

MAXIMIZING THE BENEFITS FROM WATER AND ENVIRONMENTAL SANITATION

**Water and Sanitation for all:  
practical ways to improve accessibility for disabled people**

**3. Low-cost assistive devices for disabled people's access  
to water and sanitation**

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**What is the problem and why is it important?**

PEOPLE with disabilities are among the poorest and most disadvantaged in Uganda. From the author's personal experience, they lack access to water and sanitation in institutions, e.g. schools, in public places, and especially in their own homes. For these reasons they are more easily exposed to unsafe water and poor sanitation, which can cause water-borne diseases and death.

**What is needed?**

People with disabilities and service providers need knowledge about good health and hygiene practices, which would enable them to avoid unsafe water and poor sanitation. But information alone is not enough without environments and facilities that provide easy access to water and sanitation. Assistive devices are also needed for disabled people to gain access to and use facilities, and they need available and appropriate information about the all of the issues above.



**Figure 1. Concrete ramp providing access to classrooms**

The Uganda Society of Hidden Talents (HITS) has developed some of these facilities in its own premises. It has also developed assistive devices made of locally available materials for other people to copy.



**Figure 2. Moveable wooden ramp**

**Accessible environments**

- **Ramps:** Access to buildings and facilities can be made easier by providing a ramp, which can be permanent (Figure 1), or temporary and moveable (Figure 2), that can be superimposed on steps to enable access to buildings.
- **Wheelchair accessible toilet:** features include an entrance wide enough for a wheel-chair to enter, outward opening double doors and enough space inside for a wheelchair to turn (Figure 3).

**Assistive devices**

- **A trailer:** that can be attached to a wheelchair for carrying water, goods, or even a small child (Figure 4).
- **Toothbrush stand:** for disabled people who lack the use of hands.
- **A wooden toilet seat:** that can be placed over a squat toilet for people who cannot squat. It can be moved to one side when it is not needed.



Figure 3. Wheelchair accessible toilet



Figure 5. Knee cap made of recycled rubber tyres



Figure 4. Wheelchair trailer

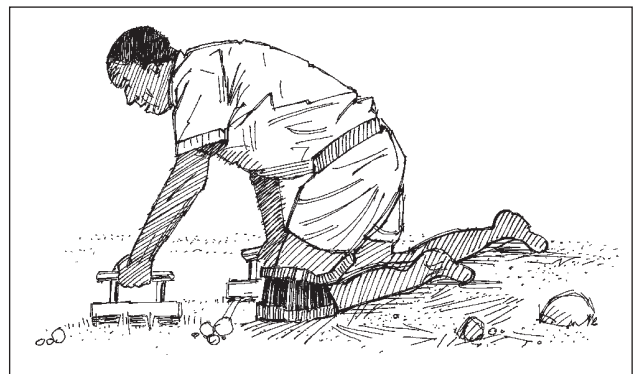


Figure 6. Disabled man using knee-caps and wooden handles to protect his hands and knees from unhygienic conditions

- **Wheel-toilet:** A wheelchair that can also be used as a toilet seat over a toilet pan or pit; or as a commode chair with a container beneath the seat. It can also be used by different people at different times.
- **Knee-caps and stump-caps:** worn on the knees or stumps to protect them from contact with unhygienic conditions (Figure 5).
- **Wooden handles:** so that hands do not come in direct contact with the ground (Figure 6).

### Challenges - for HITS

- Product development process—the process of field-testing and improving designs needs to be more systematic;
- Dissemination of information about assistive devices is so far limited.

### Challenges - for Uganda

- There is a lack of awareness of the community, government, and institutions about the needs of disabled people;
- Lack of information about accessibility options;
- Structures are designed and constructed without considering disabled people's needs, and are then either impossible or too costly to adjust.
- Lack of funding for accessible facilities;
- Cost - most people with disabilities cannot afford to buy accessible facilities/devices.

### Recommendations

- Sensitize communities on facilities to enable people with disabilities access to water and sanitation.
- Infrastructure should consider the needs of people with disabilities.
- Provide funding for accessible facilities.
- Facilities for people with disabilities should be as cheap as possible or be subsidized.
- Provide information for people with disabilities on assistive devices and accessible facilities, and best hygiene and sanitation practices.

### Conclusions

All stakeholders should be involved in this struggle to provide accessible water and sanitation to people with disabilities. However, disabled people themselves need to play a key role, because they know what is accessible to them and what is not.

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