Guidance note to facilitate country consultation on JMP estimates for drinking water, sanitation and hygiene

February 2017

1. Background

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) was established in 1990 and has been instrumental in developing global norms and standards to enable benchmarking of progress on drinking water, sanitation and hygiene (WASH).

The JMP aims to publish comparable estimates of progress at country, regional and global levels based on official national data. By the time the JMP published its 2015 update and MDG assessment the global database contained more than 2000 datasets. The 2015 report included estimates for 205 countries, areas and territories, of which 142 had at least 5 data points since 2000.

Following agreement of the 2030 Sustainable Development Agenda by UN member states, the Inter-Agency & Expert Group on SDG Indicators identified the JMP as the custodian agency responsible for compilation and reporting on the official global indicators for Sustainable Development Goal targets for drinking water (6.1), sanitation and hygiene (6.2).

The JMP is currently updating its database to incorporate new indicators which address the expanded scope and ambition of the SDG targets. During 2016 the JMP worked intensively to compile existing national data for the new SDG indicators, and reached out to WHO and UNICEF regional and country offices through a data drive in October 2016. Country consultations on preliminary JMP estimates will be held during February and March and the JMP plans to publish global baseline estimates for SDG targets 6.1 and 6.2 in June 2017. These estimates will also be fed into the SDG report by the UN Secretary General, due to be published in July 2017.

2. Objectives of the country consultation

According to the instructions from the IAEG-SDGs, international agencies responsible for producing country estimates on SDG indicators are expected to consult with countries on the interpretation and use of country data in global estimates and reports. The JMP country consultation is a process whereby WHO and UNICEF seek feedback from national authorities on the JMP country files and estimates of progress in drinking water, sanitation and hygiene. It is therefore important that relevant country authorities understand the essential elements of the JMP country file and estimation methods in order to effectively provide feedback through this consultation.

JMP global and regional estimates are derived by aggregating country trends so establishing comparable estimates of progress across countries is paramount. Because the JMP applies a common methodology across all countries its estimates often differ from government estimates which use different definitions and/or methods. The JMP methodology is rooted in estimates of which water and sanitation facilities are used by households, and gives preference to population-based sources of data such as censuses and household surveys, over administrative records which may be based on infrastructure coverage. However, data from infrastructure-based databases will be essential for aspects essential to SDG indicators such as drinking water quality and wastewater treatment.

The purpose of the consultation is not to compare JMP and national estimates of WASH coverage but rather to review the completeness or correctness of the datasets in the JMP country file and to verify the interpretation of national data in the JMP estimates. The consultation should focus on three main questions:

a. **Is the country file missing any relevant national sources of data on drinking water, sanitation and hygiene to get a better estimate?**
b. **Are the data sources listed considered reliable and suitable for use as official national statistics?**
c. **Is the JMP interpretation and classification of the data extracted from national sources accurate and appropriate?**

WHO and UNICEF country offices are well-placed to ensure coordination and effective division of labour. Country Offices are not expected to undertake complex analysis, or to review the estimation methodology, but simply to support national authorities to identify any missing data sets and to provide feedback on the interpretation and classification of existing data. Country Offices are best placed to know which sectoral ministries should be consulted (water, sanitation, health, environment) but in all cases we encourage you to engage with the National Statistics Office which is the national counterpart of IAEG-SDGs, the body tasked by the UN General Assembly to oversee the global monitoring, and therefore will be primarily responsible for SDG reporting at the national level.

3.   JMP estimates for basic and safely managed services

JMP estimates are based on a simple classification of drinking water sources and sanitation facilities into improved and unimproved types. This information is widely available from national household surveys, censuses and administrative systems. For MDG reporting the JMP estimated the proportion of population using improved and unimproved types of facilities. For SDG reporting the JMP will add new information on service levels and further classify improved facilities into three categories: 'limited', 'basic' or 'safely managed' services. JMP estimates of the population using 'basic' services are used for global tracking of progress towards SDG target 1.4. JMP estimates of the population using 'safely managed' services are used for global tracking progress towards SDG targets 6.1 and 6.2. as shown below.

3.1. Drinking water

Households using improved drinking water sources which are located on premises, with water available when needed, and free from contamination[1], will be classified as having 'safely managed services'. Households not meeting all of these criteria, but using an improved source with water collection times of no more than 30 minutes per round trip are classified as having 'basic services', and those using improved sources with water collection times exceeding 30 minutes are classified as 'limited services'.

3.2 Sanitation

Households using improved sanitation facilities which are not shared with other households are classified as having 'basic' services, and those using improved sanitation facilities shared with other households are classified as having 'limited' services. To be classified as 'safely managed' households must use an improved sanitation facility which is not shared and where excreta are either safely disposed in situ or removed off-site and treated. Sewage that undergoes at least secondary treatment (or primary treatment with a long ocean outfall) will be included, though non-specific information such as "wastewater treated" will not be used for the estimates. Information on faecal sludge management can include containment, emptying, delivery to treatment and treatment with appropriate technologies.

3.3 Hygiene

Hygiene was not included in the MDGs. However SDG target 6.2 has specific reference to hygiene. Through international consultations on hygiene, the presence of a handwashing facility with soap and water has been identified as the closest measurable proxy for hygiene and therefore has been included in the SDG indicator as the top global priority. This proxy measure has been increasingly included in household surveys, and represents a more reliable indicator than reported handwashing behaviour. For global reporting the JMP uses national surveys to estimate the proportion of households with a handwashing facility with soap and water available at home.

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[1] For global monitoring purposes, the priority water quality parameter will be the absence of faecal indicator bacteria (E. coli or thermotolerant coliforms). Data on arsenic and fluoride will also be used where available.

4.   Estimation method

The JMP generates rural, urban and national estimates for each country by drawing a line of best fit between all available data points. Simple linear regression using least squares method of minimizing the variability of the data points is used to estimate the proportion of the population using each of the following facility types for a given reference year between 2000 and 2015:

- Improved drinking water
    - Improved within 30 minutes (basic or safely managed)
    - Improved over 30 minutes (limited)
    - Unimproved water
    - Surface water

- Improved sanitation
    - Improved and not shared (basic or safely managed)
    - Improved and shared (limited)
    - Unimproved
    - Open defecation

- Handwashing facility with soap and water
    - Facility observed with soap and water available
    - Facility without soap or water
    - No facility

To calculate **safely managed drinking water** the JMP estimates the proportion of improved drinking water sources (piped and non-piped) which are:

- on premises,
- available when needed, and
- free from contamination.

These values are multiplied by the proportion of the population using improved drinking water sources, to find the population using improved water sources that are on premises, available when needed, and free from contamination. Finally, to be conservative, the JMP uses the minimum of these three values, wherever available, to estimate coverage of safely managed drinking water services.

To calculate **safely managed sanitation** the JMP estimates, like in the MDG period, the proportion of improved sanitation facilities not shared with other households (sewer connections, septic tanks and other improved facilities such as improved pit latrines) from which excreta are

- safely disposed in situ (contained and not emptied, or emptied and buried on site), or
- removed from the home through sewer lines and treated at a treatment plant, or
- emptied from non-sewered facilities, transported to a treatment plant and treated.

The proportion reaching treatment is adjusted based on the proportion of wastewater and faecal sludge treated.

While the data required to estimate access to basic drinking water, sanitation and handwashing facilities are readily available for most countries, the JMP has not always been able to find data from all countries in order to estimate safely managed drinking water and sanitation services. The JMP will only make an estimate if data are available for at least 50% of the relevant population and will indicate the completeness of the data underlying each country estimate.

5.   Structure of JMP country files

The JMP country files have been updated to address the expanded scope and ambition of the SDG targets and the Excel spreadsheet has a series of tabs but for ease of reference the front page includes links to the key tabs as described below:

5.1   'Ladders' for the most recent estimates
This tab displays drinking water, sanitation and hygiene 'ladders' used by the JMP for global monitoring purposes. The ladders show the latest rural, urban and national estimates for the year 2015. Summary estimates are tabulated below as they will appear in the statistical tables at the back of the planned JMP 2017 report.

5.2 'Basic charts'

This tab includes charts showing estimated trends in the use of 'basic' drinking water and 'basic' sanitation services since the year 2000. These charts illustrate the JMP method of using a linear regression of available data points to generate estimates for any given reference year between 2000 and 2015 and highlight differences between previously published estimates of 'improved' and new estimates of 'basic' services.

5.3 'Safely managed charts'

This tab summarises the data used to estimate use of 'safely managed' drinking water and 'safely managed' sanitation services. It includes charts showing estimated trends in the major types of facilities used by households i.e. piped versus non-piped improved drinking water sources, and sewer connections versus septic tanks and other types of improved sanitation facilities. It also includes charts showing estimated trends in the main elements of 'safely managed' services. The drinking water chart shows the proportion of improved drinking water sources which are located on premises, available when needed, and free from contamination. The sanitation chart shows the proportion of population using sanitation facilities from which excreta are disposed in situ, and faecal sludge and sewage which are removed and treated.

5.4 'Estimates'

This tab provides estimated values for limited and basic services, as well as for elements of safely managed services. Improved water sources are disaggregated into piped and non-piped sources, while improved sanitation facilities are disaggregated into sewer connections, septic tanks, and improved latrines. Individual elements of safely managed drinking water (on premises, available, and quality) are shown separately, along with the overall estimate of safely managed drinking water, which is the minimum of the three elements. Individual elements of safely managed sanitation (excreta disposed in situ, faecal sludge treated, sewage treated) are shown, along with the overall estimate of safely managed sanitation, which is the sum of the three elements, Estimates are provided for rural, urban and national areas, alongside population estimates from the UN Population Division. Estimates are generated for all years possible from 2000 through 2015.

5.5 'Data summary'

This tab provides a comprehensive list of all national data sources used in the production of JMP country estimates in chronological order. It shows which sources are used to derive each value and whether they are surveys, censuses or administrative sources. For more detailed information on how data extracted from each of these sources has been classified by JMP see 'Water data', 'Sanitation data', 'Wastewater data', and 'Hygiene data'.

6. What to review?

The country consultation should focus on the Data Summary tab which lists those sources of data on drinking water, sanitation, and hygiene which have been collected to date. **If the country file is missing any relevant sources of data, the JMP team will be grateful to receive these data and include them to update the estimates.** For example, if data on drinking water quality are missing from the country file but available from national partners, these could potentially be used to calculate and report on the indicator for Safely Managed Drinking Water services.

If any of the data sources listed in the Data Summary tab are not considered to be reliable and suitable for use in calculating the SDG indicators, please inform the JMP team as well. Data points can be excluded for global estimates if they are unsuitable, unreliable or simply incorrect.

Finally, if the data extracted from the listed sources (shown in detail on the 'Water Data', 'Sanitation data', 'Wastewater data', and 'Hygiene data' tabs) has not been accurately extracted or interpreted, please inform the JMP team. In some cases data extracted might have been misinterpreted or misclassified by the JMP team, and therefore will require correction.

Results of the consultation should be shared with the WHO and UNICEF country and regional offices, and copied to sdgbaselines@wssinfo.org.

Please note that the final deadline for feedback from JMP country consultations is **31st March 2017.**