



# International Conference on Agriculture and Life Sciences (ICOALS V)

3 – 5 November 2025 – Tiranë, Albania

## Round Table Discussion on Mountain Pastures and Shepherds in Albania: Challenges and Prospects

*by*

**The Grassroots Institute | Canada / Western Balkans**

[www.grassrootsinstitute.net](http://www.grassrootsinstitute.net) | [www.tgi-wb.eu](http://www.tgi-wb.eu)

&

**Rural Association Support Programme**

<https://rasp.org.al/en/>

# The Grassroots Institute

## Horizon30

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[www.minoritymap.org](http://www.minoritymap.org)

Our Other Websites:

[www.grassrootsjournals.org](http://www.grassrootsjournals.org)

[www.grassrootsglobal.net](http://www.grassrootsglobal.net)

[www.minoritymap.org](http://www.minoritymap.org)

[www.tgiversity.org](http://www.tgiversity.org)





# TGI – OUR STRENGTHS TO CONTRIBUTE TO WESTERN BALKANS



## THEMATIC/TECHNICAL STRENGTHS

- Participatory Rangelands (Grasslands, Meadows, Pastures) Conservation & Management
- Transhumance, Pastoralism, and Shepherds-Owned Self-Governance
- Sustainable/Organic Agriculture Development; Climate Smart Agriculture
- Micro Watershed Management (Integrated) and Ecological Restoration
- Conservation of Biocultural Heritage, Biodiversity Heritage, CCA (community served area)
- Land Rights, Resource Rights and Multi-Stakeholder Advocacy

## METHDOLOGICAL STRENGTHS

- Project Planning, Writing, Execution, Management & Monitoring {Organizing the Local People as Primary Stakeholders [project oriented]}
- Capacity Building and Training of Project Stakeholders [multiple skills & disciplines]
- Process Writing, Documentation and Communication
- Advocacy, Media Advocacy, Skill Training
- Participatory and Action Research
- Curriculum Design and Mainstreaming in School & Higher Education Institutions



# TGI Western Balkans | Rangelands and Pastoralism in the Region

## WESTERN BALKAN REGIONAL GATHERING OF PASTORALISTS

To observe IYRP 2026, The Grassroots Institute felicitates the Regional Gathering and calls for Partners and Collaborators in all 6 countries of the Western Balkans region. We are in the process of constituting Organizing Committees at the national, zonal, local levels. Interested stakeholders, including shepherd groups/ associations, national or local NGOs, municipalities, government departments, regional authorities, academic institutions, animal products business federations, farmers' cooperatives, youth groups, colleges/schools, and others, are invited to contact us.



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**25-26 APRIL 2026**

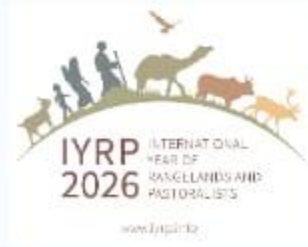


Photo Courtesy: Nina Martinelli



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# Ecological Attributes of Mountain Pastures

*By: Hasrat Arjjumend*











# Ecological Attributes of Mountain Pastures

- Mountain pastures (alpine, subalpine and montane pastures and rangelands)
- Shaped by altitude, aspect and microtopography
- Not a single homogeneous habitat, but a mosaic of grasslands, meadows, shrublands, seasonal wetlands and rocky outcrops
- Vertical heterogeneity produces high local biodiversity, strong environmental gradients, and tightly coupled human–nature interactions
- Pastoralism and traditional management practices have co-evolved with these environments





# Ecological Attributes of Mountain Pastures

## Vegetation patterns and plant functional traits

- **High beta-diversity:** With rapid change along elevation and aspect, species turnover is high; mountain pastures support rare, endemic or range-edge species adapted to cold, drought, or nutrient-poor soils.
- **Plant functional mix:** Grasses, sedges, herbs, low shrubs and cushion plants form the typical assemblage. Species have conservative life-history traits (e.g., slow growth, clonal spread, deep or fibrous roots) that confer resilience to grazing and episodic stress. Management (cutting, grazing intensity, timing) strongly modifies species composition.









# Ecological Attributes of Mountain Pastures

## Soil, carbon and belowground ecology

- Mountain pastures can store significant soil organic carbon (SOC) in surface horizons and peat in wet meadows; their cold soils slow decomposition and thus help retain carbon, making them relevant for climate mitigation. However, SOC stocks are highly variable and sensitive to management and erosion.
- Rocky and shallow soils often limit infiltration but maintain refuges for specialized soil fauna and mycorrhizal networks that support nutrient cycling under low-fertility conditions. Disturbance (trampling, compaction) can alter porosity and microbial functioning.





# Ecological Attributes of Mountain Pastures

## Hydrology and water regulation

- Mountain pasture mosaics, peatlands and high-altitude meadows act as natural sponges — modulating snowmelt runoff, recharging groundwater, and filtering sediments and nutrients before water flows downstream. Changes in vegetation cover or soil compaction can accelerate runoff and erosion.

## Ecosystem services

- Provisioning: forage and fodder for livestock (critical for pastoral livelihoods), traditional plant resources (medicinals, hay), and genetic resources in locally adapted breeds.
- Regulating: carbon storage, water regulation, erosion control, wildfire risk modulation (depending on vegetation structure).
- Cultural & recreational: traditional pastoral cultures, transhumance routes, and high-value for tourism and landscape identity.





# Ecological Attributes of Mountain Pastures

## **Disturbance ecology: grazing, fire, shrub encroachment, and mechanical impacts**

- Grazing by domestic herbivores (and wild ungulates) is a primary ecological driver shaping species composition, sward structure, seed dispersal and nutrient patchiness.
- Under traditional regimes, moderate grazing often maintains open meadow habitats and high plant diversity.
- Conversely, abandonment of grazing can lead to shrub and tree encroachment, loss of open habitat specialism, and altered fire regimes.
- The net ecological effect of grazing is context-dependent — mediated by intensity, timing, herbivore type and landscape heterogeneity.





# Continuing into.....

- ◆ Grazing as an Enemy of Natural Ecosystems: Dilemma of Deep Ecologists
- ◆ Modern Challenges faced by Mobile Livestock Herders in Albania

