EO for building pastoral communities' climate resilience across Central Asia

How can satellite information help foster climate resilience?

The **Climate cluster** of the **Earth Observation for Sustainable Development** initiative of the **European Space Agency** arose to support integration of satellite-based climate services as **'best-practice' climate information** in **the planning and implementation** of development projects and programmes of **International Financial Institutions**

Monitoring climate-induced changes

Complement existing data

Consistent data streams

Targeting specific challenges

Hazard & Exposure information

Detailed information

Evidence-based climate resilience decision making

Collaboration with IFAD in Central Asia

Chronic vulnerabilities in pastoral communities across Central Asia are exacerbated **by the impacts of climate change** and sub-optimal land management practices. In response, **IFAD** is funding pastoral resilience programmes in the region to improve land management and bolster **the sustainability of the rural agricultural economy**

The ***climate cluster*** contributed to the design of the **IFAD**'s projects

- *Regional Resilient Pastoral Communities Project in **Kyrgyzstan***
- *Community-Based Agricultural Support Project-2 in **Tajikistan***

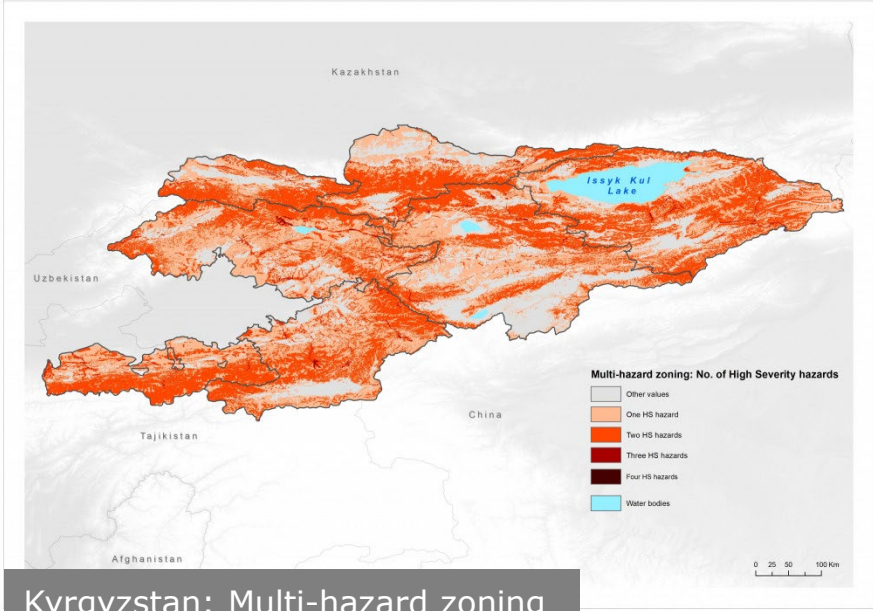
And supported the completion mission of the project

- *Livestock and Market Development Programme II in **Kyrgyzstan***

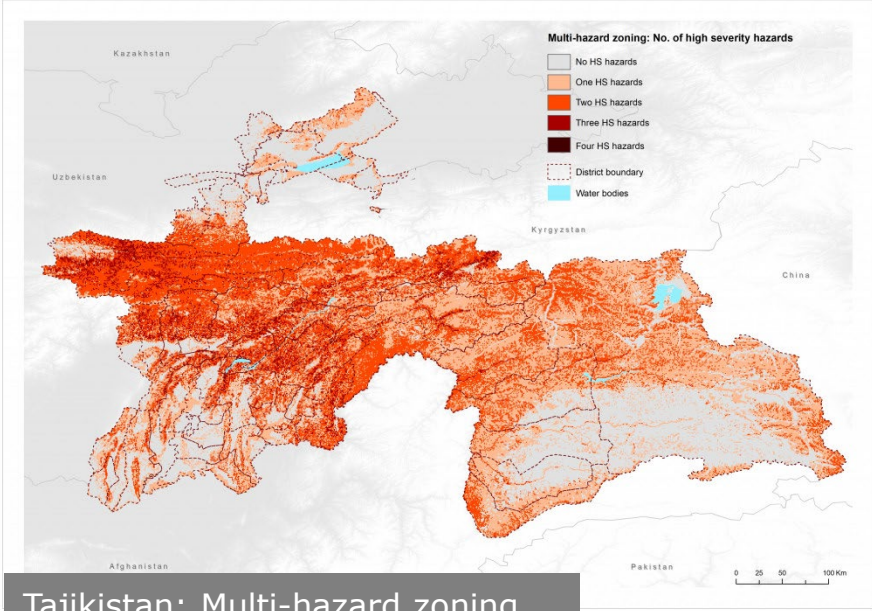
Gorno-Badakhshan in Tajikistan from pxfuel.

Climate risks faced by Central Asia

The climate cluster provided **satellite-based climate hazard** information, such as related to **landslides**, **floods**, **droughts**, **natural vegetation deterioration**, and **land degradation** to produce **multi-hazard maps** that highlight pasturelands exposed to the most severe overall levels of climate-related hazard allowing the prioritization of interventions



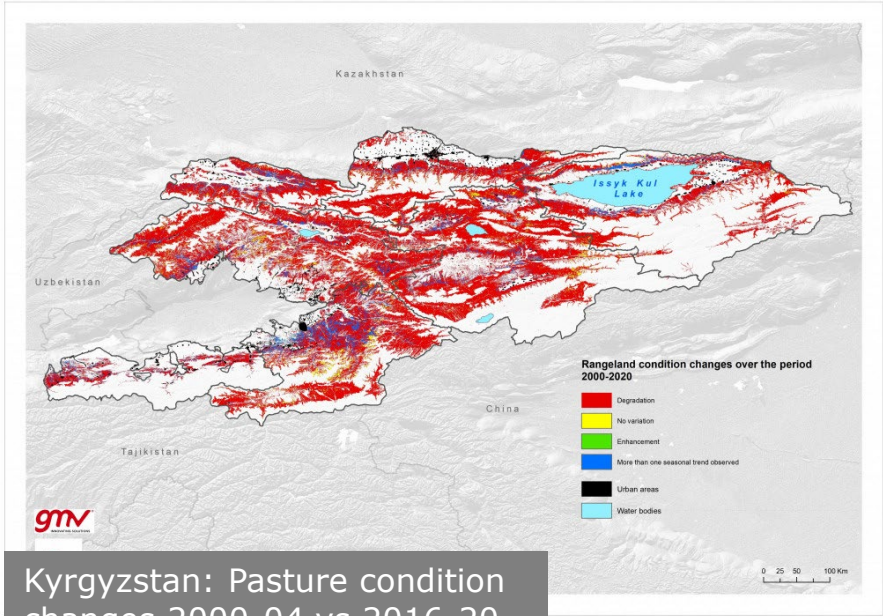
Kyrgyzstan: Multi-hazard zoning



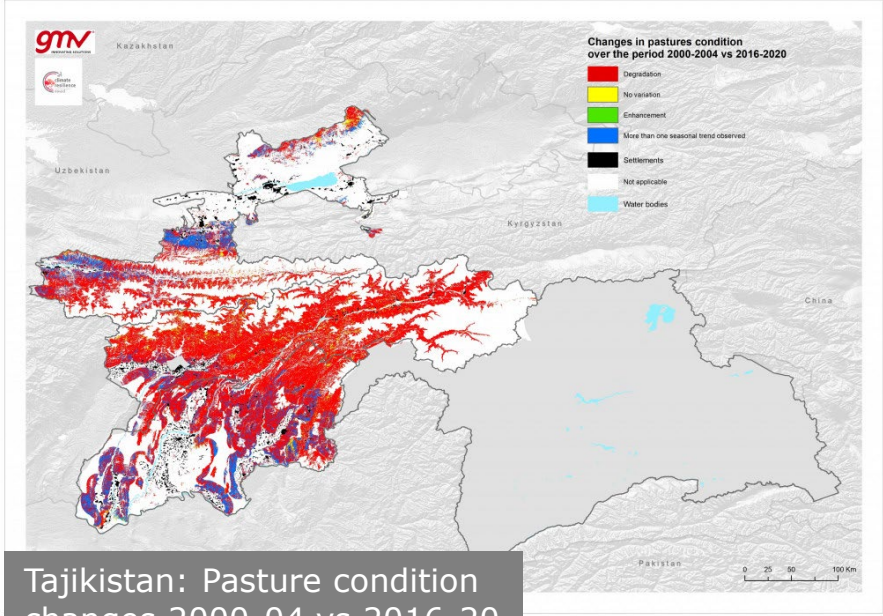
Tajikistan: Multi-hazard zoning

Pasture degradation

Working with **IFAD** and **FAO** the climate cluster, integrating satellite data and local pastoral knowledge, identified **patterns and seasonal trends in the degradation of the pastures** to identify areas suitable for rehabilitation or restauration investments.



Kyrgyzstan: Pasture condition changes 2000-04 vs 2016-20



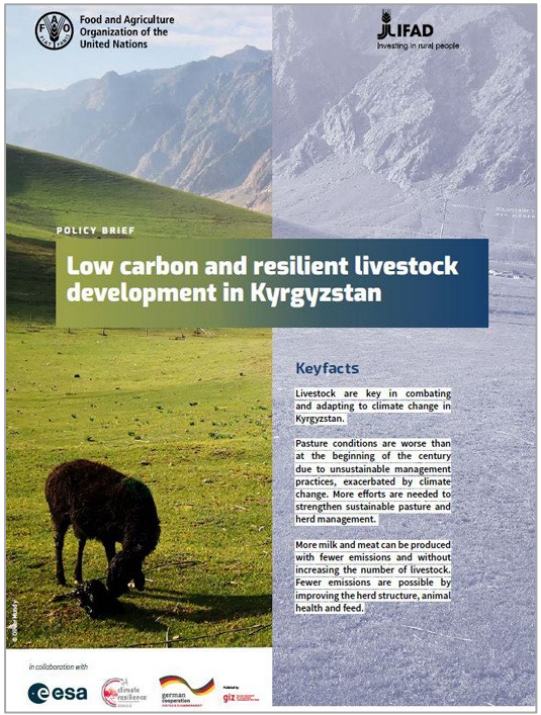
Tajikistan: Pasture condition changes 2000-04 vs 2016-20

How to use the maps?

The geospatial data on pastures status in rangelands were used by IFAD and Kyrgyz's Agencies for

- informing project formulation;
- providing data for impact assessment at project completion;
- supporting climate financing;
- informing pasture maps at municipality level;
- and informed climate policy formulation (e.g., NDCs)

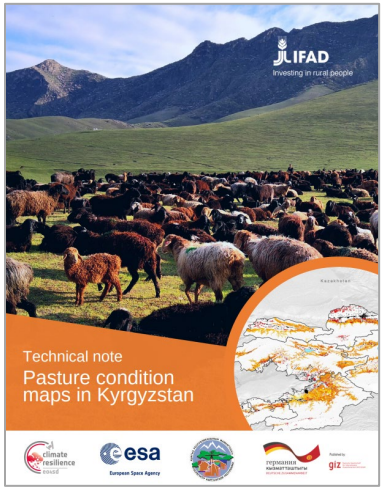
<u>Investments in livestock and pastures have a positive impact</u>
Winter pastures were in a better condition as the share of healthy winter pastures increased by 4 percentage points.



Stay tune for future updates

You can find more information and success stories of the **ESA's EO4SD climate cluster** at https://eo4sd-climate.gmv.com

And a technical note about the **pasture condition maps in Kyrgyzstan** at https://www.ifad.org/en/web/knowledge/-/pasture-condition-maps-in-kyrgyzstan



And currently at the **Climate Resilience cluster** in the **European Space Agency's initiative Global Development Assistance (GDA)**

Thank you

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