

# ENVISIONING A CLIMATE CHANGE-PROOF FUTURE

## Elders hold the key to local knowledge

The convergence of climate change and socio-political factors is driving the youth of Csangos and Hutsuls communities to migrate and pursue alternative livelihoods. This trend is leading to a growing disconnection between the younger generations and their traditional landscape, putting centuries of valuable local environmental knowledge at risk of being lost.

## Do not always blame climate change

Although the Carpathians exhibit a relatively lower vulnerability to climate change compared to other mountain regions, local communities still perceive trends linked to climate change that affect their livelihoods and agricultural practices, particularly due to rising temperatures. However, they also acknowledge the influence of multiple drivers and assign greater significance to the economic and social impacts.

## AS THE CLIMATE EVOLVES, REGULATIONS MUST FOLLOW SUIT

Rigid EU-level regulations related to natural resource management need to be made more flexible, reacting and adapting more quickly to changing environmental and socio-cultural conditions.

## LOCAL EXPERIENCE IS WORTH A DEGREE

Only local communities can comprehensively estimate and perceive the impacts of the intricate network of drivers, including climate change, on the local socio-ecological system. This underscores the significance of their knowledge and the importance of amplifying and disseminating local voices on a global scale.

## LEARN MORE



LICCI is a European Research Council (ERC) funded project aiming to bring Indigenous and local knowledge to climate change research. Visit the project website for more details and research results.  
[www.licci.eu](http://www.licci.eu)

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Credit: Nataliya Stryamets

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LICCI

Local Indicators of  
Climate Change Impacts



## Hutsuls and Csángós Carpathian Mountains, Romania

The Carpathian Mountains in Central Europe are home to diverse ethnic groups like the Hutsuls and the Csángós. Known for their species-rich landscapes shaped by smallholder farming, the region has been impacted by socio-political shifts resulting from communism and its subsequent collapse in 1989. Currently, the area is also facing rising temperatures.

Credit: Daniel Babai

## HUTSULS AND CSÁNGÓS

The around 7,000 Hutsuls and 14,000 Csángós in Romania are mostly agropastoralists and small-holder farmers.



## ACTIVITIES



Herding: cows, sheep and pigs.



Agriculture: Potatoes (main crop). Grasslands provide pasture and hay meadows for livestock.



Timber and non-timber forest products.



# TERRITORY AND CLIMATE

## Temperate-continental CLIMATE



Mean winter temperature: +2,5°C  
Mean summer temperature: 15°C



Precipitation: 600-1100 mm / year

### Changes in the climate

The mean temperature is increasing as well as the number of sunshine hours.  
Lower wind speed.

There's an increased intensity of heat waves and a decrease of snowfall frequency.

## ACCESS TO NATURAL RESOURCES



Winter fodder and summer forage are primary resources for livestock.



Wood is a versatile resource for farming and household tools.



Wild edible plants and mushrooms supplement food sources. Medicinal plants used both for consumption and commerce.

### Changes in the territory

Access to the EU prompted a rural exodus in search of seasonal work abroad, along with new agri-environmental and climate subsidy schemes, which changed the socio-political context of extensive and small-scale agriculture in both communities. Post-communism, illegal deforestation surged due to unregulated land tenure.

## VOICES OF LOCAL KNOWLEDGE

Hutsuls and Csángós have undergone major socio-economic changes. Such changes also lead to changes in cultural values and the way Hutsuls and Csangos relate to the environment. In this complex framework, climate change impacts are not always the main challenge.



Credit: Daniel Babai

*"The forest is young. Once the forest was old, but the forest is now [după Revoluție, i.e., after the 1989 Revolution] clear-cut. Everything is cut, so it remains empty."*

*"It used to be somewhat later, now it's springing earlier."*

*"Sometimes is too cold, sometimes is too warm."*

*"The forests have changed, so there are no more blueberries. Instead, raspberries are growing in the clearcuts."*



Credit: Daniel Babai

*"In the old days, farmers would not have let a mower into these places, because it leaves a palm-high furrow."*

*"Some people think that grass is really good when it's young because it's more nutritious. But you're degrading the grass in your own meadow...."*

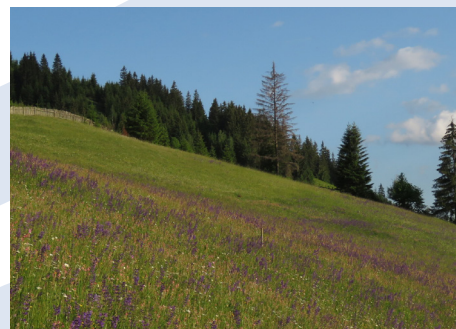
Climate  
change

Political  
changes

Socio-economic  
changes



Drivers of change



Credit: Daniel Babai

*"Of course potatoes do not grow anymore! We do not plant them! It is cheaper at the minimarket."*



Credit: Nataliya Stryamets

## IMPACTS ON LIVELIHOODS AND CULTURE



Credit: Daniel Babai

### Policy barriers to climate change adaptation

Climate change has accelerated biomass maturation, while EU subsidy regulations do not allow earlier haymaking, which has led to the disappearance of communal haymaking.



Credit: Daniel Babai

### 'This is not our weather'

The hay meadows of the Csangos have changed with the climate, with a decrease in highly valued forage species and an increase in species detrimental to the economy. In parallel, Hutsuls are increasingly adopting a remittance economy model and, thus, altering their relationship with the land.



Credit: Nataliya Stryamets

### Even fish depend on forests

Hutsuls reported a decrease of fish in the river, and limited to trout, driven by the increased turbidity of the water due to the soil sliding caused by deforestation.