

January 2024

# FLOOD PROTECTION PROJECT

*Senaki, Georgia*



## In a nutshell

Senaki, a municipality in Georgia, has made significant strides in climate action by committing to reduce greenhouse gas (GHG) emissions by 35% and bolstering resilience through adaptation measures. These efforts are part of the Covenant of Mayors initiative, underscoring Senaki's dedication to sustainable development.

## Background

Senaki faces multiple climate hazards, including landslides, floods, strong winds, and heavy rainfall. These risks particularly affect vulnerable territories such as Senaki town and its surrounding villages along the Tekhura and Rioni rivers. To address these challenges, Senaki developed a comprehensive "Sustainable Energy and Climate Action Plan" (SECAP), aligning with the Covenant of Mayors' pillars of mitigation, adaptation, and secure energy.

Every year, 30% of the population of Senaki, as well as infrastructure (roads, bridges) and agricultural fields, are at risk of natural hazards caused by climate change.

## Description of the action

01

- Rioni River Embankment (Zemochaladidi Community):
- Cost: 1,360,990.00 GEL (approximately 486,000.00€)
  - Funding: Supported by the UN Development Program and Green Climate Fund, these efforts included the installation of gabions and embankments to prevent river overflow, protecting local households and agricultural lands from fluvial flooding.

02

- Tekhura River Embankment (Akhalsofeli Community):
- Cost: 4,888,888.00 GEL (approximately 1,746,000.00 €)
  - This initiative safeguarded agricultural lands in Akhalsofeli village, enabling new cultivation opportunities and reducing flood risks to local infrastructure and residences.

03

- Rioni River Embankment (Teklati Village):
- Cost: 3,940,683.00 GEL (approximately 1,407,400.00 €)
  - Implemented embankment works in Teklati village aimed at protecting critical infrastructure and residential areas from the adverse effects of river flooding during periods of heavy rainfall.

## Focus on

Senaki's initiatives have successfully mitigated damage to roads and other essential infrastructure during both pluvial and fluvial floods, ensuring uninterrupted access to vital services for residents.

## Senaki



**Population:**

51 800

**Area:**

520,7 km<sup>2</sup>

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

March, 2023

**CO<sub>2</sub> emission reduction target:**

35%

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

### Targeted sector:

- Agriculture and rural development: Enhancing agricultural resilience against climate hazards such as floods and landslides, particularly in areas vulnerable to river overflow and heavy rainfall.
- Infrastructure: Protecting critical infrastructure, including roads, bridges, and utilities, from the impacts of extreme weather events, ensuring continuity of services for residents.

### Climate hazards:

- Fluvial Flooding: Due to its proximity to rivers like Rioni and Tekhura, Senaki experiences risks of fluvial flooding during heavy rains, endangering homes, agricultural lands, and infrastructure.
- Landslides: The municipality is also susceptible to landslides, especially in hilly and mountainous regions, posing risks to settlements and transportation routes.
- Strong Winds and Heavy Rainfall.

### Vulnerable population groups addressed:

- Rural communities: Residents in rural areas, including villages along rivers and in hilly terrain, are particularly vulnerable to the impacts of floods and landslides. The adaptation measures aim to protect these communities and enhance their resilience through infrastructure improvements and agricultural support.
- Agricultural Workers: Farmers and agricultural workers rely heavily on stable weather patterns for crop cultivation and livelihoods. Senaki's initiatives aim to secure agricultural lands against flooding and other climate risks, supporting sustainable farming practices.

## Achievements:

**Zemochaladidi Village:** The embankment works protected 200 households, representing 90% of the village population, from recurring fluvial flooding and safeguarded livestock and cultivated areas.



**Akhalsofeli Village:** By preventing floodwaters from damaging agricultural lands, the project facilitated the cultivation of previously unusable areas, benefiting 60% of the local population and promoting agricultural development, particularly in hazelnut farming.



**Infrastructure protection:** The measures undertaken mitigated damage to roads and other vital infrastructure during both pluvial and fluvial floods, enhancing community safety and continuity of essential services.



Costs savings – 270,000 GEL (approximately 96,390 €)



## Advice for Replication:

**Funding strategy:** secure diverse funding sources, including international grants like the Green Climate Fund, and coordinate with local and national governments for co-financing.



**Community engagement:** involve local communities in the planning and implementation phases to ensure projects meet local needs and build community resilience effectively.



**Comprehensive planning:** conduct thorough vulnerability assessments to identify priority areas for adaptation measures, considering both current and projected climate risks.



## USEFUL LINKS

<https://www.facebook.com/CityHallOfSenakiMunicipality>

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## Financing the project

**+** **Financing source(s):**  
Adaptation measures are carried out with the financial resources of the Donors-UN development program, the Green Climate Fund, as well as the central and local governments.

**+** **Total amount :**  
4,117,700.00 €

## CONTACT

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