

# Access to water, hygiene and sanitation for persons with disabilities in the locality of Mandiakuy (Tominian Circle in Mali)

Disability

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**Towards Inclusive WASH** Sharing evidence and experience from the field

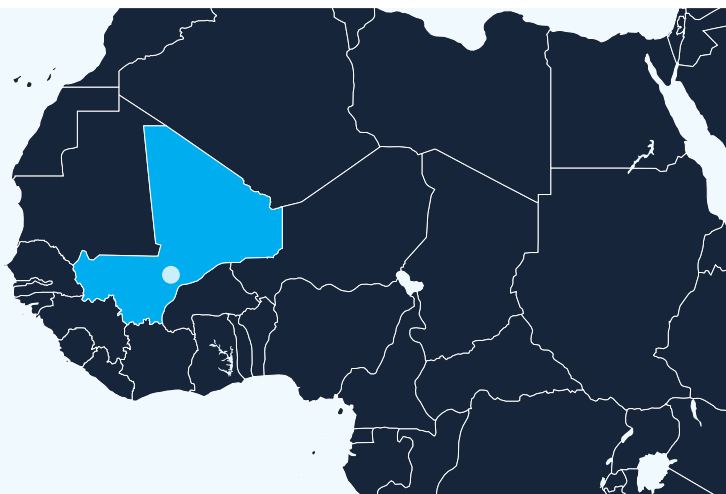


## Background

Despite efforts by development stakeholders to improve access to water, sanitation and hygiene (WASH) in the city of Mandiakuy, coverage remains below the national average.<sup>1</sup> The Government of Mali is committed to increasing coverage of water access to 75% and sanitation to 35% by 2015. Mandiakuy city has a population of approximately 4,000 inhabitants, who share three functional boreholes. In 2009, only 5% of residents in the city had access to a household latrine.<sup>2</sup> Compounding to the lack of available drinking water and sanitation facilities, vulnerable groups such as people with disabilities (PWD) face additional access challenges from pervasive discrimination. Thus, in partnership with Handicap International's Social Inclusion and Rights Project and Messiah College (an American university), World Vision initiated actions to enable PWD to gain full autonomy regarding access to safe WASH in the city of Mandiakuy, Mali.

### Location

» Mandiakuy city, Tominian Circle, Mali



## Initial Situation

Prior to action, there were no water points in Mandiakuy that were accessible to the city's residents with disabilities. Mr Jacques, a visually impaired person, explains:

At the water pump (borehole), other persons had to pump water for us. Then, the water had to be taken to our house, and this was also done by others.

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When there was nobody to help us at the borehole, we had to wait or beg the neighbours (for assistance). We felt like beggars.

To solve this problem, a number of people with disabilities first organised themselves into an association under the leadership of a nun named Sister Alice Somda. Created in 2004, the association is called *Mougnousi*, which means 'patience is good' in the Boré language. Next, *Mougnousi* partnered with World Vision and Messiah College to find practical ways to improve their access to water and sanitation.

## Innovations

To overcome the existing accessibility barriers, this project developed a number of innovative technological solutions to water source and latrine access, and delivered inclusive WASH training to the community including those with disabilities.

The innovations of the actions include:

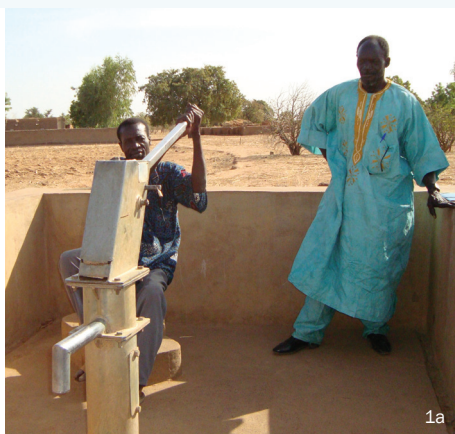
1. Improving PWD's ability to access and use water pumps in Mandiakuy by:
  - » Involving PWD to determine an appropriate site for an accessible water pump in the city through a meeting. There are now three pumps in the city including one accessible to PWD
  - » Modifying the superstructures of the water pump to make them accessible to persons with disabilities
  - » Providing the water pump with accessories such as an extended handle and a seat (Figure 1a and 1b) to improve ease of use.
2. Improving PWD's ability to independently transport and manoeuvre water bottles for domestic use through the production and distribution of:
  - » Bottle cages for better handling especially by people who have partially or completely lost arms or fingers. There are several models of bottle cages manufactured with rope or nylon cloth, metal and wood, but the model that best suits the Mandiakuy area seems

<sup>1</sup> Ministère des Mines, de l'Energie et de l'Eau (MME) / Direction Nationale de l'Hydraulique (DNH) (2002) *Guide méthodologique de l'Alimentation en Eau Potable et Assainissement (AEPA) en milieu rural et semi-urbain au Mali*

<sup>2</sup> Government of Mali (2009) *Plan de Développement économique social et culturel de Mandiakuy*



**Figure 1a and 1b**  
 Person with a disability demonstrates use of a specially designed water pump in the locality of Mandiakuy city, Mali. Note the lengthened handle on the pump (Figure 1a) and the seat (Figure 1b)  
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**Figure 2**  
 Pouring spouts for domestic water use, Mandiakuy city, Mali  
 Handicap International Mali

to be the wooden one that is well known by local artisans (approximate cost US\$0.60)

- » Brackets for easy water transport on the tricycles of persons with mobility disabilities
- » Wooden pouring spouts produced by local artisans (US\$1.50) or metallic ones produced by local blacksmiths (about US\$5) (see Figure 2).

The bottle cages, brackets and pouring spouts were provided free of charge by Messiah College, and distributed to them via the local disabled people's organisation (DPO).

3. Improving PWD's ability to access and use household latrine facilities. There are now three household latrines in the village adapted for people with visual impairments. Modifications included:
  - » The construction of walls with inbuilt hand rests, to guide visually impaired people and support people with limited mobility and strength (Figure 3).

- » The use of concrete or stone floors for better drainage. This keeps the toilets clean and less slippery.
- » Providing guides for the visually impaired to locate the latrine hole through the use of a string and stone device. This is a rope through the toilet and two parallel walls. This rope is stretched using two external stones suspended at each end of the rope. In the middle of the rope, a lightweight stone hangs along the edge of the toilet hole so that visually impaired people can identify where to defecate.
- » The construction of latrine seats in terracotta, metal and wood. Visually impaired people preferred the wooden *bagayogo* chair because this chair is more comfortable at an affordable price. Also, it is made of a local material and local craftsmen know how to manufacture it.
- » The construction of cement seats for the visually impaired (Figure 4) because this material is difficult to destroy at the slightest shock.

It is interesting to note that all these water and sanitation related innovations were made with local equipment and locally available materials (wood, leather, rope, plastic jars, plastic cans, iron, cement, clay, sand etc.). The technology was designed locally by blacksmiths and artisans (masons, pump repairers, welders) with the collaboration and technical support of Messiah College.

Another point of interest is cost; apart from the work on the site of the borehole and on the pump, other costs related

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**Figure 3**

Inbuilt hand rests guide people with visual and mobility disabilities to a latrine in Mandiakuy city, Mali

Handicap International Mali

**Figure 4**

A cement toilet seat for the visually impaired in the locality of Mandiakuy, Mali

Handicap International Mali



to the technology such as transport aids, household water use and sanitation equipment are affordable to the communities (costing between US\$0.60 and US\$5).

4. The project also included capacity building sessions on WASH for the city's residents, including members of the DPO. This training raised awareness around food hygiene and other diarrhoeal disease reduction techniques. Trainings were facilitated in a way that made these hygiene promotion messages accessible to participants with physical disabilities (visual, mobility etc).

This project's achievements were facilitated by the following factors:

- » The commitment of the principal advisor, Sister Alice Somda as a champion of disability inclusive development
- » The presence of and close collaboration with the DPO, *Moughousi*
- » The availability of funding provided by the partners, World Vision and Messiah College

- » Good collaboration between village authorities, persons with disabilities, *Moughousi*, partners and public administration authorities
- » The availability of local materials for the production of the equipment
- » The existence of local artisans and blacksmiths to manufacture the equipment used by persons with disabilities for water transport, domestic water use, and sanitation
- » The availability of Messiah College skills that have been transferred to local artisans and blacksmiths.

In particular, the involvement of persons with disabilities at every stage of the project was critical. Members of the *Moughousi* participated in:

- » Identification of the sites for the borehole and latrines
- » Construction of the facilities, as a labour force
- » Planning and participating in hygiene promotion and capacity building activities on water point operation and maintenance
- » Monitoring and evaluation of the activities
- » Management of the facilities (water pump and latrines).

## Sustainability challenges and discrimination

Despite efforts to make the use and management of the borehole inclusive, the marginalisation of PWD is still prevalent.

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**Figure 5**  
Focus groups with  
members of the DPO  
Mougousi  
Handicap International Mali



The management of the new accessible water pump was originally delegated to members of *Mougousi* who had been involved in its installation. Members collected a small fee from users which contributed to operation and maintenance (O&M). However, problems later arose with local authorities as Mr Dakouo, a member of *Mougousi*, says:

Today, we are no longer dependent on others for the collection, transport and use of water, or use of latrines. Unfortunately, the village chief and his council have taken away from us the management of the water pump. Before, this had been an income generating activity for us. *Mougousi* used to pay for the recurrent maintenance costs of the pump with this income. Also, with the proceeds from the pump, our association wanted to create a market garden, but this hope has now vanished.

Since the Chief and his council took away *Mougousi*'s management authority they have not redelegated responsibility for the borehole's upkeep to another organisation or to another person. This has brought maintenance to a standstill, despite the fact that it was operating properly before when it was being managed by those who had been involved in its installation. The extended handle has also been stolen, some say to prevent the borehole from being used by PWD. Therefore, in order to make benefits from the new technology sustainable, it is necessary to continue to raise awareness among the public and authorities on disability rights and inclusive local development.

## After the action

At the local level this project has had the following impacts at the local level:

- » Water and sanitation facilities are now independently accessible to 35 members of the DPO in the city of Mandiakuy. Members have also gained independence from their neighbours in terms of the transport and use of water bottles in their homes
- » Greater cohesion among DPO members gained through working together
- » Regained enthusiasm and confidence for PWD gained through project management and decision-making
- » Increased community capacity in hygiene and sanitation, and better health for PWD and the general population
- » Increased membership for the *Mougousi* association (three new members joined during the project).

At the national level, impacts include:

- » Greater awareness among administrative and municipal authorities regarding the rights of people with disabilities to independently access water, sanitation and hygiene
- » Greater public awareness of the potential for DPOs to secure access to WASH through the screening of documentary films about the Mandiakuy project.

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## Recommendations

- » Involve municipal authorities, the Village Chief and his council in the design, implementation and monitoring of actions to engender greater support for disability inclusive development projects
- » Develop a municipal or village development plan that incorporates disability inclusive innovations
- » Promote collaborations between DPOs and local authorities
- » Continue to raise the awareness of the public and local authorities on disability rights and inclusive local development.

## References

- » Ministère des Mines, de l'Energie et de l'Eau (MMEE) /Direction Nationale de l'Hydraulique (DNH) (2002) *Guide méthodologique de l'Alimentation en Eau Potable et Assainissement (AEPA) en milieu rural et semi-urbain au Mali*
- » Mandiakuy Municipality (2009) *Plan de Développement économique social et culturel de Mandiakuy*

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This case study is one of sixteen from the Towards Inclusive WASH series, supported by AusAID's Innovations Fund. Please visit [www.inclusivewash.org.au/case-studies](http://www.inclusivewash.org.au/case-studies) to access the rest of the publication and supporting resources.

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