Population Dynamics and Target 10 in MDG 7

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I am pleased to contribute a short note on the reciprocal interactions between population dynamics and the achievement of target 10 which aims at reducing by half, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

As an introduction, I think it is important to note that the published JMP data on coverage that are used as a benchmark for measuring progress towards Target 10 do not deal with a central feature of Target 10, which is "sustainable access"; they deal only with access which may or may not be available on a sustainable basis. One important implication of introducing the notion of "sustainable access" is that it might mean that the fraction of people with sustainable access to safe water supply and basic sanitation in 1990 could be significantly fewer than the fraction reported in the JMP. If this is the case, as it likely is, it could mean that the grounds to be covered in order to reach Target 10 would be far greater than had been previously assumed to be the case.

It is important to note also that, other than requiring that access should be on a sustainable basis, the definition for "sustainable access to safe drinking water supply" that is used in the report of the Millennium Development Task Force on Target 10 (namely, Health, dignity, and development: what will it take?) is substantially the same as that used in the JMP. With regard to the definition for "basic sanitation", however, there is a significant difference. In "Health, dignity, and development: what will it take?", "basic sanitation" has been defined as the lowest-cost option for securing sustainable access to safe, hygienic, and convenient facilities and services for excreta and sullage (domestic wastewater) that provide privacy and dignity while ensuring a clean and healthful living environment. This definition implies that "basic sanitation" has four salient features: (a) access to it should be on a sustainable basis; (b) it should meet basic human needs of safety, hygiene, and convenience; (c) it should include service for both excreta and sullage disposal; and (d) it should result in a living environment that is clean and healthful. The notion of "lowest-cost option" is included only to underscore the point that, apart from the four salient features, the relative cost of the feasible technology for delivering basic sanitation services may differ from one place to another, depending upon local circumstances and imperatives such as population density and size, access to drinking water supply, and such physical conditions as soil type or level of water table. A key question for discussion is whether all the four salient features of "basic sanitation" need to be present, and why.

One implication of these features is that access to basic sanitation and, for that matter, access to safe water supply, should be available not just at the individual or household level, but also at the neighborhood or community level. This means that even though the eventual target for access to both water supply and sanitation is the individual or the household, the pivotal level for intervention to ensure this access should be the neighborhood or community level. Hence in assessing the reciprocal interactions between population dynamics and strategies for achieving Target 10, consideration needs to be given not only to the population of individuals, but also to the population of communities within which the individuals dwell.

Given that Target 10 does not define absolute numbers of people to be reached by 2015, but rather the proportion of the population at that time that should have been given access to safe water supply and basic sanitation, it follows that the actual numbers of people to be reached would depend upon the population growth rates during the period up to 2015. Estimates of such population growth rates have been made by various organizations such as the UN Population Division, UNICEF, WHO, the World Bank, and the Stockholm Environment Institute. Based on such estimates, predictions have been made of the number of people to be reached each day, if the target is to be reached. It is apparent from such estimates that population growth rates will affect not only the number of people to be reached by 2015, but also the cost and financing strategies that should be used to reach them. Thus the ability of individual countries to reach the targets will depend, inter alia, both upon their ability to mobilize the required human and financial resources, and upon the strategies for deploying them.

Strategies for pursuing Target 10 will also depend upon the types of settlement within which the target groups are located. These could be rural communities, small towns, large towns or mega-cities. As reported in a recent (2005) World Bank Report on Small Towns Water Supply, about a third of the people in Africa and Asia today live in small towns (2,000 – 50,000). In time, villages in these regions are likely to become small towns; small towns will become large towns (50,000 – 200,000), and large towns will become large urban areas (over 200,000). It has been estimated that for every large town, there are about ten small towns and even more rural communities.

The types and rates of transformations that will take place between these different types of human settlements will greatly influence the choice of strategies for pursuing Target 10. For example, if most of the communities to be reached end up being located in rural areas and small towns, as is suspected would be the case over the next ten years, and if the rural communities, in particular, are located in hard-to-reach remote areas, then the Target cannot be reached unless fast-track strategies that entail the use of mass approaches like the franchising method are used. The adoption of such approaches would help to reach a large number of communities simultaneously while at the same time helping to provide the massive capacity building and technical backstopping that would be necessary.

Other aspects of population dynamics that would pose a challenge in the choice of strategies for achieving Target 10 would include changes in population densities within each of the settlement types as well as the location of the population growth centers in relation to such resources as sources of water supply, public water ways used for various beneficial purposes, and tourist resorts. Another aspect of population dynamics that would influence the choice of strategies for achieving the targets would be changes that might occur in the socioeconomic profiles of people in the different settlement types. Among other things, such changes could influence not only the choice of service levels, but also strategies for cost recovery and, hence, sustainability of service.

So far the focus of my discussion has been on the impact of population dynamics on strategies for achieving Target 10. The question is whether the choice of strategies would also affect population dynamics. It is to be expected that the success and cost of selected strategies would influence the influx or outflow of populations into different types of settlements. However, it does not appear that much work has been done on this. Hence, this is one of the areas where there is a gap in knowledge.