

Spate Irrigation Network

With support of the Partners for Water program the project is implemented by the Spate Irrigation Network, Practica Foundation, MetaMeta and UNESCO-IHE. For queries and possibility for cooperation please contact abebe@metameta.nl

SpN is:
Co-convened by MetaMeta and UNESCO-IHE
Supported by: IFAD



www.metameta.nl



www.unesco-ihe.org



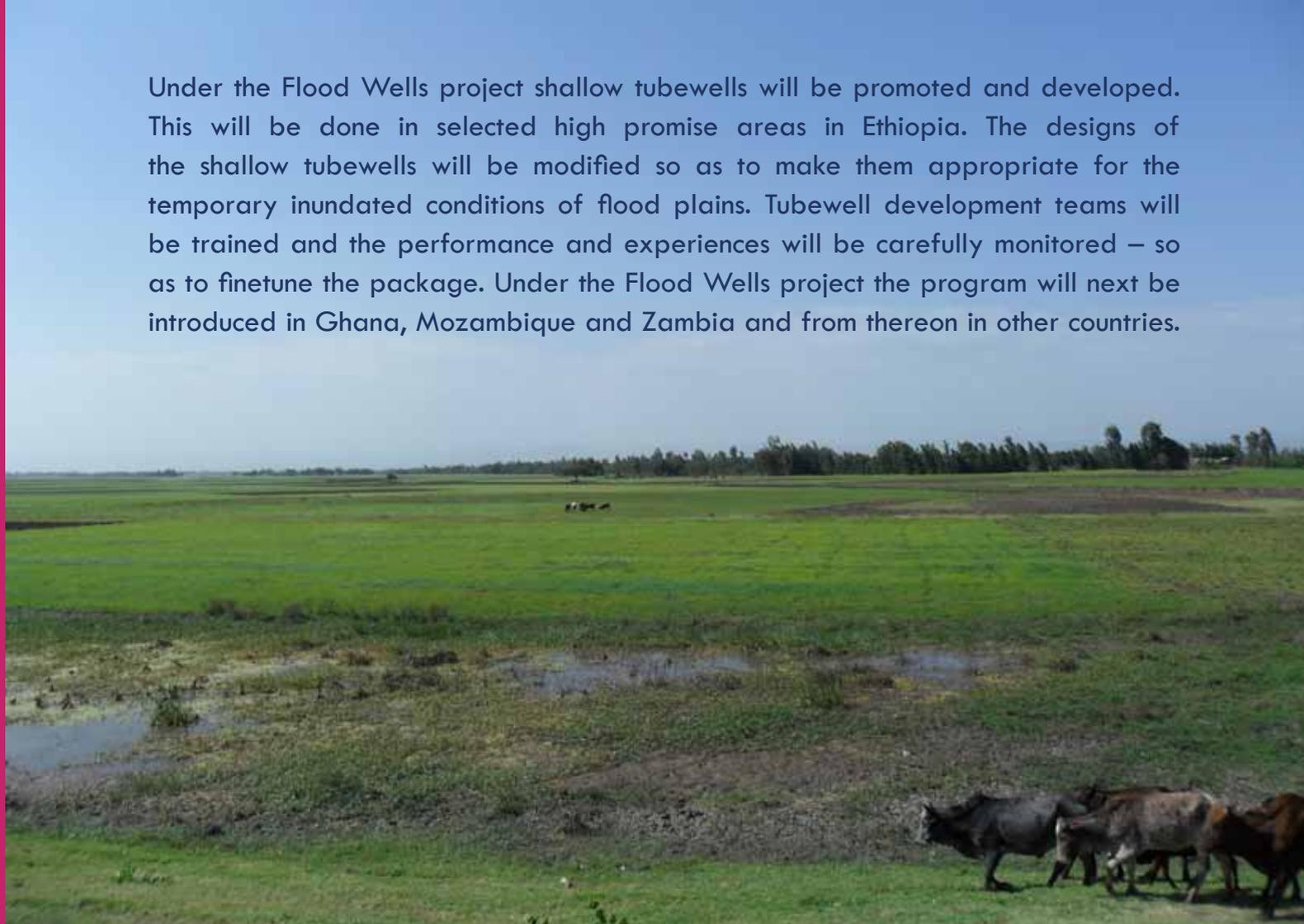
www.practica.org



www.partnersvoorwater.nl

www.spate-irrigation.org

Under the Flood Wells project shallow tubewells will be promoted and developed. This will be done in selected high promise areas in Ethiopia. The designs of the shallow tubewells will be modified so as to make them appropriate for the temporary inundated conditions of flood plains. Tubewell development teams will be trained and the performance and experiences will be carefully monitored – so as to finetune the package. Under the Flood Wells project the program will next be introduced in Ghana, Mozambique and Zambia and from thereon in other countries.



Flood wells



Spate Irrigation Project

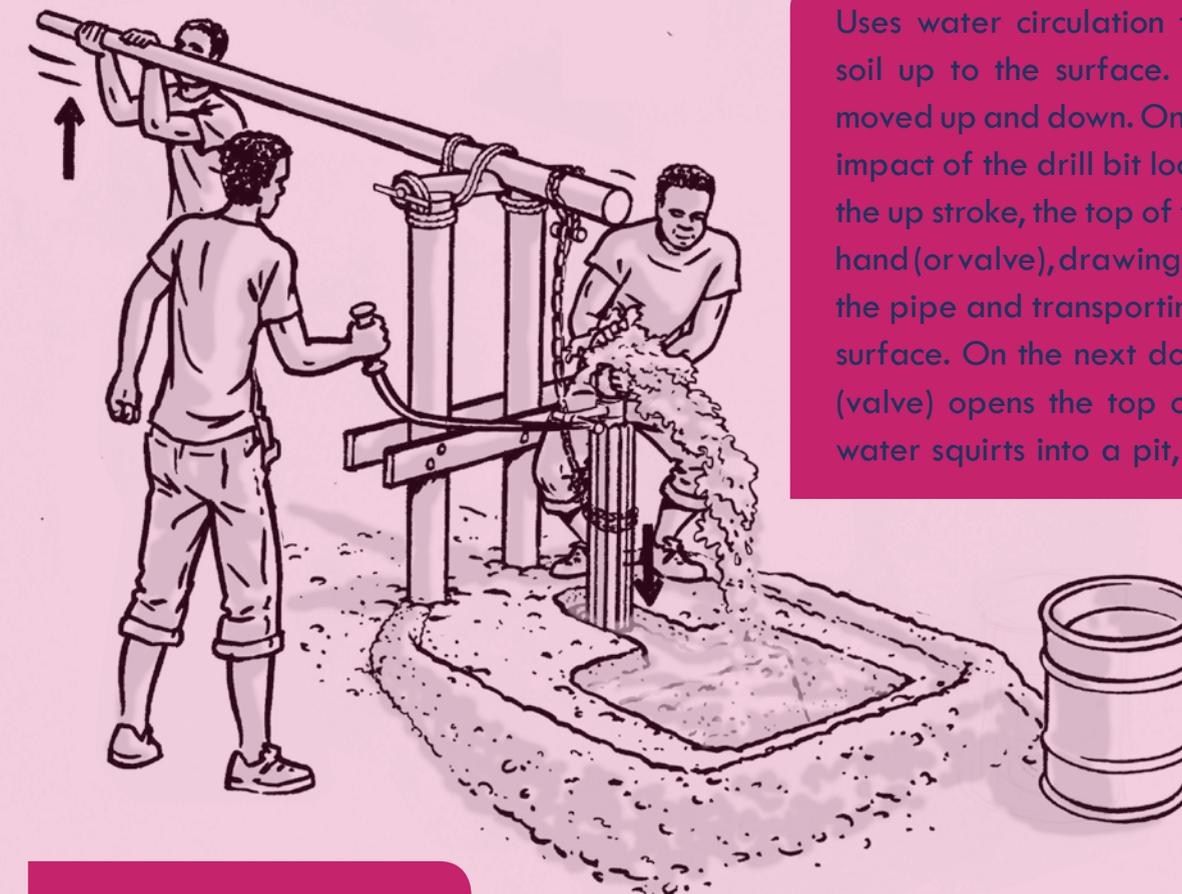
Flood plains in Africa – estimated to measure close to 20 million hectares – present one of the largest opportunities to contribute to food security and rural economic growth. Yet until recently floodplains were given very little attention in agricultural development in Africa and – different from Asia - the techniques for exploiting these highly fertile plains through small water management measures have been untapped. One such ‘low hanging fruit’ technique is the manual development of low cost shallow tube wells. This presents one of the largest potentials. In most flood plains groundwater is very shallow and easy to access. It is sustainable because of the constant recharge from the floods. Manually developed shallow tubewells are not yet common but they are superior to for instance dugwells that are common in some, but not all, flood plains. Shallow tubewells can access groundwater at larger depth, are cheaper to make and less prone to collapse. We believe that this technique can make a large difference for small holder farmers in a substantial part of the flood plains in Africa.

Techniques



ROTARY JETTING

Based on water circulation and water pressure. As opposed to sludging, water is pumped down the drilling pipes. The large volume of water has an erosive effect at the bottom and the ‘slurry’ (water and cuttings) are transported up between the drill pipe and the borehole wall. A motor pump is used to achieve an adequate water flow. The drill pipe may simply have an open end, or a drill bit can be added and partial or full rotation of the drill pipe can be used.



SLUDGING

Uses water circulation to bring the drilled soil up to the surface. The drill pipes are moved up and down. On the down stroke, the impact of the drill bit loosens the soil and on the up stroke, the top of the pipe is closed by hand (or valve), drawing up the water through the pipe and transporting the cuttings to the surface. On the next down stroke, the hand (valve) opens the top of the pipe and the water squirts into a pit, in front of the well.