Schweizerische Eidgenossenschaft
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Swiss Agency for Development and Cooperation SDC

LANDSCAPE FIRE MANAGEMENT
IN THE WESTERN BALKANS

Guidelines for Student Joint Research Grants within the Landscape Fire Management in the Western Balkans Programme

January 2025

Contents

1. Summary of the Student Joint Research Grants 3
1.1 Scope 3
1.2 Priority Areas 3
1.3 Type of research 7
2. Application Process 7
3. Student Eligibility 8
4. Conditions 9
5. Fund Distribution 9

1. Summary of the Student Joint Research Grants

The Landscape Fire Management in the Western Balkans (LFMWB) Programme financed by the Swiss Agency for Development and Cooperation – SDC aims to increase the resilience of Western Balkan forests and landscapes against fires to benefit the people who depend on these landscapes for their livelihoods and socioeconomic development. The LFMWB Programme is coordinated by the Regional Executive Agency (REA) - Farmahem from Skopje with backstopping support from Helvetas Swiss Intercooperation from Switzerland.

As part of the LFMWB Programme, the Student Joint Research Grants (SJRG) is established and managed with a focus on conducting research in the Western Balkans. Supported by the LFMWB Programme, students from national universities in the Western Balkans and Switzerland will have the opportunity to contribute to addressing gaps in landscape fire management and adaptive landscape management in the Western Balkans through their research results. This initiative also provides a unique opportunity for students and universities from different countries in the Western Balkans and Switzerland to collaborate, fostering cross-cultural exchange, academic partnership, and shared learning in addressing landscape fire management challenges.

The joint student research needs to align with the LFMWB Programme goals, and it should comply with the priority areas of the call. Moreover, the research topics need to emphasize evidence-based or innovative approaches to safeguard landscapes and communities from the impact of fires.

1.1 Scope

The joint student research should be conducted in the Western Balkans region that includes Albania, Bosnia and Herzegovina, Kosovo*, Montenegro, North Macedonia, and Serbia. Thus, the research site of the joint student collaboration should be located within the Western Balkans, allowing students to directly investigate and address region-specific challenges in landscape fire management. The collaborating students need to be enrolled in faculties from two different Western Balkan countries or one Western Balkan country and Switzerland to ensure diverse perspectives and strengthen regional cooperation.

1.2 Priority Areas

The overall goal of the call is to actively engage students from various national universities in the Western Balkans as well as from Switzerland to collaborate, conduct research, and exchange knowledge related to LFM with an aim to propose ways how to create more resilient and resistant landscapes and improve local livelihoods. In addition to the suggested topics,

* This designation is without prejudice to positions on status and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo Declaration of Independence.

research proposals addressing other innovative approaches or practices in the field of LFM are also encouraged.

Priority research areas of the call are:

1. Context-Specific Solutions for Advancing LFM in the Western Balkans

This research area encourages exploring context-specific technologies, methodologies, and practices for applying the LFM approach in the Western Balkans. Possible topics could include:

- **Emerging technologies in LFM**: Research in the use of satellite imagery, drones, remote sensing, Geographic Information Systems (GIS), and artificial intelligence (AI) to assess fire-prone areas, monitor changes, model fire risk, map vulnerable areas, and identify high-risk zones for preventative measures.
- **Exploring the effects of prevention practices:** Compare landscapes where fire prevention and mitigation measures, such as silvicultural practices in forests and fire management strategies on pastures and agricultural land, have been applied with areas where these measures have not been implemented, to assess their effectiveness in enhancing fire resilience.
- **Cross-regional technology transfer**: Investigating the applicability of LFM technologies and methodologies used in other regions of the World to the Western Balkans and suggesting best practices.

2. Relation between Climate Change and Landscape Fires

This priority area focuses on understanding the impacts of climate change on fire regimes and how fires, in return, contribute to climate change. It is essential to propose approaches that are specifically applicable to the Western Balkans region. Research topics could include:

- **The link between climate change and fires**: Investigating how shifts in temperature, rainfall patterns, and humidity, alongside human activities such as land use changes, deforestation, migration and urbanization, are altering the occurrence and intensity of landscape fires in the Western Balkans.
- **Vulnerability of habitats to landscape fires:** Analyzing to what degree different habitats (e.g., forests, grasslands, agricultural areas) are vulnerable to fire as a result of changing climate conditions and what could be key elements to strengthen their resilience.
- **Impact of climate on fire seasons**: Exploring if the shifting of the timing of fire seasons occurs due to warmer temperatures and changing precipitation patterns, and how this affects LFM.

- **Resilience of native species to LFM and climate change**: Studying the resilience of native species in WB and ecosystems to landscape fires in a changing climate, including the potential for restoration or adaptation strategies.
- **Mitigation strategies for fire-induced carbon emissions**: Identifying ways to reduce the carbon footprint of landscape fires, such as by implementing prescribed burns or reducing fuel loads in vulnerable areas to fires.
- **Adaptive silviculture for climate change and fire resilience**: Exploring how silvicultural practices can be adapted to address the challenges posed by climate change, such as altered precipitation patterns and increasing temperatures, and to enhance forest resilience to both climate change and fire.
- **Vulnerability and adaptive capacities of rural women to climate change and landscape fires:** Exploring how rural women are affected by climate change and landscape fires due to their roles in agriculture and resource management, while also examining their adaptive strategies and contributions to building resilience in their communities.

3. Prevention, Preparedness, and Postfire Management

This priority area emphasizes enhancing the resilience of communities and landscapes to fires through prevention, preparedness, and restoration activities. The potential research topics include:

- **Community-based fire prevention strategies**: Research effective methods for engaging local communities in fire prevention, such as public education campaigns, volunteer fire societies, and community-wide fuel reduction initiatives (thinning, etc.).
- **Fuel management techniques:** Investigating the effectiveness of various fuel reduction techniques, such as manual thinning, mechanical clearing, prescribed burning, firebreaks, fuel breaks, as well as vegetation thinning, in mitigating fire risks and enhancing landscape resilience in fire-prone areas.
- **Post-fire management**: Exploring management methods and techniques for landscapes and ecosystems affected by fire, including restoration with fire-resistant native plant species, soil stabilization, and the recovery of habitats for wildlife.
- **Fire-sensitive land use planning**: Studying how land-use practices (e.g., agriculture, forestry, spatial planning) can be modified to reduce fire risks.
- **Impact of silvicultural management on forest fire resilience**: Researching how different silvicultural practices influence fire. This could lead to better forest management practices that mitigate fire risk. Investigating how different silvicultural systems (e.g., even-aged vs. uneven-aged forests, coppice forest vs high forest vs coppice with standards, monoculture plantations vs. mixed-species forests, close-to-nature silviculture) and species composition influence fire resistance and resilience. The research could focus on how these systems affect ignitibility, fire intensity, spread,

and the ability to regenerate after various types of forest fires such as surface fires, crown fires, etc.

- **Controlled grazing for fuel reduction in pastures:** Exploring the use of livestock grazing to manage vegetation in pastures helps control the growth of grass and shrubs, reducing the amount of fuel that could contribute to larger fires.
- **Agricultural practices and agroforestry for fire risk reduction**: Investigating the integration of agroforestry systems and fire-resilient plant species in agricultural landscapes to create firebreaks and improve fire resilience. The research could explore how these systems enhance ecosystem services such as soil protection, water retention, and biodiversity while reducing fire hazards. Research could focus on identifying effective strategies that combine fire prevention with sustainable farming practices to enhance both productivity and landscape fire resilience and resistance.
- **Improving waste management to prevent landscape fires:** Analyzing the role of national waste management planning in mitigating the risk of landscape fires caused by improper waste disposal and burning.

4. Bridging the Gap between LFM Practices and Policies in the Western Balkans

This priority area focuses on aligning LFM practices with policies and governance structures. Research topics might include:

- **Policy and regulatory frameworks for fire management**: Analyzing current fire management policies in the region, identifying gaps in legislation, and proposing LFM policy reforms or better alignment with best practices.
- **Governance models:** Investigating the effectiveness of governance structures and policy frameworks at national and regional levels in addressing fire management challenges. The research could focus on designing innovative approaches to organize decision-making, allocate responsibilities, and coordinate actions for effective LFM.
- **Integration of scientific research into policy**: Investigating how the scientific findings related to LFM can be incorporated into fire management policies to improve prevention, preparedness, and post-fire management.
- **Fire policy effectiveness in cross-border cooperation:** Exploring opportunities and challenges for creating unified LFM policies across borders in the Western Balkans, focusing on cross-border cooperation and regional fire risk reduction strategies based on good examples from other countries.

1.3 Type of research

The SJRG supports both bachelor and master-level theses related to LFM and adaptive landscape management:

- **Bachelor Thesis:** Each selected bachelor student will receive grants of up to 2,500 CHF as support for conducting the research.
- **Master Thesis:** Each selected master student will receive grants of up to 3,500 CHF as support for conducting the research.

2. Application Process

Applications must be submitted by a pair of students working as joint research partners. The pair of students can consist of either two students from the Western Balkans, each from a different country, or one student from Switzerland and one from the Western Balkans. This collaboration will enable networking and opportunities for the students to exchange knowledge, share insights, and develop innovative approaches in their joint research projects, fostering cross-cultural and academic exchange.

The call for proposals for the Student Joint Research Grant will open on the **27th of January 2025**, with a submission deadline of the **3rd of March 2025**.

The students are required to provide the following documents:

- Confirmation of Enrollment at their respective faculties (in English or translated to English).
- Confirmation of student collaboration (signed by both students and the mentors from the respective faculties) (in English).
- A Thesis Concept and Methodology (outlining the research objectives and approach) (for each student separately) (in English).

REA reserves the right to request further clarification of the application or interviews with the students.

The host[1] student should submit the application for both collaborating students via email to the following address: info@lfmwb.net
Please note that you need to add the collaborating student and the mentors in CC.
The questions related to the application process can be asked at:
marija.sterjovska@lfmwb.net

[1] Host student refers to the student enrolled in the faculty located in the same country where the research is conducted.

3. Student Eligibility

To be eligible to apply for the Student Joint Research Grant the following criteria need to be fulfilled:

- The students must be enrolled in a Western Balkan or Swiss university while using grant funding.
- Students who will collaborate need to be enrolled in faculties located in two different countries within the Western Balkans, or one in the Western Balkans and the other in Switzerland.
- The Swiss students need to jointly collaborate with a student from the Western Balkans.
- The students need to be enrolled in a field of study related to LFM, environmental science, forestry, agriculture, climate studies, social sciences, or a related discipline.
- The students need to be in the undergraduate (bachelor) or graduate (master) tuition group while using grant funding.
- The students may be enrolled either full-time or part-time.
- The students may not be on Leave of Absence while using grant funding.
- The joint research needs to be conducted under the guidance of qualified mentors from both academic institutions. Each student needs to have at least one mentor from the university of enrolment while using grant funding. A single mentor can provide mentorship to multiple students.
- The mentor needs to be available to provide consultation, training, and advice throughout the funded research timeline. The local mentor should provide support to both collaborating students.
- The students must submit their thesis no later than 31 July 2026. The thesis needs to be submitted to REA in English (translated if necessary) and/or the local language.
- Students need to demonstrate proficiency in English, as it will be the working language for collaboration and reporting.
- The collaborating students must have distinct thesis titles, allowing them to use the same research data while analyzing different aspects of the topic. However, the methodology can be the same or similar.
- Both students need to conduct the research in the same location in the Western Balkans.

**The number of applications for bachelor thesis or master thesis is not limited per university.*

4. Conditions

The conditions that the candidates need to fulfill are the following:

- Each student must sign a contract with the LFMWB Programme (REA).
- Students must complete their research by 31st July 2026.
- Verification measures include a progress report and final thesis submissions to REA.
- The thesis needs to acknowledge the support of the LFMWB Programme, ensuring its visibility and recognition of the provided support.

5. Fund Distribution

After signing the contracts between the selected students and REA the funds will be distributed as follows:

Initial Payment: 40% of the total grant will be disbursed at the start of the research project to cover initial expenses.

Intermediate Payment: 40% of the total grant will be disbursed halfway through the research project upon submission of a progress report and approval by the REA.

Final Payment: 20% of the total grant will be disbursed upon completion and submission of the final master/bachelor thesis to REA.