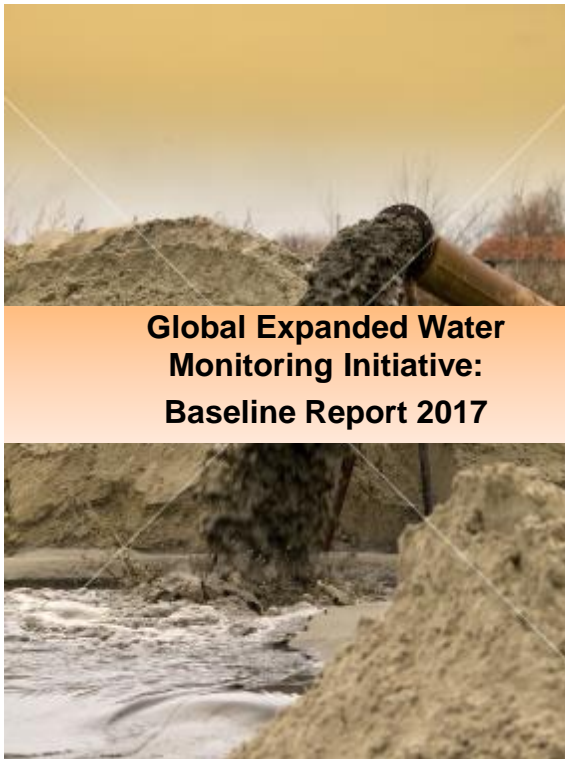


Earth observations in SDG water monitoring



GEO-WQ Summit

Geneva, 20 April 2015

Rifat Hossain

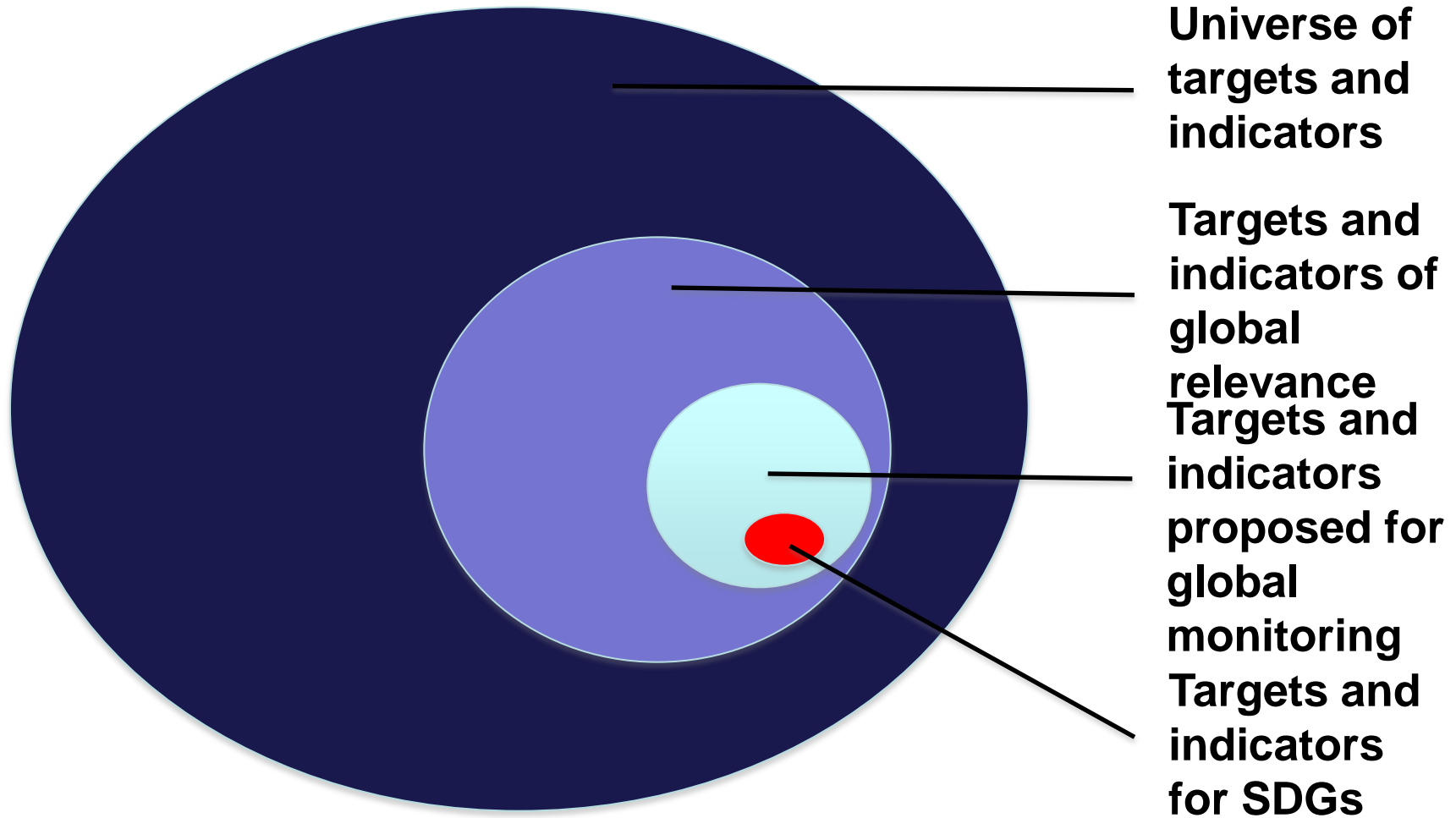
World Health Organization

Geneva, Switzerland

Purposes of Global Monitoring

- Global advocacy
 - Measuring progress for the global community
- Informing global investments
- Informing investments at country level by governments and donors
- Supporting regional and country benchmarking and reporting

Global Targets and Indicators...



Transition in indicators development...déjà vu?

MDGs

- 8 goals, 21 targets, 60 Indicators
- MDGs were crafted by technocrats : goals directly from MD, targets mapped to indicators
- Available data dictated indicators framework: IAEG-MDGs

SDGs

- 17 goals, 169 targets, ≈100 indicators (1 indicator per target max)
- SDG goals and targets are created by Member States: technical proofing by technocrats?
- Measurability will dictate monitoring and indicators framework: IAEG-SDGs

Lessons from MDG monitoring

- High focus on development: silent on sustainability etc.
- Piggy backing on household surveys
 - Cost effective
 - Limit different aspects and timely reporting
 - Info on access to water sources, but not its quality
- Earth observations:
 - Data available for cost effective monitoring
 - Huge investments in EO: developed countries contribution to monitoring next goals and targets?
- Data revolution: integrate EO, Big Data, traditional data

Post 2015 development agenda

Political

**Goals and
targets**

**UN General
Assembly**

Non political

**Indicators/monitoring
framework**

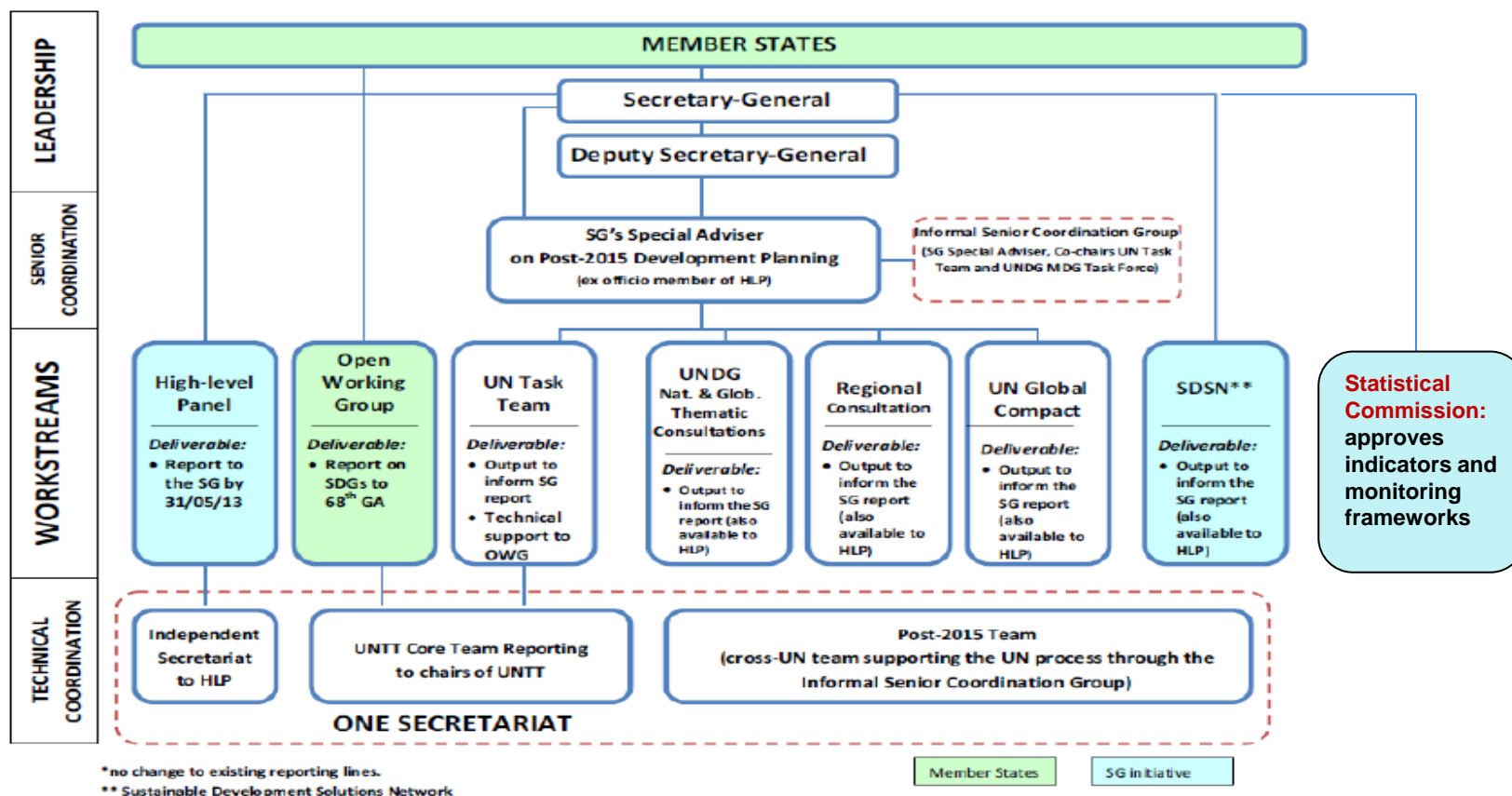
**UN Statistical
Commission**



Post2015 development actors...

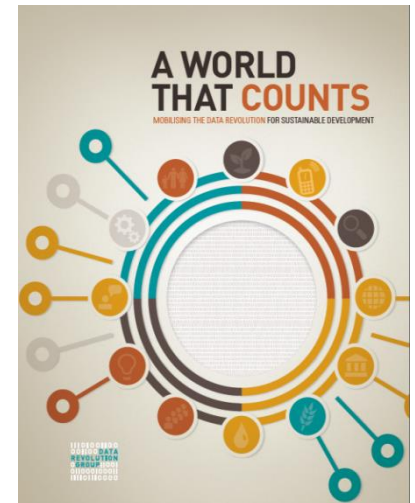
POST-2015 UN PROCESS: ACTORS AND COMMUNICATION LINES*

7/11/2012

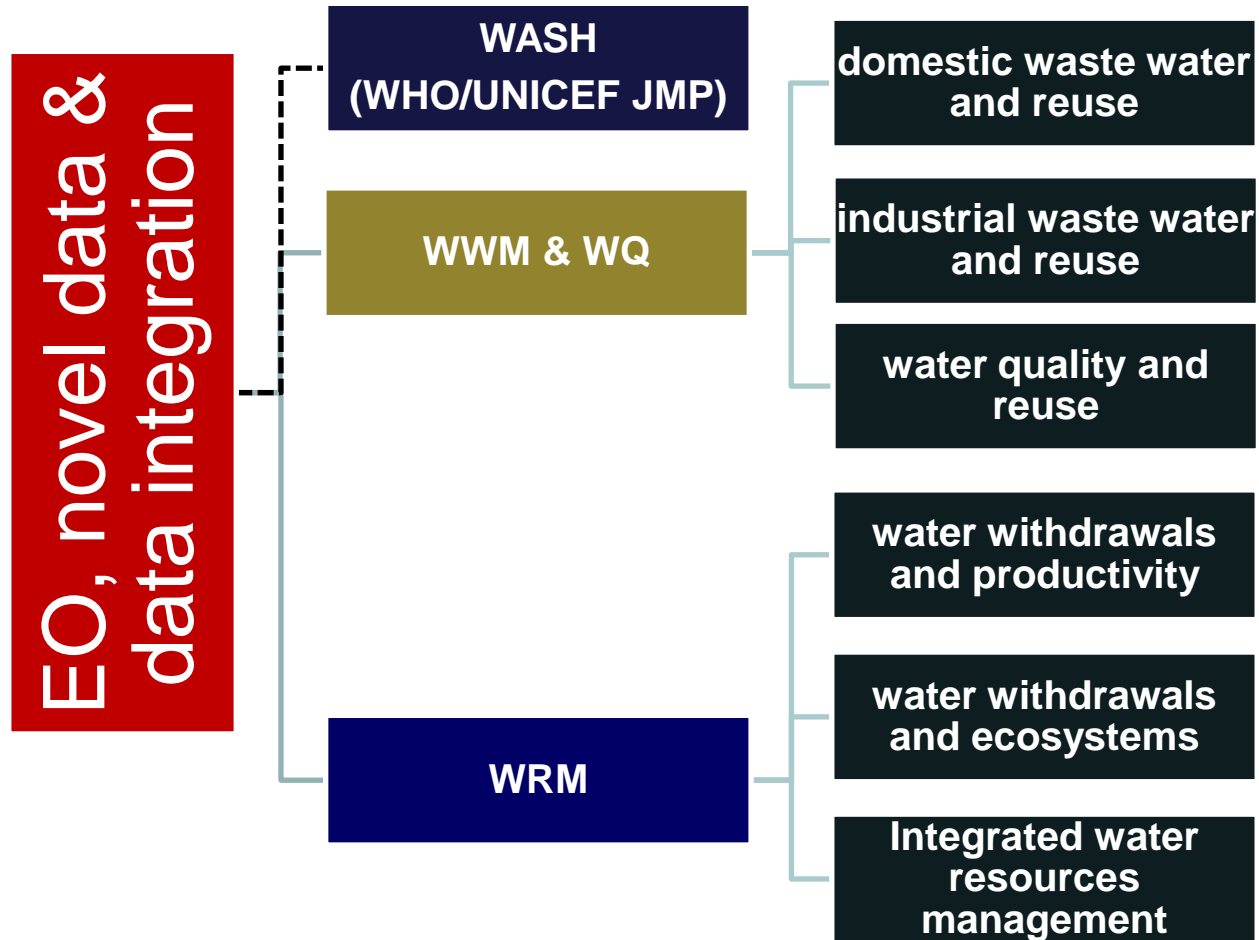


Independent Expert Advisory Group on Data revolution for SDGs

- Recognizes use of various data, including novel, **geospatial** and Big Data, in an integrated manner
- An urgent call for action for
 - global consensus on principles,
 - **Share technology/innovation for common good**
 - New resources for capacity development
- Data revolution is a joint responsibility of Governments, international and regional organizations, the private sector and civil society.
- Underscores importance of CRVS: **denominator issue**



EO in SDG water monitoring: a UN initiative



Task Team Contributors

- International: WHO, GEO, WMO, UNU-FLORES, WCRP (GEWEX), WMO-CHY, CIESIN, World Bank, UN Global Pulse
- Countries: Australia (CSIRO), Bangladesh, China, Colombia, Japan (MEXT), Germany, Pakistan, USA (USEPA, USGS, NSF, USACE, US GEO),
- Space Agencies: ESA, JAXA, NASA, NOAA
- Academia and institutes: Chouaib Doukkali University (Morocco), U of Tokyo, Chinese Academy of Sciences, U of Bonn, Vrije Universiteit Amsterdam, University of Twente, CUNY, U of Texas, GMU, Delatres, Fraunhofer Institute of Optronics, WRI
- Two members from SG IEAG on data revolution for SD

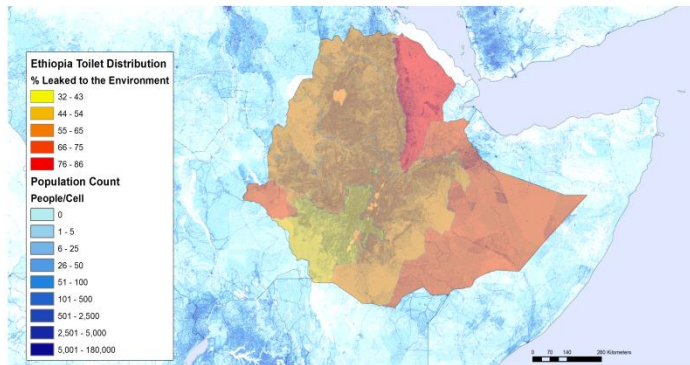
OWG Target 6.3: waste water indicators

Indicator: A consolidated indicator of waste water production, treatment and reuse/recycling

Rationale: Natural Environment agencies have reliable statistics for some countries but are limited. Global Estimates validated by data from global databases greatest promise

EO support for the indicator:

1)



2)



Types of toilet use /fecal leakiness map, combined with pop density, landuse, landcover, and eutrophication and harmful algae blooms to highlight the potential public health impacts.

High resolution satellite images could document the location of treatment facilities.

OWG Target 6.3: water quality indicators

EOTT recommended indicator: The UN Water indicator related to Nitrogen and Phosphorus pollution in large lakes, water bodies and coastal zones.

Rationale: The WQ TT report indicators seemed complex and focused on point data. While improving GEMSTAT data is desirable, an indicator that provides information for every country is most desirable.

EO support for the indicator:



LANDSAT and MODIS data provide global data on phytoplankton blooms and sedimentation



Hydrologic models can estimate the movement and changes of concentrations of pollutants (incl. N and Ph) in rivers

Indicators roadmap...

- February 2015: Expert Group meeting on indicators framework;
- March 2015: 46th Statistical Commission: road map for the development and implementation of indicator and monitoring framework and roadmap – IAEG-SDGs is born
- July 2015: IAEG-SDGs: first note on indicator framework
- Nov/Dec 2015: IAEG-SDGs report to UNSC
- March 2016: 47th Statistical Commission to endorse IAEG proposal and agree on an implementation plan
- June/July 2016: SDG global baseline report identifying gaps;
- 2016-2020: Scaling-up of national, regional and global capacities to monitor goals and targets

EO at key post2015 events/progs

- Expert Group meeting on indicators framework 25-26 February in New York
 - Statistical note...integrating EO with other data ([/http://unstats.un.org/unsd/post-2015/activities/egm-on-indicator-framework/docs/Statistical%20note%20on%20Water%20for%20UNSC%20final%2025Feb2015.pdf](http://unstats.un.org/unsd/post-2015/activities/egm-on-indicator-framework/docs/Statistical%20note%20on%20Water%20for%20UNSC%20final%2025Feb2015.pdf))
- Side events at UNSC 27 Feb in NY
 - EO committed to SDG monitoring
- 46th Statistical Commission 3-6 March
 - EO/data revolution is essential for SDG monitoring
- Indicators development by the IAEG-SDGs
 - EO integrated with other data sources

46th Statistical Commission...decisions

- IAEG-SDGs to develop an indicators and report against them
- High-level Group for Partnership, Coordination and Capacity-Building for post-2015 monitoring: on strategy for statistical capacity-building and funding for statistics
- Under Statistical Commission a biennial World Forum on Sustainable Development Data
 - bring together public and private data producers and users to discuss the latest data innovations and their potential use in post-2015 monitoring;
- IAEG and High-level Group seek input from the various groups working on the modernization of statistics

Clear role of EO...

Towards... 47th Stats Comm

- July 2015: Financing for Development: cost of SDG monitoring paper (to be launched at World Bank-IMF Joint Spring meet, 17 April, 2015) fully recognizes EO data in SDG monitoring and costs out
- Methodological work and strengthening of statistical systems by IAEG-SDGs :
 - use of new data sources,
 - improved data collection
 - strengthening and modernization of statistical systems etc.

Opportunities for EO...

Data for Development

A Needs Assessment for SDG Monitoring and Statistical Capacity Development



Indicators, indicators...

- Hundreds of indicators for the 169 targets
- 304 selected by UNSD, evaluated by Member States
- **Question 1: Feasibility** of the provisional indicators:
 - *A: Easily feasible; B: Feasible with strong effort; C: Difficult, even with strong effort*
- **Question 2: Suitability** according to categories:
 - *A: Support; B: Need to discuss or consider others; C: do not support*
- **Question 3: Indicator relevance to the target** according to the following categories:
 - *A: Very relevant; B: Somewhat relevant; C: Not relevant*

Preliminary evaluation of the proposed indicators 1

- 50 indicators (16%) AAA: feasible, suitable, very relevant
- 39 indicators (13%) BAA: feasible with strong effort, but suitable, very relevant.
 - Hygiene indicator under 6.2, wastewater treatment indicator under 6.3 and water stress indicator under 6.4 met this criteria.
- 28 indicators (9%) BBA: feasible with strong effort, in need for further discussion, but very relevant.
 - None of the water target indicators
- The rest of the water target indicators were
 - BBB (6.4.2, 6.5.1 and 6.6.1) and
 - one with the rating CBB for 6.5.2.

Preliminary evaluation of the proposed indicators 2

- 6.1.1 % of pop using safely managed drinking water services: AAA
- 6.2.1 % of pop using safely managed sanitation services: AAA
- 6.2.2 Population with a hand washing facility with soap and water in the household: BAA
- 6.3.1 % of waste water safely treated BAA
- 6.3.2 % of receiving water bodies with ambient water quality not presenting risk to the environment or human health: CBB
- 6.4.1 Water Stress BAA
- 6.4.2 Water Productivity BBB
- 6.5.1 Status of IWRM Implementation BBB
- 6.5.2 Availability of operational arrangements for transboundary basin management: CBB
- 6.6.1 % change over time in wetlands: BBB

Food for thought...

- EO community support for
 - Urgently complete the detailed technical/statistical note for the proposed indicators: how to make EO more relevant?
 - Cost of monitoring, or cost effectiveness of using EO for SDG monitoring
- Set up working groups/teams to advance the various works
 - Resource allocations/mobilizations

THANK YOU

Use of all available and relevant data is the real data revolution and integrating them into the monitoring framework will be transformational...

Rifat HOSSAIN

Email: hossainr@who.int