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Subject: **Viability of PlayPumps**

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PlayPumps otherwise known as roundabout pumps are being assertively marketed in certain African countries. The pump is powered by children playing on a roundabout which draws water up to an elevated storage tank. The water is then drawn from the tank through a tap. WaterAid has been approached on a number of occasions and asked why it does not use PlayPumps in its projects. The following is a position statement on PlayPumps:

PlayPumps are a novel idea, but they are not deemed to be suitable for use in WaterAid projects for the following reasons:

- High cost ($14,000 and this does not include drilling a borehole)
- Complexity of pumping mechanism means operation and maintenance requires specific skills that may not exist locally
- Reliance on child labour
- Risk of injury
- Do not fill any particular technological gap (other pumps fulfil the same function for less money)
- Spare parts networks are not as established as those for other pumps, meaning PlayPumps could be very difficult to fix when they break down (which they do, like any other pump)

The use of children's roundabouts to drive simple hand pumps has been advocated particularly in Southern Africa. Although this seems like a good use of children's high spirits, these may not be available at times of water demand, early morning and early evening and if the weather is wet.

It is necessary to have water storage to cover these times of peak demand and this involves the construction of an elevated tank with the best part of 1 day's supply in storage to cover the times when the children are not playing and also when pump/roundabout maintenance is required.

The manufacturers suggest that the cost of the elevated tank can be covered by using the tank sides for advertising and bringing in revenue, but this must be a very risky source of potential revenue in many parts of rural Africa and in poor communities will not be realised.

The pumping of water, by a hand pump as required, by each family unit, is considered to be a far more equal distribution of labour and generally recommended by WaterAid. It will also reduce costs of pumping to a quarter of the roundabout pump.

You could provide at least four conventional wells with hand pumps and associated safe sanitation and hygiene education for the cost of one PlayPump.

There may be case for PlayPumps to be used in a school situation, where the demand for water primarily occurs when the children are at school and playing at break times. Provided they can be persuaded to use the roundabout while playing then sufficient water might get pumped into the storage tank to meet the daily demands of the school.

The issues regarding sustainability of the pump remain because of specialist maintenance requirements and a lack of spare parts on local markets.

In summary, there are cheaper and more sustainable ways of achieving the same aims without using PlayPumps.

WaterAid India partners have developed their own ‘play pump’. They have modified an India MkII (a very common handpump) to work together with a see saw. This makes use of the standard up down motion of the pump handle. The pump has been deployed in a school playground with good results so far. This differs from the PlayPump© in the following ways:

- It is cheaper
- It is completely based on a common pump design for which spare parts are readily available locally
- There is good knowledge of how to maintain the technology locally
- It is a local innovation
- It is only intended for use in the school playground context