

February 2024

REDUCTION OF WATER SHORTAGE RISK THROUGH PROVISION OF DRIP IRRIGATION SYSTEM

– *Koti, Chinari and Spitak Armenia*



In a nutshell

Spitak joined the Covenant of Mayors in May 2014 and developed its SEAP in April 2015. Later on in April 2021 the community joined the new Covenant of Mayors for Climate and Energy pledging to reduce GHG emissions by 30% by 2030 and increase resilience toward adverse impacts of climate change.

The adaptation measures were implemented within the framework of the UNDP-BCPR “Mitigation of Climate Change Risks of Rural Communities through Improved Local Development Planning” project in 2014-2015. The main objective of the project was to enhance the climate resilience of Armenia in the highest risk sectors and areas and ensure national ownership through enhanced institutional knowledge and responsibility. Specific objectives were to i) mitigate the climate change risks of rural communities through mainstreaming climate risk management; ii) applying/testing risk mitigation measures in agricultural practice; iii) increasing stakeholders’ awareness on the threat to climate change on the agricultural sector, and iv) strengthening the risk management and adaptive capacities of vulnerable communities.

Background

Armenia is one of the countries at risk of climate change impact and seriously suffers from natural disasters like earthquakes, landslides, mudflows, as well as floods, hail, drought, soil erosion and land degradation, directly impacting local agriculture productivity and profitability.

To assist countries in developing capacity to manage risks, to provide stakeholders with relevant decision-support information and tools to face the challenges highlighted by increased climate risks the UNDP developed and adopted climate risk management framework (CRM) that integrates traditional approaches of disaster risk reduction and climate change adaptation. With the aim to promote CRM framework, UNDP has funded the project with the purpose to mitigate climate change risks of rural communities, mainstream climate risk management into agricultural sector, and strengthen the adaptive capacities of vulnerable communities to promote climate resilience.

Description of the action

01

Together with UNDP Community Development Project, the project team made needs assessment for adaptation measures for target communities. The adaptation recommendations have been discussed and included the provision of family size greenhouses with drip irrigation system in order to mitigate water shortage and crop cultivation risks.

02

Drip irrigation is an efficient and economic method of watering. Being used commonly in dry regions with scarce water resources, nowadays the use of drip irrigation is increasing, since this irrigation method is typically more than 90% efficient at allowing plants to use the applied water.

03

As a result of project implementation, total of 4.160 linear meters of drip irrigation systems for greenhouses were provided to 26 rural families (of which 13 are women-lead) in Koti and Chinari communities of Tavush region.

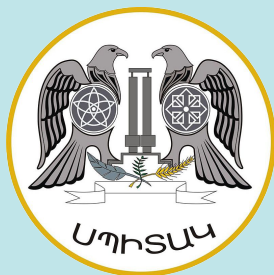
04

In Spitak community a drip irrigation system was installed in 2.000 m² greenhouse constructed as part of “Improving the living conditions of persons with disabilities by provision of employment in the greenhouse cultivation” project, conducted by Spitak municipality and “Save the Children” NGO since July 2014. The greenhouse is operated by 4 women and 3 men, out of which 5 people have disabilities. The provided drip irrigation system has ensured full technological cycle of the greenhouse and currently it is in full operation.

Focus on

The project is in line with the objectives of the Strategy of the Main Directions Ensuring Economic Development in Agricultural Sector of Armenia for 2020-2030, one of the fundamental principles of which is climate change adaptation, resistance and environmental sustainability. It is also compliant with the objectives of the National Action Program of Adaptation to Climate Change of Armenia aimed at reduction and management of climate risks in Armenia through addressing the impacts of climate change, taking full advantage of emerging opportunities, reducing socio-economic vulnerabilities, and avoiding losses and damages due to climate change.

Chinari



Population:
43 460

Area:
615 km²

**Signatory to the
Covenant of Mayors
since:**

13.09.2014

**CO₂ emission reduction
target:**

30%

Targeted sector, climate hazard(s), and vulnerable population group addressed

Target sectors to be addressed by the project are: Agriculture & Forestry and Water.

Climate hazards to be tackled by the project are: droughts and land degradation.

Vulnerable population groups to be addressed by the project are: small villagers, women, population without permanent jobs and low-paid populations, people with disabilities and other target groups suffering most from natural disasters and that have no sufficient means to eliminate the damage caused to their property by natural disasters due to climate change.

THE PROJECT HAS REACHED SIGNIFICANT RESULTS AND OUTCOMES:

The adaptive capacity of small farms to the negative impacts of climate change has been improved.



Social, economic and food security threats caused by droughts, lack of water resources and land degradation as a result of climate change are reduced.



Awareness and knowledge level of the population on the adaptation technologies in agriculture are raised.



Additional jobs have been created in Spitak for the local population, including people with disabilities.



Considerable water saving and improvement of yield of vegetation compared to traditional surface irrigation systems was demonstrated though the piloted low-cost method of drip irrigation that was combined with proper application of fertilizers, thus, creating big potential for replication in rural communities facing negative impacts of the climate change.



USEFUL LINKS

<https://nature-ic.am/en/projects/climate-risk-management>

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Financing the project

Financing source(s):
The project is financed by the "Mitigation of Climate Change Risks of Rural Communities through Improved Local Development Planning" UNDP - BCPR / 00075559 Project and co-financed (10%) by 26 beneficiary households

Total amount:
USD 7.400 (Koti, Chinari) and USD 4.500 (Spitak)

Key figures



Total length of the drip irrigation systems installed in the greenhouses of 26 rural families in Tavush region – **4.160** meter



Coverage of the drip irrigation system installed in community greenhouses in Spitak – **2.000** m²

CONTACT

For more information on the project, please contact :

Address: Governmental bld. #3, room 533, Yerevan, RA

Email: climate@nature.am
Phone: +374 10 583920
Website: www.nature-ic.am

Contact person:

Mrs. Diana Harutyunyan

Climate Change Program Coordinator
UNDP Armenia