Farmer led irrigation in Africa

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While official modern irrigation often failed, farmers kept developing their own irrigation. This irrigated area is much larger than thought before. Farmers who led own irrigation are better off, market oriented and have greater food security. Present water laws, based on colonial ones, favour big users and do not recognize the right to water of small users, neither customary law.

During the past decades, researchers in Africa started to notice that apart from the 'official' irrigation, a lot of self-initiated irrigation is taking place. Initially this was labelled as traditional, informal, unplanned, small scale, unsustainable or illegal irrigation. But while the official, 'real' and modern irrigation often failed, farmers kept developing their own systems. From the farmers perspective, it is not small scale, but related to large areas, and beyond individual or private practices, it is collaborative. Farmers plan and develop these areas without external stimulation, and it is expanding in quality and quantity. There are no hard figures on the extent of farmer led irrigation development, but in the regions where case studies were conducted it appeared that the irrigated areas were double, triple or 4 times as much as thought before. The World Bank started in *The Farmer Led Irrigation Initiative,* with emphasis on technology and official finance. FAO published the *Farmer Led Irrigation Development Guide,* which reintroduced the concept of 'development'. Farmers are recognized as taking all kinds of initiatives: drivers of development. They need water, land and a supportive environment, including access to markets, technologies, cheap labour and finance. This then can lead to 'islands of intensification'. Technology is not enough. Institutes are no longer in control, farmers set up their own systems.

On the Kilimanjaro Southern slopes in Tanzania, irrigation developed from the top to the lower sides. Farmers moved from higher lands to lower areas, bringing their knowledge of irrigation. Other systems were developed, like by the state for the purpose of sugar cane production. This is highly productive farming. Farmers' fields, considered as too steep, were excluded. The farmers copied the system however on their own land around this state area, irrigating a larger area than the state led scheme. Government gave permissions to the farmers and the government started supporting the farmer led irrigation, on the assumption that additional water resources could be used. This example shows that farmers are able to develop. The water use upstream has consequences downstream, where people also want to use the water for domestic use and irrigation. Farmers upstream and downstream developed various systems for distribution. It helps that downstream, where largely use is made of shallow wells, people can buy cheap petrol and diesel

pumps. For an NGO led irrigation scheme in the region more farmers were interested than could be placed so a lottery scheme applied. The running costs of the scheme are however so high that farmers started their own schemes in the immediate surrounding. An upstream–downstream distribution was agreed upon, indicating the time period water could be used, and this was written out. This shows that farmers can set up their own distribution systems, also among different communities. Overall, the farmers who lead their own irrigation development are better off, they are market oriented and have made greater food security possible.

After these introductions on farmer led irrigation, we need to go to the bottom of the pyramid, where most users are: at the household's domestic yards where water is used for nutritious vegetables, meat and milk. Only 10% of the water is for domestic use. There are multiple sources at the homestead (rain, groundwater, a stream) and multiple uses (garden, livestock, domestic). It was realized that what people develop themselves at their homesteads is not wrong, but can be a basis for further development. In general there is the idea that water is given by God and that it is a source you share. You share it *in* within the community, and you share it *out,* respecting neighboring communities, as a sign of respect. The problem is in the legislation, all these uses are illegal as long as users do not have a permit. The amount of small users of East and Southern Africa having permits is really low, about 75% is excluded because their use is too small, which makes them invisible. At the same time states do issue permits for big users, causing an enormous inequality in water access. The present water laws, based on colonial ones, favor big users and do not recognize the customary laws. A solution will be in a hybrid water law, which uses permits as a regulatory tool, to prevent pollution and overuse of water and allows re-allocation. Priority should be at the bottom of the pyramid, to fulfil the relevant human rights to safe water, food and income there.