



**UNITED NATIONS  
ECONOMIC COMMISSION  
FOR EUROPE**

**WORLD HEALTH  
ORGANIZATION  
REGIONAL OFFICE FOR EUROPE**

MEETING OF THE PARTIES TO  
THE PROTOCOL ON WATER AND HEALTH  
TO THE CONVENTION ON THE PROTECTION  
AND USE OF TRANSBOUNDARY  
WATERCOURSES AND INTERNATIONAL LAKES

Meeting of the Parties  
Third session  
Oslo, 25-27 November 2013  
Item 7 of the provisional agenda

MOP-3/WH/2013/INF.7

## **INFORMATION PAPER**

### **Wealth quintile analyses in access to drinking-water and sanitation**

#### **1. Introduction**

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) Joint Monitoring Programme for Water Supply and Sanitation (JMP) is the official United Nations (UN) mechanism for monitoring progress towards the Millennium Development Goal (MDG) related to sustainable access to safe drinking-water and basic sanitation (MDG 7, Target 7c).

In light of the UN recognition of the human right to water and sanitation in 2010, equitable access to drinking-water and sanitation is central on the agenda of the global post-2015 sustainable development debate.

The WHO's work on wealth quintiles has been intensified in recent years. It aims at providing information on the distribution of access to different types of water supply and sanitation technologies for different economic levels of the society. For example, piped water in households and use of improved sanitation facilities are typically enjoyed by the richest quintiles of the population, depriving the poor of the enjoyment of the highest health benefits associated with the use of such basic services.

Poverty is a reality for the countries of the European region. The current economic crisis adds an additional burden to poor populations and may even increase the proportion of the population being at risk of falling below the poverty line. The impact of these issues on access to drinking-water and sanitation needs to be analysed in a systematic manner. An improved evidence base will inform the work under the Protocol on Water and Health and contribute in the process of developing the post-2015 targets and ensuing monitoring indicators.

In order to address this need, the WHO conducted a series of wealth quintile analyses in access to drinking-water and sanitation for nearly 70 countries, including six European countries. In this paper, the results of these analyses are shown exemplarily for Hungary, Republic of Moldova and Serbia.

## 2. Methodology

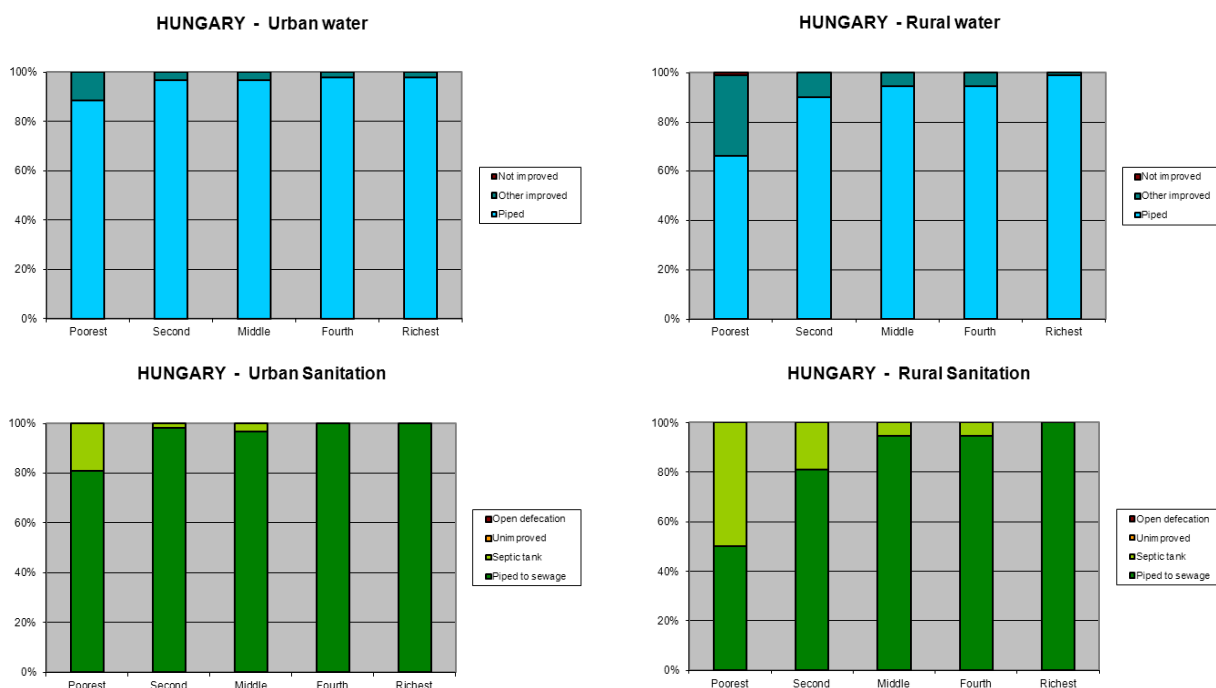
Wealth quintiles are based on the assumption that an underlying economic status difference exists in the wealth of the households. Many household surveys contain information on the use of drinking-water and sanitation facilities, and generally also provide information on the socioeconomic status of the household, specifically information of different assets households possess. Quintile analyses could also be conducted using other variables. While income variables are not reliable indicators, consumption variables are known to be better indicators of economic status of the households, but very few surveys allow such analyses.

The wealth quintile analysis starts by disaggregating the total population into five segments (from poorest to richest wealth quintiles) based on an assessment of the sum of the assets households own. Access to drinking-water and sanitation facilities is then estimated by service level (water and sanitation ladders) and cross tabulated against the different wealth quintiles. This analysis aims to show the contrast of access between poorest to richest quintiles, and allowing for pro-poor policy formulation and targeted interventions. If sufficient data is available over time, trends in coverage for each of the five wealth quintiles can be analysed.

## 3. Exemplary findings

### Hungary

- The only survey available in the form of a micro-dataset is the World Health Survey 2003 which allows disaggregation of data by quintiles. However, it was not possible to analyze a trend over time due to lack of survey data.
- Since 2000, 100% of the population use improved drinking-water sources. Disaggregation of data by types of improved water sources revealed differences in the use of piped water in home. The poorest fell behind regarding their access to piped water on premises, and this is especially true for the rural poorest where the access is only 65%, compared to near universal coverage of the richest.

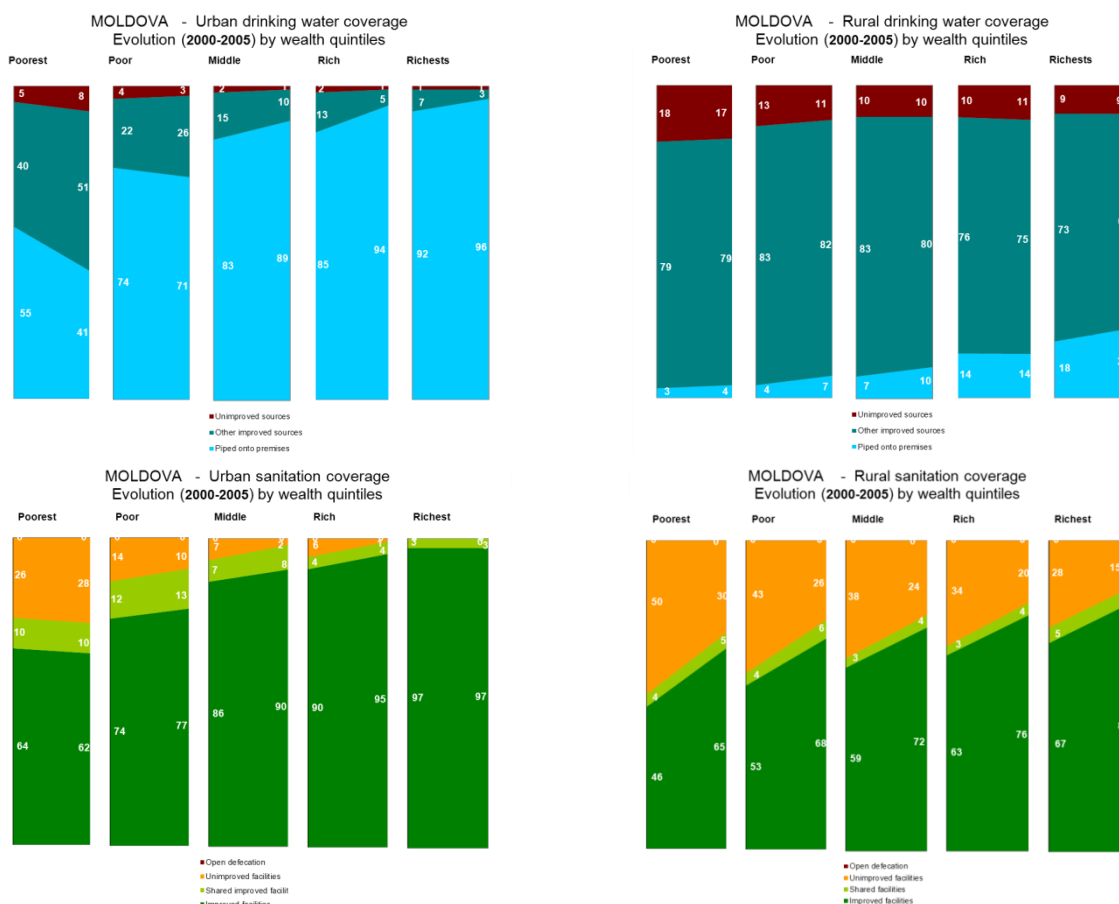


- The use of improved sanitation facilities is 100% for both urban and rural areas since 1990. Disaggregation of data by wealth quintiles revealed a different scenario in regard to provision of piped sewage connections (which is not a category for JMP reporting). There is a significant disparity between rich and poor people benefiting from the connection to sewage both in rural

and urban areas. The difference is higher in the poorest quintile, and this indicator is 81% in urban areas and 50% in rural areas in sharp contrast to the 100% coverage for the richest quintiles in both regions.

## Republic of Moldova

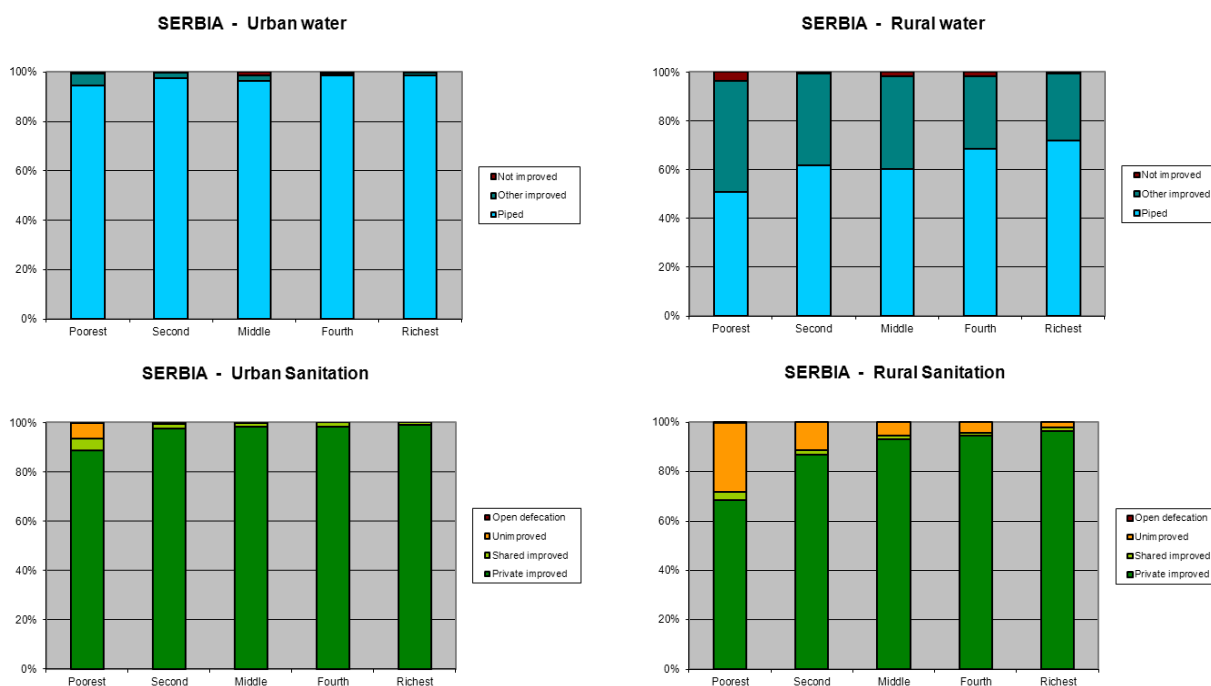
- JMP estimates for 2011 show that the use of improved drinking-water sources was 99% in urban and 93% in rural areas. Inequities appear in access to piped water supply on premises, indicating a great disparity between urban (86%) and rural (23%) areas. The 2011 data also indicate that the use of improved sanitation facilities is 89% in urban and 83% in rural areas.
- The wealth-quintile analysis was undertaken by using two micro-datasets: the Multiple Indicator Cluster Surveys (MICS) 2000 and the Demographic Health Survey 2005. This data allowed analysis of trends in wealth quintiles for the period 2000-2005.
- It appears that progress between 2000-2005 in provision of piped water on premises in urban areas made to the detriment of the poor and poorest. Among the poorest, the percentage of use piped water on premises has declined from 55% to 41%.
- In rural areas, access to piped water on premises increased over time in all wealth quintiles; however, significant disparities remain between the poorest (4%) and richest (22%) in 2005.
- Other sources, such as “tanker/truck vendor” and the “cisterns” which are considered as unimproved by the JMP have widely been used by the poor in urban and by the rich in rural areas. The use of bottled water has increased between 2000 and 2005, in particular among the urban richest.



- The quintile analysis revealed that in overall, there was remarkable progress in the use of improved sanitation facilities, except for the urban poorest. However, significant inequities appear in the use of improved sanitation facilities between urban and rural as well as between rich and poor.

## Serbia

- One micro-dataset of the MICS 2005 is available from the JMP database which provides sufficient and well disaggregated data for the analysis.
- No significant gap was revealed in the use of improved drinking-water sources between urban (100%) and rural areas (98%). However, for the rural poorest, this indicator is slightly lower (96%).
- A clear correlation is observed between the wealth quintile category and the provision of piped water on premises in both urban and rural areas. On average, there is a significant disparity in the access to piped water on premises between rural (63%) and urban (97%) areas. In rural areas, access to piped water on premises is lowest (50%) in the poorest wealth quintile.
- On average, urban areas have a high level of private improved sanitation service provision (98-99%), except for the poorest (88%).
- In rural areas, there is a clear correlation between the use of improved sanitation facilities and wealth quintiles; 28% of the poorest in rural areas still rely on unimproved pit latrines whereas this indicator is only 3% for the richest quintile.
- In both urban and rural areas, 5% of the poorest share their facilities with other households.



## 4. Conclusions

The above results present an initial attempt to analyse access to improved drinking-water sources and improved sanitation facilities disaggregated by wealth quintiles. So far, the results are based on only few available survey datasets suitable for the analysis.

The results of wealth quintile analysis provide useful information for understanding and assessing inequities in access to drinking-water and sanitation by service levels, particularly with regard to measuring disparities between rich and poor in rural and urban areas and observing trends of the progressive reduction of inequalities. Among other measures, this particular kind of reporting is suggested by the JMP-led post2015 monitoring processes.

Incorporation of such analysis in future JMP reporting could be useful for informed decision making at the national level in targeting of resources to reduce the inequity and ensure that the most disadvantaged and marginalized groups of population are reached.