



# Capacity building activities in rain water harvesting: South Kyrgyzstan

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Water and food are fundamental human rights. However, a number of communities in the world suffer due to a lack of these most basic needs. With few alternative economic opportunities, communities in rural and mountainous Kyrgyzstan have to rely mainly on agriculture for their livelihoods. Alteration of rainfall patterns puts rain-fed agriculture at risk. As water is an essential factor for existence, its seasonal unavailability makes small-scale family farmers vulnerable during long dry seasons in arid and semi-arid areas. Living far from the administrative centre, having poor infrastructure (including

poor water systems), and existing conflicts of water interests exacerbate the situation for the residents of the Shybran village of Batken province (south Kyrgyzstan). Unpredictable weather conditions undermine farmers' plans for agricultural activities. There is a strong need to enhance the capacity of local farmers in relation to water security.

Climate change adaptation strategies include rainwater harvesting (RWH), the most sustainable technique for securing water. As a simple, cost effective and easily



**Figure 1:** Project group and farmers in Shybran village in the workshop and construction of rainwater tank process  
 Photo Credit: Daniar Matikanov

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constructed alternative for irrigating crops, RWH offers stability in terms of water availability for the agricultural output of small-scale farmers in semi-arid areas like Kyrgyzstan. More than 90% of the locals in the Shybran village rely on agriculture for their livelihoods. Farmers currently grow maize, barley, sunflowers, apples, apricots, and more. Although minor forms of RWH already exist there, efficiency of water use is doubtful. To be precise, poor water storage capacity, increased evaporation rates, the absence of calculations of local precipitation levels and the actual annual need of irrigation water weakens efficient use of this precious natural resource.

Three graduates of German universities, Daniar Matikanov, Baatyrbek Alymkulov and Aiperi Otunchieva, all originating from Kyrgyzstan, developed the project "Water for Small-scale Farmers." With the support of the Engagementpreis Foundation, a two-day workshop was conducted in Shybran village in August 2016 by a German consultant, Mr. Frank Löwen (NGO Down to Earth Consult), who has over 15 years of experience in nature conservation and water use efficiency in different parts of the world. The project was also supported by the Association for the Promotion of a Natural and Socially Acceptable Nutrition and Landscape Culture (*Verein zur Förderung einer natur- und sozialverträglichen Ernährungs- und Landschaftskultur*) in its further research activity at this site.

Practical solutions were presented for efficient water use in the absence of water system infrastructure in rural areas. Our main message was that even with annual precipitation less than 300mm, it is possible to ensure the productivity of rain-fed agriculture. During the sessions, farmers from 15 households were informed about the opportunities to increase water supply, improve water use efficiency and employ appropriate crops requiring less water. Different types of RWH structures (open landscape and house roof technique) were introduced to the locals, taking into account landscape, amount of precipitation, climatic conditions, and amount of water needed for irrigation.

The expected results of our project include availability of RWH structures with efficient water use, their wider dissemination among rural farmers in southern Kyrgyzstan, insurance of water sustainability, increased reliance on self-grown food, and decreased youth migration from rural areas.

RWH is a sustainable project as it will be used permanently by the farmers in Shybran village since agriculture is the primary livelihood strategy. During the capacity building activities, the locals showed a strong interest in learning the new method for rainwater saving and its efficient use in farming. After the training, construction of RWH structures is planned to be finished by May 2017. As the village suffers due to the lack of drinking water, we plan to find easily available solutions for this complex problem in the future. It is only the beginning of our plans to work with this village, which has so far never received any support from the government nor from other organizations.