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Short Paper		
Promoting self-supply of improved traditional wells in Mali: a comparison of two approaches		
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Abstract/Summary <i>Mali is seen as a country with high potential for promoting self-supply, primarily through encouraging people to make improvements to their own traditional hand-dug wells. This paper examines case studies of two approaches used to promote improved traditional wells, supported by UNICEF and WaterAid. Both pilot projects involved subsidising some improved traditional wells to act as demonstrations for other users to copy. However, levels of copying without subsidies were limited. The paper concludes that improved targeting and monitoring of initiatives to promote self-supply is required, to better understand the effects of such demonstrations and to ensure they have a better chance of reaching those who could benefit most from self-supply.</i>		
Introduction Mali is seen as a country with high potential for promoting self-supply as a means of improving access to drinking water thanks to the large numbers already using traditional hand-dug wells: over 5 million people (60% of the rural population), using 200,000 wells in rural and peri-urban areas (Maiga et al., 2006). RWSN, WaterAid and the Ministry of Health performed a study in 2005-06 in the Koulikoro region of Mali to assess this potential. This study (summarised in Maiga et al. 2006) showed that communities often prefer improved wells or modern wells to boreholes fitted with handpumps, for reasons of lower cost, greater reliability and proximity to the home. The study also found that water quality in existing traditional wells was generally better than expected: 85% of the unprotected traditional wells tested had less than 10 FC/100ml. Following this study, UNICEF and WaterAid began piloting self-supply from 2008 as a means of increasing access to drinking water via improved traditional wells. UNICEF's approach involved supporting the health services at different levels to lead the promotion of self-supply through pilot projects in different regions. WaterAid continued its existing approach of working through partners at commune (municipality) level but began to include some promotion of self-supply in this work. Both approaches were based on the idea of subsidising prototype improved traditional wells that could serve as demonstrations for other users to copy. However, the two approaches differed in the choice of local organisation to promote the initiatives, the levels of subsidy offered, the typical extent of improvements to wells, and whether promotion was targeted at private wells for families or communal wells for many households. This article explores case studies of the two approaches and assesses their success in promoting take-up of self-supply by other users.		
Description of the Case Study – Approach Table 1 summarises the two key approaches used for promoting self-supply examined here: <i>Table 1. Summary of the two approaches for promoting self-supply</i>		
Donor	UNICEF	WaterAid
Local partners and locations of piloting	The Ministry of Health and regional health services in three regions (Koulikoro, Segou, Sikasso). Within these, six district health services were chosen, working with ASACOs (health centre management	Local NGOs in the communes of Kolokani, Bla and Dialakoroba, working with selected villages within each commune.

	committees) in selected communes.	
Level of promotion	Communes or area covered by an ASACO.	Villages.
Locations chosen for this case study	The health district of Dioila, where three communes piloted self-supply (Banco, Massigui, Ngolobougou), because the health services at district and commune levels in Dioila were considered proactive and a good example of by a previous study soon after the initial piloting (Sutton, 2009; 2010).	The villages of Bogola and Kola in the commune of Dialakoroba, because these villages were considered dynamic by WaterAid's partner NGO and so were chosen for demonstrations of improved traditional wells and piloting of CLTS (broadly equivalent to self-supply for sanitation).
Summary of piloting approach	UNICEF provided funding to regional health services, which in turn funded district health services to organise training for masons and to buy cement for ASACOs. ASACOs organised interested families or communities in their area to collect cement, obtain other materials needed (sand, gravel, lid) and pay for the masons' work. However there was little promotion of the idea beyond the villages where the ASACOs or masons were based.	WaterAid's partners included improved traditional wells in their programmes of infrastructure installations. Wells were chosen on the basis of previous reliability of the water supply. If wells previously belonged to a family, they became intended for community access after improvement. While this approach emerged partly from WaterAid's research on household self-supply, it became seen by partners more as a means of implementing relatively cheap community water supply. The promotion of self-supply involved encouraging water user committees to promote well chlorination and show other users the elements of the improved wells.
Typical improvements, cost of wells, and level of subsidy	Cement aprons for wells, sometimes with an interior lining of bricks and cement near the top of the well and a metal lid, at a typical cost of 100 USD to 500 USD. Most of this cost was subsidised in the form of free cement. Owners contributed 20 USD to 50 USD cash, depending on the masons' rates set by the ASACO and whether the owner bought a lid.	Raised upper rim with lid and cement apron with drainage. Often full cement lining so that the point can meet national standards for a 'modern well'. Cost of 1000 USD to 2000 USD, fully paid by the WaterAid project.
<p>The study used to compare the results from these approaches was carried out in May-June 2011. For the UNICEF-supported work in Dioila, the study methodology consisted of semi-structured interviews with key representatives of health services and key informants (1-2 members of the ASACO, 1-2 masons trained by the project and 1-2 well-owners) in each of the three communes. In each of the two villages selected in Dialakoroba the methodology included structured interviews with owners of all traditional wells which had some improvements, focus group discussions on household spending priorities and financing of water and sanitation services, and community and GPS mapping of all water points.</p>		
<p>Main results and lessons learnt</p> <p><i>1. The take-up of other users copying elements of the improved wells is limited</i></p> <p>In the three communes in Dioila, it is unclear exactly how many wells were improved by users with their own funding after the completion of the demonstration improved wells. Limited monitoring was performed</p>		

by the district health services and the ASACOs, mainly because of a lack of funds to support follow-up visits (the project funding was for the initial activities of training masons and making demonstrations only). Estimates based on the partial knowledge of the district health technician, the ASACOs, and the masons suggest that around 15 families or communities in total funded their own improvements after the pilot project, compared to about 50 wells which were improved with the subsidies. This is of a similar order to the rates of take-up observed in the promotion of self-supply by the health services supported by UNICEF in other areas of Mali (Sutton, 2010). In the two villages in Dialakoroba, no wells were improved by users after the construction of the improved traditional wells. In each village, a number of users do have partially improved traditional wells (typically with some brick and cement headwork, and sometimes a metal lid), but these improvements had all been done at least 10 years previously.

In both cases, this limited take-up and copying of ideas by other users seems partly related to which villages were chosen for the initial demonstration and promotion, discussed below. Although interviewees typically stated that the cost of paying for improvements to wells was a barrier, this needs further investigation, since masons have demonstrated that improvements can begin with very low-cost work (e.g. wellhead protection with rocks and some cement). Research on this topic is continuing with WaterAid in Mali as part of a wider study of willingness to pay for drinking water services in rural areas.

2. The villages chosen for promotion were probably not those which could benefit most

In each of the three communes in Dioila, the vast majority of wells improved with subsidies during the project were situated in the main village at the centre of each commune. This seems to be related to the use of ASACOs (health centre management committees) to promote the initiative. The key members of each ASACO are generally based in the central village where the main community health centre is located. Health promotion to other villages in the commune is usually performed via community health "relays", volunteers from each village who attend meetings with the ASACO in the central village and then return to their communities to pass on the messages. However, if any links in this chain break down (for example, relays from a particular village missing a session, or failing to communicate messages once back in their community), most of the population of the commune will be uninformed. Also, the ASACOs in this initiative generally operated a 'first-come, first-served' policy for allocating cement to well-owners, which helped prioritise residents of the main village who could come to collect cement more easily than those from different, further villages. Overall, this led to the majority of wells which were improved being in these larger central villages which already had numerous other improved water sources, rather than more distant villages or hamlets where there tends to be a greater reliance on traditional hand-dug wells for drinking, and where self-supply of improved wells is thought to have a more important role (Sutton, 2010).

A similar problem was evident in the WaterAid-supported promotion in Dialakaroba, despite the villages chosen for the demonstration wells being selected by WaterAid's local partner NGO rather than left to a more ad hoc process as in Dioila. Both villages already had multiple improved water points (boreholes fitted with handpumps and large-diameter modern wells), to the extent that the population which could be served from improved water points already (according to national norms) was more than twice the actual population of each village. The logic of WaterAid's partner NGO was that despite this level of coverage, and despite all households being well within the official distance (500m) of one or more improved water points, users often prefer the convenience of hand-dug wells closer to their home, so should be encouraged to improve these for better water quality too. However, as noted by Sutton (2010), it may be better to target self-supply initiatives to small villages or hamlets where the reliance on traditional wells is greater.

3. Water quality varied and the extent of effective water treatment is limited

The health services from Dioila performed some follow-up water quality testing on samples of improved traditional wells throughout the district (not solely from the three communes discussed here) in 2009 and 2011. The total faecal coliforms measured in water from these improved traditional wells were generally less than 10 FC/100ml, although surprisingly the water quality in the wells with a lid tested in 2011 was in general worse than the water quality in wells without a lid, perhaps suggesting that lids are often left open and contamination still permitted that way.

There was evidence of residual chlorine in about a quarter of wells tested in 2011, but none in 2009. Tests for chlorine were also performed in the existing partially improved traditional wells in the two

villages in Dialakoroba in 2011, because most well-owners said they sometimes added chlorine (in the form of *eau de javel*, locally available household bleach). These tests showed zero chlorine levels: if users do use chlorine, it is for occasional shock chlorination rather than regular treatment. Responses from participants in these surveys and estimates from local health workers are also that rates of water treatment in the home are very low.

4. Promoting improved wells is a minor part of masons' work

Interviews with masons suggested that improving wells is a minor part of their work and they are unlikely to promote it without the guaranteed support of a subsidised project such as these, since travelling to other villages to seek work is a risk if it is not certain that there would actually be demand for their services.

Conclusions and Recommendations

The first conclusion is the need for better targeting of initiatives which seek to promote self-supply. Self-supply is often considered most appropriate for small villages or hamlets in Mali which are less well-served by improved water points. However, the case studies in this paper predominantly subsidised families or communities which already had access to water from improved sources.

The second recommendation is for better monitoring after the promotion of self-supply, to understand the effect of the promotion. In the case study here where self-supply was promoted by the health services, some follow-up was undertaken by district-level services but this was limited by lack of resources. However, there could be potential for simple low-cost monitoring via existing structures such as the volunteer health "relays" and the ASACOs, or the similar systems of water and sanitation relays that have been supported by WaterAid.

References

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