MOVING
MOuntain Valorisation through INterconnectedness and Green growth

Maleshevski mountains

Vulnerability matrixes and vulnerability map

2024

MOVING receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 862739. The content of this document does not reflect the official opinion of the European Union. Responsibility for the information and views expressed therein lies entirely with the author(s).

What will you find?

The MOVING (MOuntain Valorisation through INterconnectedness and Green growth) project stands at the forefront of climate resilience, aiming to fortify the sustainability of mountain areas against climate change. A key outcome of the project is the creation of tools that show susceptibility and vulnerability, ready to be used by both experts and the general audience[1].

This document synthesises crucial information for the **Maleshevski Mountains Region,** particularly focusing on the Participatory Vulnerability Matrix and the Spatial Vulnerability Map.

Using a participatory approach, the Vulnerability Matrix allows to downscale relevant information to the local level, offering a detailed view of how drivers of change impact this teMaleshevski mountainsitory. Understanding that areas within the Maleshevski Mountains Region are not equally vulnerable to identical threats, the Spatial Vulnerability Map emerges as a critical tool. It showcases the varied susceptibility across the region, paving the way for more effective, targeted adaptation strategies.

Mountain Reference Region: Maleshevski Mountains

Mountain Reference Landscape: Maleshevski Mountains MRL

Value Chain: Rural tourism

Land-use system: Mosaic landscape

Reference variable: Landscape of Maleshevija

[1] Extended outputs are accessible through the following documents: 'Land Use Systems and Land Cover Map in 23 Reference Regions' and'Land use system vulnerability matrixes and vulnerability maps for the 23 reference regions'

1. Participatory Vulnerability Matrix

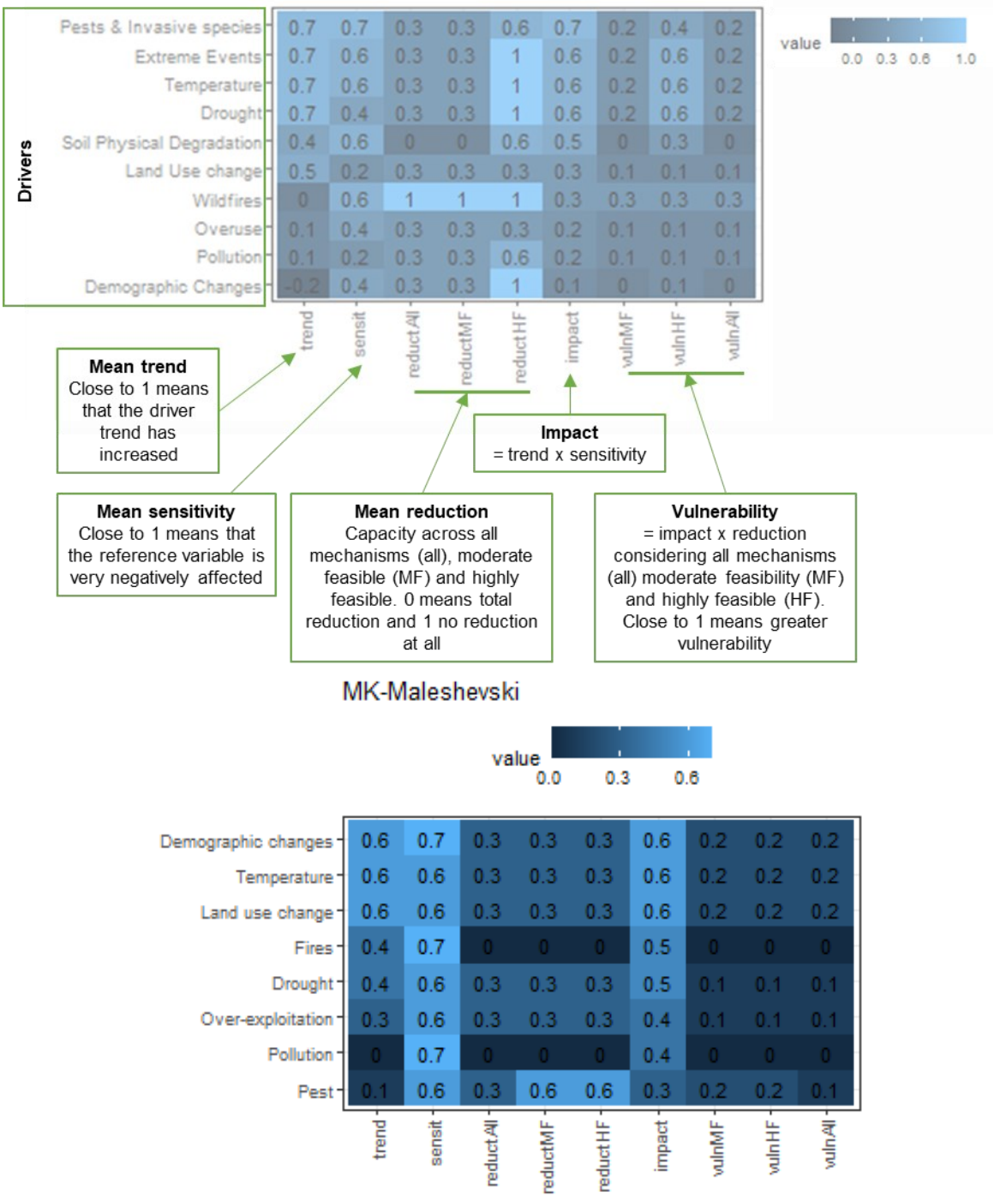

Figure 1. Vulnerability Matrix for Maleshevski Mountains MRL (below) and how to read it (above). Source: MOVING H2020

Participants perceive a medium impact (between 0.4 and 0.6) of most drivers. Optimism about adaptive capacity mechanisms stands out positively, as a high feasibility and a medium reduction capacity is perceived, which would greatly improve the situation, in the face of an impact of these drivers of change. For pests, on the other hand, it seems that this is not currently an important factor, but it would potentially have a large impact and is still perceived to have less coping capacity than the other drivers.

1.1 List of adaptative mechanisms suggested by consulted stakeholders

- Aerial treatment with insecticides
- Improce response time and coordination of forest services
- Monitoring and measuring pollution
- Publicly managed irrigation systems
- Higher investment from the central government in the socio-economic development of the region.

2. Vulnerability Map

Vulnerability drivers:

- Precipitation
- Temperature

Spatial explicit factors:

- Elevation
- Precipitation

Table 1. Spatial Vulnerability Index for Mosaic landscape in the Maleshevski Mountains MRL

Spatial Vulnerability Index			Spatial Explicit Factor 1	
			Elevation (m)	
			[0-1500]	*]1500-max]*
Spatial Explicit Factor 2	*Precipitation (mm)*	*[0-500]*	**4**	**4**
		]500-650]	**3**	**3**
		]650-max]	**2**	**2**

Vulnerability levels: 1 – very low, 2 – low, 3 – medium, 4- high, 5 – very high.
Source: MOVING H2020

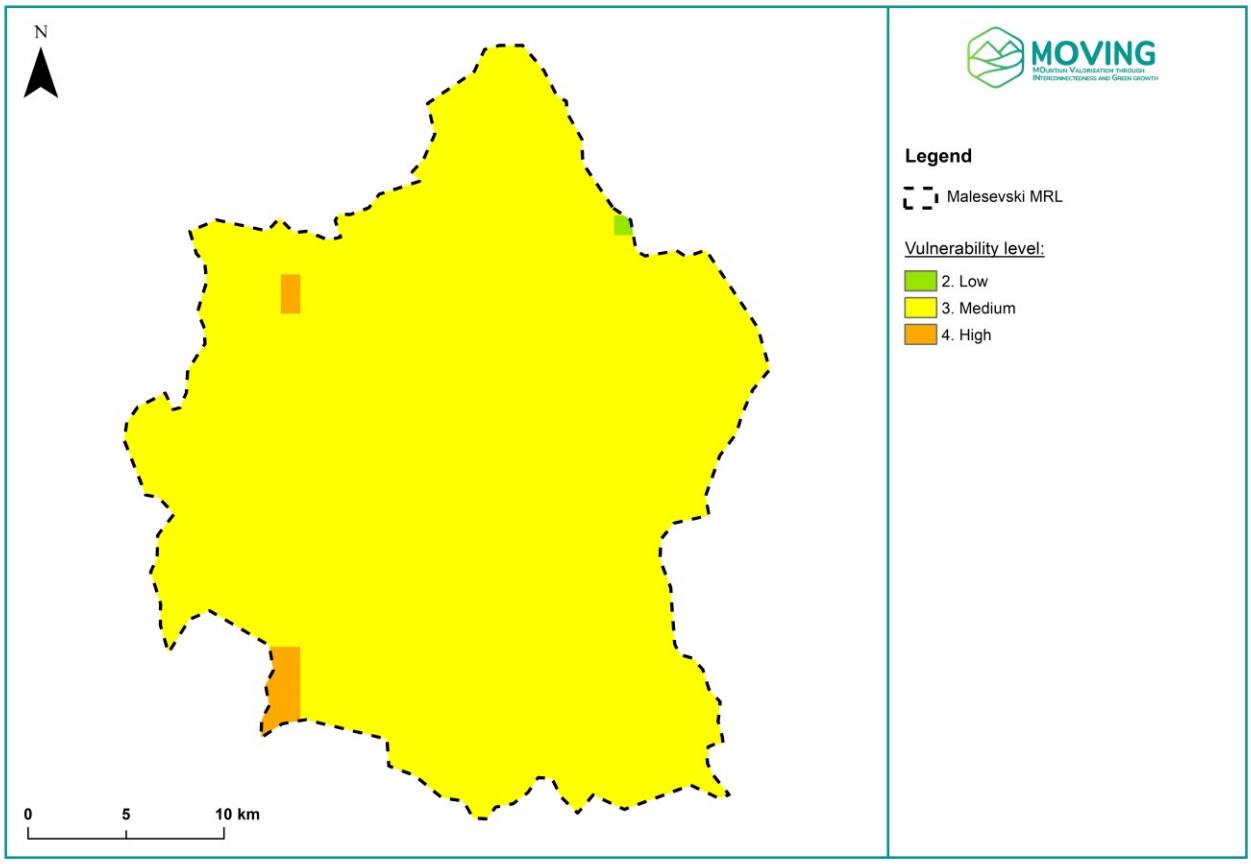

Figure 2. Vulnerability Map of Mosaic landscape in the Maleshevski Mountains MRL.
Source: MOVING H2020