



# Association of Women Scientists of Tajikistan

**Project Title:** "The demonstration of climate resilient innovative agro-biotechnological methods and methods of waste utilization in six dekhan farms of Vakhdat district". **The main goal of the project:** The demonstration of sustainable land management at the level of rural communities through the promotion of innovative technologies combined with environmental methods of organic waste utilization

## PROJECT IMPLEMENTATION BACKGROUND

Tajikistan faces serious problem of environmental and land degradation. Use of agricultural land without restoration of its' fertility, as well as improper use of agro-technological methods and techniques of cultivation, leads to considerable land degradation. Other negative factors accelerating the pace of land degradation are soil dehumification or loss of soil humus. As a result of soil dehumification, such land degradation processes as compaction, reduced porosity and other factors are aggravating, which lead to further desertification. Environmental and land degradation lead to lower income and livelihood worsening.

Another factor causing environmental deterioration is the burning of fallen leaves in fall and winter periods, as well as congestion of organic agricultural and food waste at inappropriate locations with a disposal that doesn't comply with relevant rules and regulations of environmental safety. However, with the right treatment such waste might become a great fertilizer.

## KEY PROJECT IMPLEMENTATION ACTIVITIES

Upon appraisal/approval of the project with local authorities and dekhan farms, Association carried out recruitment exercise, and purchased necessary equipment and chemical reagents. Laboratory studies were carried at the initial stage towards selection of conditions and components for the decomposition of the tree leaves and organic household waste. Additionally, the chemical composition of a prototype biocompost and necessary microflora were defined. Dekhan farm "Galatmokh" was provided with a compost pit and laboratory (room for vermiculture breeding). The project has concluded agreements with neighboring dekhan farms and municipal authorities of Vakhdat for the supply of organic waste and fallen leaves for subsequent purpose of biocompost production.

"Association of Women Scientists of Tajikistan" held a seminar on organic farming for the project's target groups, and organized hands-on training on technologies related to manufacturing and use of the biocompost. All beneficiaries received a thematic guide, developed by relevant experts.

## PROJECT PHOTO



Process of loading compostable substrate into the pit to get vermicompost (biocompost)

## PROJECT DATA

### Project Donors:

The Small Grants Programme of the Global Environment Facility, UN Development Programme

**Other Project Partners:** Dekhan farms located in Abdullo Abdulvosiev jamoat

### Geographical coverage:

Abdullo Abdulvosiev jamoat, Vakhdat district, The Republic of Tajikistan

### Project Beneficiaries and Stakeholders:

Population of dekhan farms "Galatmokh", "Hamza", "Norbobo", "Bakhtiyor", "Bekhruz", and "Usmonjon" located in Abdullo Abdulvosiev jamoat

### Project Duration:

June 2012 - July 2013 года



Empowered lives.  
Resilient nations.

## KEY PROJECT IMPLEMENTATION ACTIVITIES

Compost pits were built within five small dekhan farms of the targeted jamoat, where (right after construction) load of the substrate was started. One mechanical crusher was delivered to each dekhan farm for production of the substrate.

Later, the Institute of Soil Science conducted laboratory study of soil and biocompost, sampled from targeted dekhkan farms. Samples were analyzed for presence of nutrient content, humus, macro and microelements. On basis of these studies, Institute had drawn recommendations on the standards for use of the biocompost. In order to assess the safety of agricultural products grown within the framework of the implemented project, corresponding studies were carried out in the laboratories at the State Research Institute of Nutrition and State Surveillance and Epidemiological Surveillance Service.

At the final stage of the project, target groups were provided with a workshop/seminar on the results of the carried out activities. Participants, including representatives of local authorities, jamoats, project specialists and journalists, have discussed achieved results and the possibility of further replication of good practices of manufacturing and use of biocompost.

## PROJECT ACHIEVEMENTS

The project facilitated in reduction of manufacturing and use of insecticides and pesticides in agriculture. Implemented project activities contributed into edaphon conservation, stimulation of soil biological activity, and the accumulation of humus in soil. Use of biocompost in targeted jamoats helped to stabilize and increase the organic matter in soil, and created favorable conditions for the growth and development of crops.

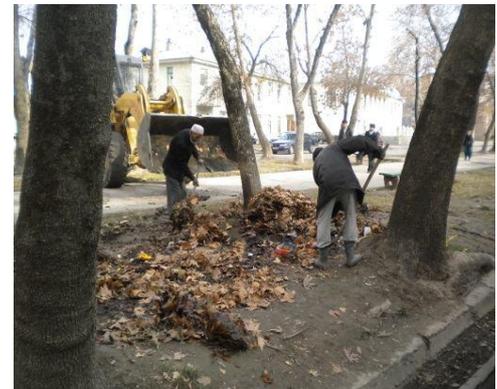
Overall, within the framework of the project, jamoat had produced more than 25 tons of end products in means of biocompost. Target jamoats 25 tonnes of finished products biocompost have decreased by 70% the use of mineral fertilizers for crops growing. This result led to lower costs for their acquisition and significantly increased profits of dekhkan farms. With the use of biocompost, dekhkans could succeed to increase their yield by 15 %, compared with traditional methods of cultivation. Manufacturing of environmentally friendly products free from chemicals are ultimately beneficial to human health.

Environment - friendly and innovative agriculture management via usage of biocompost is not only a solution for the problem of disposal of organic waste, but also facilitates in reduction of the use of chemical fertilizers and contributes to the conservation of soil fertility and reduce greenhouse emissions.

## PROJECT PHOTOS



Vermiculture breeding laboratory: Galatmikh farm



Collection of fallen leaves in Vakhdat district for biocompost production



Sampling of soil and biocompost for agrochemical analysis

TO LEARN MORE ABOUT THE PROJECT, PLEASE CONTACT

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