

## 1 Access to groundwater - Hand drilled tube well

### 1.10 SHIPO drill



#### Description:

An option to make manual drilled tube wells is the so called SHIPO drill.

Advantages compared to hand dug wells:

- Is faster;
- Can be cheaper in soils where a well needs to be completely lined;
- More water guarantee in dry season since it can drill deep into the aquifer;
- Can be done at any time no need to wait for the dry season;
- Is safer. Hand dug wells may collapse.

Disadvantages compared to hand digging:

- Requires specific tools;
- Does not work in case of boulders or gravel larger than 2 cm;
- Requires skilled technicians;
- Less storage capacity;
- A disadvantage of a borehole (compared to a hand dug well) is that there is no access to the water if the pump is broken.



#### Information:

- SHIPO drill method is used much in Tanzania and trained via/promoted by SHIPO.
- It is a combination of sludging and percussion and can be combined with jetting.
- It has a heavy lower drill pipe and other drill pipes are of PVC so light weight.
- It makes tube wells with casings of 2 to 6 inch diameter and drill to 50 meters deep.
- Cost depends on soil type, length of screen and diameter of casing.
- Cost indication: **USD 100 - 1000**, depending on depth, soil, diameter casing (excl. pump).
- Cost of a drill set: **USD 500 - 700**.
- Producers: Information at all SMART Centres.



*Top photo: Drilling a well with the SHIPO drill.*

*Middle photo: Testing a tube well after drilling.*

*Bottom photo: A rope pump installed on a hand drilled tube well of 28 meters deep.*