

## **Phad irrigation**

**Phad Irrigation:** Phad system is a very old and traditional system of gravity led irrigation through KT Weirs on stream and rivers. This system, as other traditional systems, has become defunct and non functional. The Vidharbha region of Maharashtra has a tradition of building village tanks at boundary of each village. There has also been construction of various minor irrigation earthen dams to provide irrigation support to the Rabi crops. It is said that there are thousands of such minor irrigation dams, which are either silted up or are dysfunctional for various management related issues. Most of the dams have leakages in their body wall, which flow the stored water in the stream. The Dhangars of Dhangarwadi, who are known as shepherds (nomadic tribes) have settled in the downstream of one such irrigation dam constructed by the Zilla Parishad in year 1984.

The Dhangars have for years, through own labour, developed the barren lands into agriculture fields and are doing mainly rain-dependent agriculture. Few active Dhangars have come together and have developed the Phad system on the stream bed, which is at the downstream of the minor irrigation dam. The technology they have used is very simple, wherein they have just checked the water oozing out of the leakage in major structure through small earthen bund and constructed channel along the contour to irrigate their lands with gravity fed water source. This intelligent idea of the Dhangars was picked up by an organization called 'Dilasa' working in the region. They approached CInI, who after reviewing the idea in detail have agreed to provide technical inputs in the Phad system to make it a viable and sustainable system which can be better managed by the community.

The intervention pilot has already been done in Dhangarwadi in Yavatmal district of Maharashtra and has shown promising results through increase in extent and number of irrigation. Overall, there have been two structures, which have been linked through the channel network to provide the Dhangars with water for irrigation. During the Kharif 2007, 26 farmers undertook crops such as cotton, onion, pigeon pea, soyabean and maize. The productivity increased in all crops because of the water availability during critical periods. About 80 acres land had been irrigated during Kharif season providing farmers with an additional income of about Rs. 10,000 per acre. In the Rabi season, farmers brought 40 acres land under onion, chick pea and vegetables. The water availability, when studied, showed that there was still opportunity to bring additional land under irrigation. A CInI team members observed during his visit to the region that the farmers have been able to generate good income from the system.

CInI then undertook a detailed research study in March 2008 for documentation of the whole efforts and the process followed for wider dissemination. Various organizations including the tribal development department of Maharashtra have visited the project area. A visit by Additional Commissioner (Tribal Development Department) Amravati region has resulted in approval of three Phad systems in Yavatmal district. During one of the meeting with the district administration and tribal development, Phad revival system as one of the key programmes for the area was discussed and agreed by the concerned officials. The Phad system along with crop management practices such as IPM on cotton would be helpful to reduce the farmer's distress in the region.