mg/l O ₂
7	Faecal Coliforms (FC)	MPN/100ml*
8	Other, specify

Table WQ1: Water Quality of a selected river's selected monitoring location					
Line	Category	Unit	2014	2015	2016
1	Dissolved Oxygen (DO)	mg/l O ₂			
2	Electrical Conductivity (EC)	µS/cm			
3	Total Oxidised Nitrogen (TON)	mg/l NO ₃ + NO ₂ -N			
4	Orthophosphate (OP)	mg/l PO ₄ -P			
5	pH	-			
6	Biochemical Oxygen Demand (BOD5)	mg/l O ₂			
7	Faecal Coliforms (FC)	MPN/100ml*			
8	Other, specify	NO3			



Lessons learned/ mistakes

- “River”, “lake” and “groundwater body” were not defined within the water quality pilot. Received questions about artificial reservoirs, rainwater reservoirs and saltwater lagoons.
- In future, would review definitions in the Step-by-step monitoring methodology for indicator 6.3.2 and the International Recommendations on Water Statistics [МЕЖДУНАРОДНЫЕ РЕКОМЕНДАЦИИ ПО СТАТИСТИКЕ ВОДНЫХ РЕСУРСОВ].
- May have given excessive respondent burden to countries by not applying limitation to the number of monitoring stations for which data could be provided.



Data collected so far and preliminary conclusions

- Countries more able to provide data for water quality (than for e-waste).
- Countries better able to provided water quality data for a single monitoring station, or for a simple average of multiple stations for one river/lake/groundwater body.
- Countries better able to provide data on rivers than lakes and groundwater bodies.
- Very useful at informing UNSD on countries' capabilities regarding water quality (and e-waste).
- Revealed limitations in countries' capabilities
- Good responses and liaisons with NSOs
- Difficult to determine appropriate validation procedures when data sets are unprecedented; very little alternate data on these topics.



Is the water quality pilot serving its intended purpose?

- Good coverage of data.
- Aggregation from single monitoring station of a lake, to a whole lake, to all lakes (rivers) within a country may be difficult, and may be mis-representative.
- Inclusion of water quality variables may be considered in future rounds of the UNSD/UNE Environment Questionnaire.

