

Long waiting lines despite having a good source



Water supply system with one tapstand

Introduction

An important aspect of the programme Guided Learning on Water and Sanitation (GLOWS) is that it adopts a problem based approach in which participants in the training together with community members identify key water and sanitation problems and possible solutions. In this process they may be receiving as needed external support from trainers from Technical and Vocational Training Centres (TVETC), staff from the Water and Health Bureaus and staff from core partners in the GLOWS programme. As a result of this process WASHCOs and Kebele leaders are taking things in hand and start to take direct action on the ground that helps to improve their systems, sometimes finding very creative solutions for their problems. To make this wealth of experience available to others GLOWS PROS (GLOWS Problems and Solutions) are developed that document important problems and potential solutions and make these available to others.

The problem: Unnecessarily spending your days at the tap

Long waiting lines, the problem addressed in this note, are often an issue in the GLOWS assessments in Ethiopia. People and particularly women and children spend a lot of time waiting for their turn to fetch water. They may be spending up to several hours every day in the queue particularly in the dry season just to buy a jerrycan of water. Sometimes this is because the water source is not providing enough water and new sources will be needed to solve the problem, but in other cases the situation is in a way sadder in that with limited resources

considerable improvements can be made as shown by the following examples.

Case 1: Queuing in front of a borehole

An interesting case was a community in SNNPR with only one tapstand with six taps that was located at the site of the borehole, with a generator and an overhead tank (see pictures). At this location also 6 washing basins were available but these had been disconnected as it was not clear how people would pay for the water if they use the basin. The capacity of the well is very good and could easily supply 6 times the population living in the area. When visiting the site it was established that the system was open for water collection for eight hours a day, but also that waiting lines of five hours were no exception in this location particularly in the dry season.

Case 2: Waiting at the tap

Three Kebeles in SNNPR are supplied by one piped system with 11 water points each having 4 taps. Also in this system the waiting lines are considerable and in the dry season may go up to six hours. Also in this case the problem was not caused by the capacity of the well or the pump, but because of the low discharge at the taps, clearly showing that the system could not cope with the peak in water consumption in the morning and in the evening.

Possible solutions

Both cases show that the problem is important as standing in line for several hours is not only a waste of time, but also will prevent children from going



Overhead tank in SNNPR

to school making it very important to take action and solve this type of problems.

Solution for case 1

The first solution in this case would be to increase the number of tap stands which can in fact be done quite easily by turning the 6 washing basins also into tapstands. This could in fact be done at very low cost and would dramatically cut the waiting time for the users without changing operational cost as the management of the tapstands could be done by the same people that are doing it now, the tank is available and can supply to the different tapstands with good pressure as they are all located very close to the tank as long as the capacity of the pump can keep up with consumption, which in this case does not seem to be a problem either as the pump is only operating for a few hours. Also it may be attractive as they may sell more water as people may be willing to collect more if they do not have to wait long.

An alternative might be to open a second tap stand at another strategic location which would also increase the number of taps that can be used at the same time, but would have the additional advantage that if strategically located walking distance may reduce considerably for part of the population. This would however involve additional cost in construction and also in management as the additional tap stand would need its own attendant.

Solution for case 2

In systems with multiple tap-stands connected by distribution lines the situation is more complex. The first point in such a system would be to check for leakages as these may be considerable. The community was already discussing with the Woreda Water Office to explore if the water tank could be raised as this would provide additional head to increase the pressure at the tap. This might indeed improve the situation, but it would also involve

considerable cost and might increase water loss considerably as small leakages will become bigger leakages due to the increase in pressure.

A temporary solution may be to establish a rotating distribution system where taps are open on specific service hours whereas other taps are open at other service hours. This type of organized distribution will enhance the pressure in the taps that are open which will increase the filling speed of the jerrycans which will reduce waiting time and has the advantage that the users can organize themselves as they know when the tap stand will be open.

An alternative solution could be to go for decentralised storage by installing water tanks at the tap-stands. If these tanks are full when users come then the stored water will readily available and can be quickly distributed to the users in the morning by adding a number of taps to the tank. This will require however good management as the storage tanks need to be full when the users reach in the morning and in the second part of the afternoon. This implies for example that the pump needs to run during the time that people fetch water to keep water flowing to the tapstands and the tanks. In addition it would need to operate in the late afternoon to fill the tanks for the next morning and for a period during the day to refill the storage tank for water collection in the afternoon. An additional advantage of this approach is that the pressure in the distribution system does not need to be increased thus avoiding extra water loss in the system.



Typical Tap stand in a systems with multiple water points