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INFORMATION PAPER 11

Wealth quintile analyses in access to drinking-water and sanitation in three Eastern European countries

1. Introduction

Access to improved sources of drinking-water and adequate sanitation is monitored through the WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) which has been designated as the official monitoring mechanism by the United Nations General Assembly. With the backdrop of the UN resolution on universal right of access to safe drinking-water and hygienic sanitation, equitable access to drinking-water and sanitation is on the centre stage of the global post-2015 debate in the JMP.

JMP work on wealth quintiles has been developing in recent years. It aims at providing information on the distribution of access to different types of water supply and sanitation technologies for different income 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 facilities.

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 below the poverty line or 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 monitoring indicators and targets.

In order to address this need, WHO conducted case studies on wealth quintile analysis in access to drinking-water and sanitation in three East European countries (i.e. Hungary, Moldova and Serbia).

2. Methodology in brief

Wealth quintiles are based on the assumption that an underlying economic status exists which is related to the wealth of the households in terms of the assets they own. Health surveys at household level contain information on the use of drinking-water and sanitation facilities, and generally also provide information on the socioeconomic status of the household. However, the information might vary in quantity and quality from one type of survey to the other, or even inside the same type of survey.

The wealth quintile analysis allows (i) disaggregation of data based on the assets of the population into five classes (from poorest to richest quintiles); and (ii) analyze the classes in terms of particular use of drinking-water and sanitation facilities by technology type (coverage).

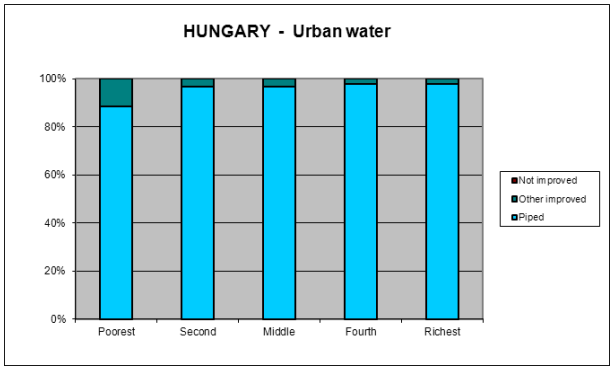
If sufficient data is available over time, trends of the coverage into each of these quintiles (regression analyse) can be analysed to see the coverage evolution within the five classes of population. Thus, the disaggregation of survey data into wealth quintiles will allow to measure access to water and sanitation by socioeconomic status.

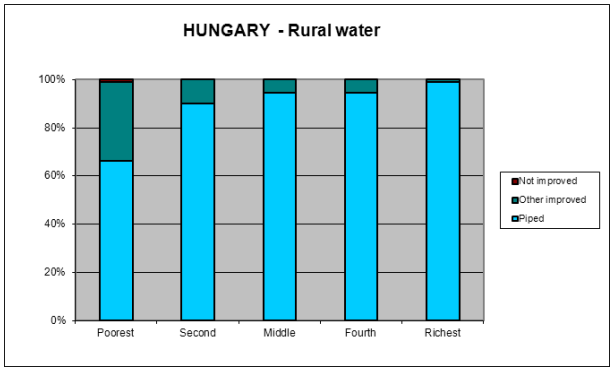
3. Exemplary findings of the case studies on wealth quintile analysis of three Eastern European countries

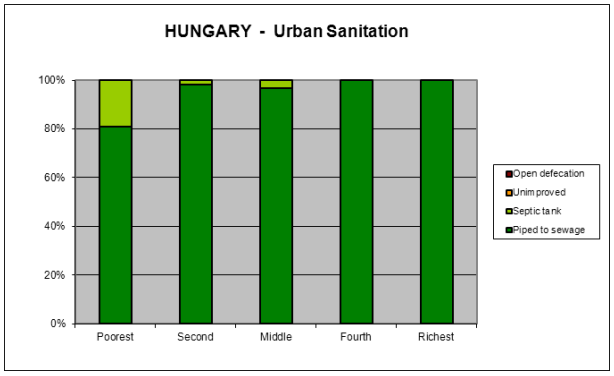
Hungary

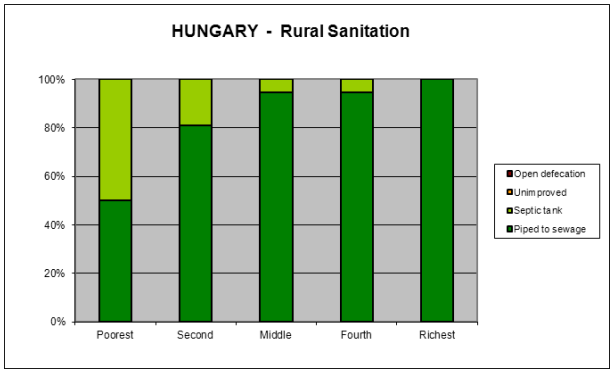
– The only survey which is available in the form of a micro dataset is the World Health Survey 2003; therefore the analysis could not analyse trends over time inside the quintiles.

– In Hungary, 100% of the population use improved drinking-water sources since 2000. However, disaggregation of data by types of the improved water sources revealed differences in the use of piped water in home. The poorest are discriminated regarding their access to piped water in premises, and this is especially true for the rural poorest who have only 65% access to piped water on premises.









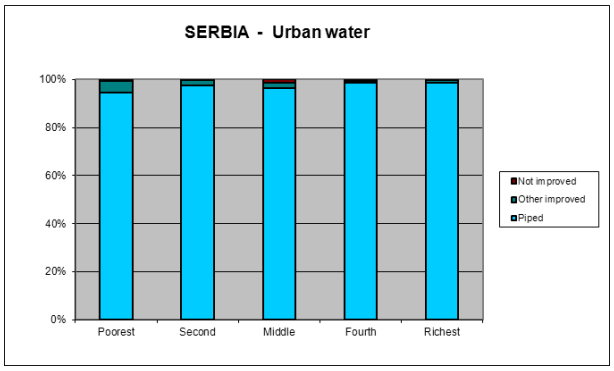
– In Hungary, the use of improved sanitation facility is 100% for both urban and rural areas since 1990. However, disaggregation of data by quintiles revealed a different scenario in regard to provision of piped sewage connections (which is not a category for JMP reporting). There is a significant disparity between rich and poor on the percentage of 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 area and 50% in the rural area.

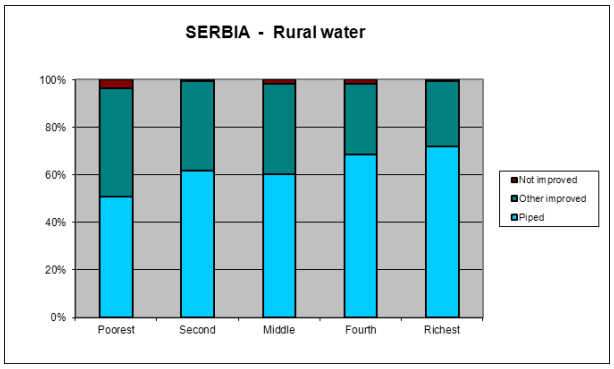
Serbia

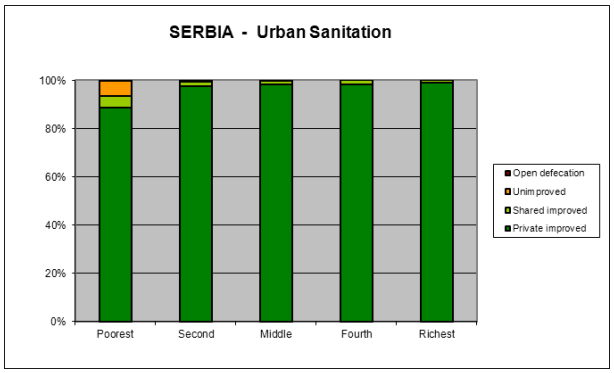
– One micro dataset of the Multiple Indicator Cluster Surveys (MICS) 2005 is available from the JMP database which provides sufficient and well disaggregated data for the analysis.

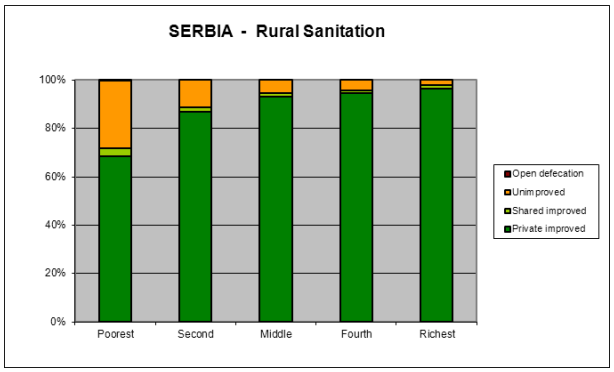
– No significant gap was revealed in the use of improved drinking-water sources between urban (100%) and rural areas (98%). However, for the rural poorest, this indicator is slightly lower (96%).

– A clear correlation is observed between the wealth quintile category and the provision of piped water in premises in both urban and rural areas. There is a significant disparity in the access to piped water in premises between rural (63%) and urban (97%) areas.









– The urban areas have a high level of improved sanitation service provision (98-99%), except for the poorest (88%).

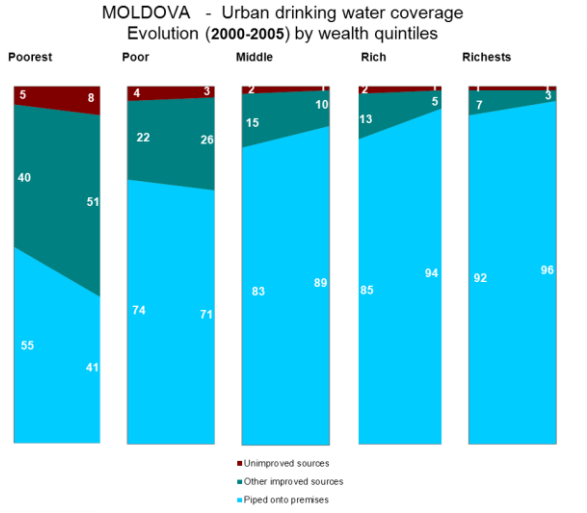
– In rural areas, there is a clear correlation between the use of improved sanitation facilities and wealth quintiles; 28% of the poorest in rural still rely on unimproved pit latrines whereas this indicator is only 3% for the richest quintile.

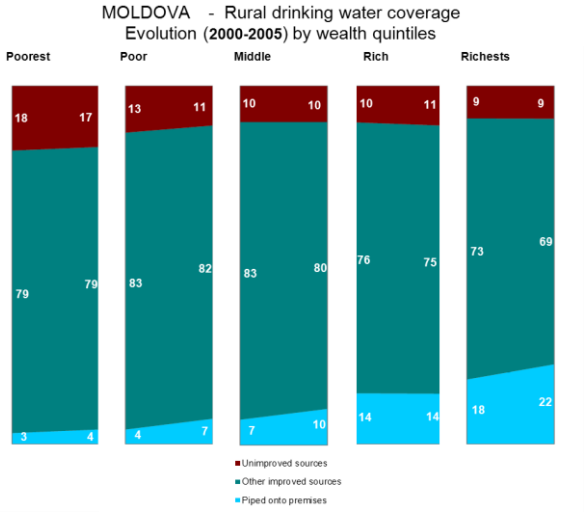
– In both urban and rural areas, 5% of the poorest share their facilities with other households.

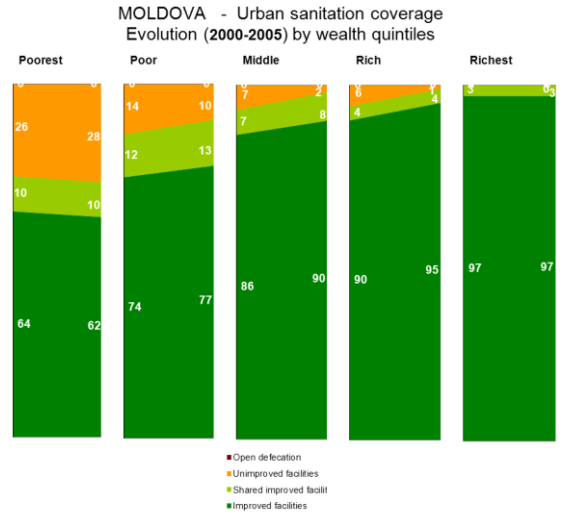
– In urban areas, flush to septic tank has a negative correlation with the wealth quintile level whereas it is positive in rural areas. This means that the rich in rural areas are located outside of the piped network and the rich in urban areas are connected to the piped network.

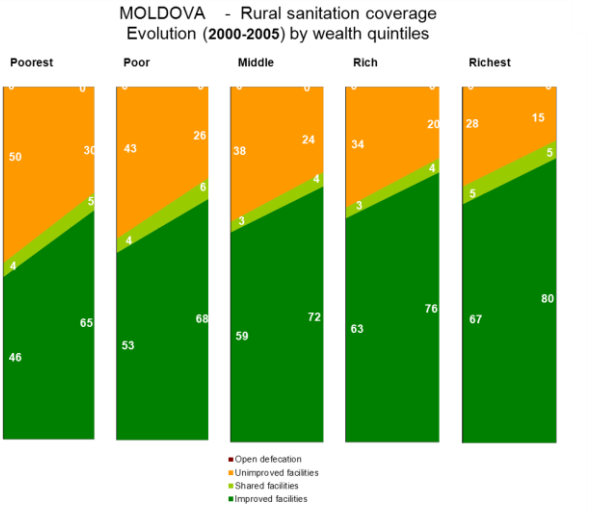
Moldova

- The analysis was undertaken by using two micro-datasets available from the JMP database. It provided an opportunity to analyze the trends inside the wealth quintiles for the period 2000-2005.
- JMP estimates for 2011 show that in Moldova the use of improved drinking-water sources was 99% in the urban areas and 93% in the rural areas. However, inequities appear in the use of piped water supply indicating great disparity between urban (86%) and rural (23%) areas.
- It appears that progress made for provision of piped water in premises in urban areas is done to the detriment of the poor and poorest. Among the poorest the percentage of use piped water in premises has declined from 55% to 41%.
- In rural areas, access to piped water onto premises increased over time in all wealth quintiles; however, significant disparities remain between the poorest (4%) and richest (22%) in 2005.
- The use of other improved sources of water is slightly increasing through the quintiles, but not as progressive as the use of piped water (except the urban poorest).
- The use of bottled water has been increasing between 2000 and 2005 and it becomes relatively important in urban areas, in particular for the richest.
- It is interesting to note other sources, such as "tanker/truck vendor" (MICS00) and the "cisterns" (DHS05) which are considered as unimproved by the JMP have widely been used by the poor in urban and by the rich in rural areas.









- JMP estimates for 2011 indicate that the use of improved sanitation facilities is 89% in the urban areas and 83% in the rural areas.
- The quintile analysis revealed that in overall there is a progress in the use of improved sanitation facilities, except for the urban poorest. However, significant inequities appear in the use of unimproved sanitation facilities between urban and rural as well as between rich and poor.

4. Conclusions

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

The results of wealth quintile analysis provides useful complementary information for assessing the equity dimension of access to 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.

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