

The pilot project introducing simple temporally diversion has been progressing by farmer's big demand on irrigated agriculture in dry season. Technical support by TSB staff and CEOs is now accelerating the progress. The number of sites newly constructed and improved is gradually increasing so far in the Study area. Now smallholder irrigation schemes are uttering their first cry here and there.

One fine day, a member of the study team visited a new developed site and met a CEO who is aggressively engaged in extending smallholder irrigation development. The farmers of the site expressed their impression of construction works and their hope of growing diversified cashable crop. The CEO told the team member the proceeding of the site establishment, which is not only construction but also the approach of the extension from one site to another. This newsletter is featuring a new site developed and a CEO of the site:

A New Extension Approach: that is CAHIN Method !!

■ A New Irrigation Site Has Been Born

Mpangankulu irrigation scheme was just recently formed with 39 members of which are 9 female and 30 male respectively. By the way, Mpangankulu means "big land". The scheme members have just started to abstract irrigation water from Kambushi stream, Nondo camp, Mbala district, Northern province. They have so far been growing cereals and legume like maize, beans, casaba, finger millet, etc. under rain-fed and then with a help of shallow well, practicing bucket irrigation cultivating tomato, onion, rape, okra.

The market of their products is Senga in Mbala, Kasama, Mbala center, and Mpulungu as well. The farmers transport agricultural products to those markets by using bicycle and/or even by hiring vehicle. With vehicle, the produces go to not only the capital of the province but also to other provinces like Copperbelt, far away from the production area.



By using shallow well water, a member of irrigation scheme has been practicing bucket irrigation. The gravity furrow system newly established can reduce their labour force to irrigate the crops.

In fact, this is a first experience to introduce smallholder irrigation with facility construction

like temporally diversion weir and furrow so as to turn practice of smallholder irrigation into reality. The site was identified through a camp agriculture committee which has been led by Mr. Kaonga Christopher, CEO in charge of the camp.

He introduced this community based smallholder irrigation through a monthly meeting and then the scheme members showed their interests. They, with facilitation by the CEO, started constructing the irrigation facilities like temporally diversion weir made of locally available material only and furrow to convey irrigation water tapped by the temporally weir.

Construction of the temporally diversion weir at the first time actually ended in failure, carried out at the end of May. After that day, it was the beginning of July, two TSB officers, Mr. Kelvin Mbokoshi Simukoko and Mr. Frank Mwansa Mporokoso, from Northern provincial office visited the site and then gave the members an advice to shift the diversion point from the originally constructed point to some 15m upstream because the elevation of previous diversion point was still low to sufficiently cover possible irrigable area.



The point for construction of diversion weir should be carefully selected. The first trial ended in failure because elevation of the construction point was too low as compared with ground elevation of the irrigable area.

Based on the advices from the CEO and TSB officers, the scheme members immediately re-tried constructing works. At last, they got plenty of irrigation water !!! During construction works of the diversion weir, they were struggling to block water leakage seeped out from the gaps created in the weir body. In order to cope with it, they heaped much clay soil (“Ishinde”) on the weir with stamping to compact them and then the water leakage was reduced at last. “It was tough work because “ishinde” was very heavy”, a lady participated in the work said. It took about 4 hours to complete construction with around 40 participants.



By blocking stream flow with the weir (Photo: Right), stream water now starts flowing into the furrow.

Mr. Hector Chonya, chairman of the scheme, said, “We never thought to get this amount of water before construction, now our target is to shift from Lima (25mx25m plot) to Hectares of cultivation land by using this irrigation water.” So far, they have been cultivating 4 Limes of vegetable by bucket irrigation. However, with this gravity irrigation scheme not only they but also we can expect at least more than 2-3 hectares of irrigated agriculture with less laborious works than bucket irrigation.

They, with the scheme being realized, plan to start horticulture like banana under irrigation. They are going to grow different types of crops throughout a year. With introduction of furrow irrigation, namely gravity irrigation system, they are expecting to reduce their labour force for pouring water by bucket. The members of the scheme, in addition to their expectation aforementioned, are thinking that the community itself is going to benefit and improve their life standard through food security and also income generating. They have, furthermore, a plan to cultivate fish too for not only a gain of cash income, but also for improvement of nutrition. Their expectation

actually includes many different things, which are to be turned into reality through using water tapped by the new diversion weir.

Mr. Kaonga Christopher, CEO Nondo, is a top runner in terms of the number of site development, despite his absent from the training workshop. He in fact learnt the technology from a peer CEO and district TSB officers who attended the training, and here we can see a peer-to-peer extension as well. He has already dealt with 6 sites as of end July, 3 sites already constructed and 3 sites identified and waiting for the construction respectively.



Right: Mr. Kaonga Christopher (CEO Ndondo camp), Centre: Mr. Hector Chonya (Chairman of the scheme) and his colleagues (behind).

Through his daily extension works, to promote the smallholder irrigation activity on community based, he is trying a unique approach. He says a key word, that is to say “CHAIN”. On that day of the weir construction of Mpangankulu irrigation scheme, Mr. Kaonga took some visitors from the other potential sites to the construction site to let them know what smallholder irrigation is and how the temporally diversion weir and furrow are constructed through participating in actual construction works.

The visitors here in this scheme are pupils while the Mpangankulu irrigators are the teacher, and then the visitor themselves would become teacher for the farmers of next other possible sites. By repeating the same way over and over, it is surely “CHAIN”, and we would like to disseminate this CHAIN approach to other areas. Taking account of the low population density of the study area, which means that peoples are scatteringly living in outline area, this “CHAIN” approach could be one of the best extension ways thought out so as to effectively and efficiently disseminate the smallholder irrigation schemes.

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