

FOREST SCIENCE AND EDUCATION IN UKRAINE

PRIORITIES FOR ACTION

Findings from the *Forum on Ukraine Forest Science and
Education: Needs and Priorities for Collaboration*

21-22 November 2023
Laxenburg, Austria



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Introduction

Ukraine's forest sector is suffering unprecedented challenges. War has impacted both forests and forestry – devastating forest areas, infrastructure and industry, as well as causing 'brain drain' and capacity loss due to the disruption of research institutions and the displacement of students and scientists. These impacts are compounded by factors including climate change, unstable forest health dynamics, landscape fires, and an overall decrease in forest productivity.

To discuss the current challenges and propose solutions, the two-day **Forum on Ukraine Forest Science and Education: Needs and Priorities for Collaboration** was held from 21-22 November 2023 at the International Institute of Applied Systems Analysis (IIASA) in Laxenburg, Austria, and online. The event was jointly organized by IIASA, the National University of Life and Environmental Sciences of Ukraine (NUBiP), and the International Union of Forest Research Organizations (IUFRO), with support from the Austrian Federal Ministry for Agriculture, Forestry, Regions, and Water Management (BML), and built on previous work by Forest Europe and the International Science Council.

The hybrid forum brought together close to 80 participants – up to 40 onsite and 40 online – including a diverse cohort of Ukrainian forest researchers, early and mid-career scientists, students, representatives of leading European universities, international institutions, and UN organizations including FAO and UNEP-Carpathian Convention (see Annex 1: List of Participating Institutions). Open discussion was supported by Chatham House-based rules – the event was not recorded, and no resulting statements were to be assigned to specific participants. The main aim of the forum was to convene the scientific expertise necessary to catalyze coordinated and impactful international action responding to the needs and priorities of forest research and education in Ukraine.

The forum's objectives were to strengthen collaboration by providing a platform for discussion and networking among Ukrainian scientists and international peers; facilitate science-policy interaction by elaborating with invited representatives of international policy processes and technical organizations what would be required at the science-policy interface; and identify priorities for forest science collaboration, with particular emphasis on future joint activities such as events, educational tools, mobility and research projects.

Based on the outcomes of the forum, this report identifies priorities for action in forest science and education in Ukraine of relevance to international organizations, research networks and institutes, student organizations, and funding agencies. Priorities and actions are proposed in the areas of **forest science for strategy, innovation in forest education, and coordination and collaboration**, backed by outcomes from the forum, with the aim of responding to the current challenges, and finding a way forward for the forest sector in Ukraine.

Forest Update: Ukraine

Ukraine's forests have experienced **more than 700 days of war**

National University of Life and Environmental Sciences of Ukraine (NUBiP), Kyiv, Ukraine

700

435,000 hectares of Ukrainian forest are still occupied by active military action

NUBiP

435,000

2.9 million hectares of Ukrainian forest have been affected by military activities

NUBiP

2.9 m

171,000 hectares of forest are contaminated with explosive remnants of war

Ukrainian Research Institute of Forestry and Forest Melioration (URIFFM), Kharkiv, Ukraine

171,000

A significant percentage of **wood processing facilities** are unavailable due to military activities

NUBiP & HSWT, Germany

The **loss of biodiversity and forest ecosystem services** from war require complex restoration and rehabilitation processes

NUBiP & HSWT



War has caused **physical and fire damage** to shelterbelts, having negative effects on biodiversity, crop yields, soil erosion

URIFFM



Drought is pushing current major forest species towards extreme and unsuitable conditions

URIFFM, CLIMAEAST



In 2020, **forest fires** related with climate change burned up to 200,000 hectares of forest and caused 17 fatalities
During 2023 area of **landscape fires** exceeded worst pre-war years and reached up to 300 000 ha

NUBiP, Regional Eastern Europe Fire Monitoring Center (REEFMC), Kyiv, Ukraine; & Global Fire Monitoring Center (GFMC), Freiburg, Germany

These statistics were presented as current by Ukrainian and international researchers at the Forum on Ukraine Forest Science and Education: Needs and Priorities for Collaboration, hosted by IIASA from 21-22 November 2023 in Laxenburg, Austria.



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Executive summary

Ukraine's forests have been heavily impacted by climate change and war. Climate change has compounded the effects of natural disturbances, with fires in 2020 burning more than 200,000 hectares of forest and causing 17 fatalities. Wind damage and increasing drought leave forests vulnerable to pests and pathogens. War since 2022 has caused physical and fire damage to shelterbelts, negatively affecting biodiversity, crop yields and causing soil erosion. Damages to biodiversity and forest ecosystem services from war require complex restoration and rehabilitation efforts. Almost 3 million hectares of forest have been affected by military activities, and hundreds of thousands of hectares are still occupied by active military action, or are contaminated with explosive remnants of war. A significant percentage of wood processing facilities are out of service.

Forest science and education in Ukraine have also been impacted. In the context of war, Ukraine has suffered 'brain drain' from experts leaving the country, funding for research has been limited, coordination between scientists has suffered, and there has been more top-down decision-making without scientific input. Students have lost motivation to take up forestry, disrupted by military activities and obligations, and forestry curricula have fallen out of date, disconnected from national and international priorities. Forest science diplomacy is needed to reconnect Ukraine forest science, education, policy and practice.

To respond to the current challenges and find a way forward for the forest sector in Ukraine, improvements to forest science and education are needed, supported by national and international collaborative efforts. Priorities for action have been identified that are of relevance to international organizations, research networks and institutes, student organizations, and funding agencies. These priorities can be grouped in three main areas: **forest science for strategy**, developing Ukraine's forest research capacity, output and interface with policy; **innovation in forest education**, to prevent 'brain drain', attract new students, and develop Ukraine's forestry research capacity; and better **coordination and collaboration**, to ensure sharing of knowledge and resources among Ukraine's scientists, institutions, and across national and international networks.

In the area of **forest science for strategy** (see Chapter 1), forest science in Ukraine must be enhanced in ways that support the development of an evidence-based national forest strategy. This will require supported action towards: *stakeholder involvement*, such as through the establishment of a national forest or landscape dialogue supported by the international scientific community and technical agencies of the United Nations, such as FAO, to gather input on the strategy; *data collection and analysis*, using up-to-date methods and continuous forest monitoring to provide a robust evidence base for the strategy; and *scientific support of strategy implementation*, to ensure science is applied in practice as Ukraine rebuilds a more sustainable, climate-smart and resilient forest sector.

Actions to support innovation in forest education (see Chapter 2) in Ukraine are needed to retain students and academics, and improve the capacity of relevant Ukrainian stakeholders and decision-makers. Priorities include: *updated curricula*, integrating practical policy and business aspects related to forestry, and enhancing the digital readiness of students; *mobility and exchange* for students and academics through bilateral educative programs, and capacity building, training and internships to support Ukrainian involvement in international events; as well as *joint research projects* with industry,

donors, UN technical agencies, organizations and regional bodies, to support the development of the evidence base required to strengthen sustainable forest management in the conditions of climate change and the post-war environment.

Forest science diplomacy and international collaboration are key to the recovery of Ukraine's forest sector. Better **coordination and collaboration** (see Chapter 3) will require priority actions in: *national alignment*, with support needed for the hosting of regular discussions and production of scientific and popular literature in Ukraine to enhance communication between stakeholders; the *establishment of a Center of Excellence* in forest science at a Ukrainian university, supported by regional and international funding; and enhanced *international collaboration*, building on existing networks to foster funding and research links between Ukraine and the international community.

The following report expands on each of these priorities, identifying actions that can be taken to improve forest science and education in Ukraine in the immediate, short, medium and long term. International organizations, research networks and institutes, student organizations, funding agencies and other stakeholders are invited to consider the priorities and actions put forward here, and how they can collaborate to support forest science and education, and the future of the forest sector in Ukraine.



Priorities: Summary

To respond to the challenges of climate change and war, and find a way forward for the forest sector in Ukraine, improvements to forest science, education and collaboration are crucial. The following priorities have been identified by Ukrainian researchers and other stakeholders,¹ to be implemented with the support of international organizations, research networks and institutes, student organizations, and funding agencies.

1. Forest science for strategy

Forest science is essential for providing an evidence base for forest strategy development in Ukraine, and responding to the impacts of climate change and war. Priorities for forest science in Ukraine include:

- Stakeholder Involvement
- Data Collection and Analysis
- Scientific Support of Strategy Implementation

Read more: Chapter 1

2. Innovation in forest education

Forest education is the basis for forest science, and forest strategy development in Ukraine. Priorities for innovation in forest education to support students and educators include:

- Updated Curricula
- Mobility and Exchange
- Joint Research Projects

Read more: Chapter 2

3. Coordination and collaboration

Forest science diplomacy and international collaboration are key to the recovery of Ukraine's forest sector. Priorities for coordination and collaboration on forest education, science and policy include:

- National Alignment
- Establishment of a Center of Excellence
- International Collaboration

Read more: Chapter 3

¹ At the *Forum on Ukraine Forest Science and Education: Needs and Priorities for Collaboration*, hosted by IIASA from 21-22 November 2023 in Laxenberg, Austria.

Actions: Summary

Coordinated and impactful action is needed to respond to the priorities of the forest sector in Ukraine. The following actions have been recommended by Ukrainian researchers and other stakeholders,¹ to be implemented with the support of international organizations, research networks and institutes, student organizations, and funding agencies.

Immediate

Immediate actions

- Participate in a forest advisory network of national and international forestry institutions, supported and facilitated by FAO, with the role to strengthen dialogue between forest stakeholders, including forest science, government and the public.
- Initiate a joint scientific project, in cooperation with technical UN agencies, on integrated demining, to remediate and restore landscapes degraded by war
- Support the establishment of a national Center of Excellence in forest science at a Ukrainian university.

Short

Short-term actions

- Conduct damaged wood assessment and strengthen the use of sustainable forestry value chains, including the use of sustainable and legal wood and wood-based materials for post-war reconstruction
- Develop joint projects with donors to strengthen sustainable forest management in the conditions of climate change and the post-war environment.
- Seek Horizon Europe consortium membership for Ukrainian researchers through the newly established office in Kyiv.
- Participate in and support Ukraine summer schools and workshops.
- Collaborate with UN technical agencies such as FAO and UNEP-Carpathian Convention to support science-practice interactions that transfer forest science knowledge to applications in the field.

Medium

Medium-term actions

Conduct collaborative research as input to strengthen Ukraine's national forest inventory, monitoring and strategy development.

- Donors can support the hosting of national-level dialogues, regular roundtables, workshops, policy briefs and popular science outputs for better communication between forest science and policy, and forest science and the public in Ukraine.
- Promote research data maintenance, circulation and digitization. This can be initiated by universities and research institutions, and supported by the forest industry through infrastructure, capacity building and dialogue.

Medium

- Strengthen the role of forest universities and research centers for the provision of increasingly reliable scientific data.
- Provide input to update and innovate the curricula for forest education to enhance the digital readiness of students.
- Encourage the Ukraine forest industry to fund applied projects in partnership with universities and research institutes in Ukraine and abroad.
- Support Ukrainian involvement in international events, networks and collaborative research by offering capacity building, training and internships.
- Launch Ukraine-specific project calls to set the agenda on priority fields for research at the national and EU levels.
- Establish mechanisms for better dialogue and communication between forest science and policy, and forest science and the public in Ukraine, via regular roundtables, workshops, policy briefs and popular science outputs, supported by international donors.

Long

Long-term actions

- Collaborate with national, international and UN technical agencies to update and implement forest sector strategy and practice from an evidence base, taking into account the challenges of post-war recovery and climate change.
- Address underrepresented research fields in forestry, such as social science, biotechnology, and others.
- Fully integrate Ukrainian forest science and education in EU research and innovation programs.
- Enhance knowledge transfer and integration of value-adding innovation and technologies in Ukraine through field-based learning experiences in cooperation with UN organizations, such as FAO and UNEP – Carpathian Convention

¹ At the *Forum on Ukraine Forest Science and Education: Needs and Priorities for Collaboration*, hosted by IIASA from 21-22 November 2023 in Laxenberg, Austria.

1. Forest science for strategy

Context

Ukraine's forests and forest science are heavily impacted by climate change and war. Across the nation, from the southern and eastern regions threatened by the potential loss of entire shelterbelt systems to the biodiversity-rich Carpathian Mountains, the impacts are palpable. War has damaged critical infrastructure, disrupted research institutions, and displaced students and scientists

Scientific evidence on the scale of the challenges is crucial for effective policymaking. However, there is currently a big gap in Ukraine between forest science, and forest policy and governance. In the context of war, there has been more top-down decision-making without scientific input, and researchers have struggled to communicate their findings. State administration and forest management systems have no built-in capacity to use research findings, and there is no role responsible for the forest agenda at the ministry level. A wealth of data exists on paper that needs to be digitized, and improvements are needed in data management for forest inventory and monitoring.

Funding for research is currently limited and not driven by needs. Researchers can apply for small grants through the education ministry or science foundations, where there are no forest specialists, or through local research institutes, which often prioritize other interests. Funding opportunities are also available through the EU initiative Horizon Europe, but researchers pursuing these have encountered a lack of understanding of Ukrainian needs and priorities. This is hoped to change with the establishment of an office in Kyiv.

Coordination is low among Ukrainian research institutions, which are suffering from a lack of qualified expertise, with insufficient mechanisms to coordinate and exchange information. Better coordination and collaboration at local, regional and international scales will be vital to develop the scientific basis needed for forest strategy development in Ukraine.

Priorities for action

Science and education must play a strong role in providing an evidence base for forest strategy development in Ukraine and support transfer of knowledge to the field. Priorities requiring support for the rehabilitation of Ukrainian forests impacted by war and climate change include:

Priority: Stakeholder Involvement

- Incorporate contributions from forest science and education to support the development of a national forest strategy for Ukraine.
- Develop a mechanism for interaction among forest scientists and other stakeholders to inform the forest strategy, such as a national forest or landscape dialogue.

How to support

- Immediate: Participate in a forest advisory network of national and international forestry institutions, supported and facilitated by FAO, with the role to strengthen dialogue between forest stakeholders, including forest science, government and the public.
- Medium-term: Donors can support the hosting of national-level dialogues, regular roundtables, workshops, policy briefs and popular science outputs for better communication between forest science and policy, and forest science and the public in Ukraine.

Priority: Data Collection and Analysis

- Develop cost-efficient methods and protocols for continuous inventory and smart forest monitoring, for example using satellite time series, remote sensing, airborne active scanning data, and statistical assessment.
- Collect and analyse data to provide a reliable evidence base for loss and damage assessments on the impacts of war and climate change conducted at national and international level by FAO and UNEP-Carpathian Convention
- Formulate a national strategy for integrated landscape fire management.

How to support

- Medium-term: Conduct collaborative research as input to strengthen Ukraine's national forest inventory, monitoring and strategy development.
- Medium-term: Promote research data maintenance, circulation and digitization. This can be initiated by universities and research institutions, and supported by the forest industry through infrastructure, capacity building and dialogue.

Priority: Scientific Support of Strategy Implementation

- Rehabilitate and adaptively manage Ukraine's forest landscapes, with decisions based on scientific evidence.
- Rebuild sustainably with green construction under the EU's New European Bauhaus initiative
- Implement climate-smart forestry to enhance forest resilience.
- Formulate a national strategy for integrated fire management.

How to support

- Short-term: Conduct damaged wood assessment and strengthen the use of sustainable forestry value chains, including the use of sustainable and legal wood and wood-based materials for post-war reconstruction
- Long-term: Collaborate with national, international and UN technical agencies to update and implement forest sector strategy and practice from an evidence base, taking into account the challenges of post-war recovery and climate change.

2. Innovation in forest education

Context

Forest education in Ukraine has been severely disrupted by war, including funding and resources, curriculum updating and planning, and the mobility and networks of students and academics.

Students are losing motivation to take up forestry, for several reasons. Male students in particular have had their studies disrupted by military recruitment and service. Unclear prospects for future research and career paths, and the absence of Ukraine forest experts among teaching staff due to 'brain drain' have made forestry a less attractive option for students at Ukrainian universities. Students are also aware that forestry curricula need to be updated to incorporate digital skills, as well as studies in environmental protection and sustainable forest management.

Unsafe field locations are another consideration. Vast areas of Ukraine's forests are contaminated with unexploded ordnance and mines. Students have reported having to relocate their research due to active battle and remnants of war. A students' association survey showed that forestry students in Ukraine are under mental pressure, experiencing shorter sleep, less in-person interaction with peers, less time engaging in physical activities, and spending less time studying than before the war.

Pathways to international opportunities may help revive forest education in Ukraine, such as through English-language training, English-taught programs, exchange and networking programs for students and teachers, funds or grants for mobility, and partnerships with international organizations, government, and forestry companies to provide internships and career options for students. Forest literacy should be introduced from early education, building capacity through to higher education.

Priorities for action

Forest education is the basis for forest science, sustainable forest management, and for robust forest strategy development in Ukraine. Priorities requiring local and international support include:

Priority: Updated Curricula

- Conduct a comprehensive student needs assessment.
- Integrate more social aspects into forest education, such as studies in governance, policy, and entrepreneurship.
- Enhance the digital readiness of students.
- Incorporate innovative teaching and facilitation methods, such as incubators for business ideas and online tools.
- Integrate interdisciplinary knowledge and experiential learning.

How to support

- Medium-term: Provide input to update and innovate the curricula for forest education to enhance the competences and digital readiness of students.
- Long-term: Enhance knowledge transfer and integration of value-adding innovation and technologies in Ukraine through field-based learning experiences in cooperation with UN organizations, such as FAO and UNEP – Carpathian Convention

Priority: Mobility and Exchange

- Develop opportunities for bilateral student and educator mobility and exchange.
- Participate in European educational consortia, including as hosts.
- Design and offer summer schools and scientific workshops to attract new students, and international teachers and researchers to forest science in Ukraine.

How to support

- Short-term: Participate in and support summer schools and workshops.
- Medium-term: Support Ukrainian involvement in international events, networks and collaborative research by offering capacity building, training and internships.

Priority: Joint Research Projects

- Develop projects on climate change mitigation and adaptation, including studies to support a national strategy for landscape fire management.
- Introduce students and researchers to the EU New European Bauhaus initiative and calls for participation.
- Integrate demining process approaches into research and teaching using the latest technologies.

How to support

- Immediate: Initiate a joint scientific project, in cooperation with technical UN agencies, on integrated demining, to remediate and restore landscapes degraded by war.
- Short-term: Develop joint projects with donors on sustainable forest management in climate change and post-war conditions.
- Medium-term: Encourage the Ukraine forest industry to fund applied projects in partnership with universities and research institutes in Ukraine and abroad.
- Long-term: Address underrepresented research fields in forestry, such as social science, biotechnology, and others.

3. Coordination and collaboration

Context

Coordination, collaboration and forest science diplomacy are essential for responding to the impacts of climate change and war, and finding a way forward for the forest sector in Ukraine. A longer-term approach to improve communication on forest issues, forest science, education and knowledge sharing is needed to support conservation and sustainable use of forests to enhance forest-based livelihoods.

At the national level, better coordination is needed among forest scientists, universities and research institutions, as well as at the science-policy interface, including through implementation with local communities. Forest policy must be evidence-based, inclusive of all stakeholders, and embedded in broader policy via a landscape approach. A national Center for Excellence, backed by donor funding, could assist in producing and disseminating policy-relevant forest research for Ukraine.

Internationally, collaboration and diplomacy can build on existing networks through the UN technical agencies and dedicated organizations, IUFRO, EFI, IIASA and others, including donors. Opportunities for collaboration exist, but are not sufficiently known among those they are intended for. Legal and language barriers pose further challenges. Ukraine's legal framework for forest policy must fit to the EU framework to fully benefit from regional opportunities for collaboration. Existing funding mechanisms do not fully correspond to needs, and require attention.

Priorities for action

Forest science diplomacy and international collaboration are key to the recovery of Ukraine's forest sector. Priorities for action and investment include:

Priority: National Alignment

- Enhance exchange of information and cooperation among forest scientists in Ukraine and other actors, such as government and local communities.
- Build capacity for science-policy and -practice interaction.

How to support

- Short-term: Collaborate with UN technical agencies such as FAO and UNEP-Carpathian Convention to support science-practice interactions that transfer forest science knowledge to applications in the field.
- Medium-term: Donors can support the hosting of regular roundtables, workshops, policy briefs and popular science outputs for better dialogue and communication between forest science and policy, and forest science and the public in Ukraine.
- Medium-term: Strengthen the role of forest universities and research centers for the provision of increasingly reliable scientific data.

Priority: Center of Excellence

- Establish a Center of Excellence as an expert think tank on Ukraine forest issues.
- Lay its foundations as an independently hosted clearing house to collect and share information about forest science, education and collaboration.
- Within the center, initiate a coordination hub for forestry science, education and policy.

How to support

- Immediate: Support the establishment of a national Center of Excellence in forest science at a Ukrainian university.

Priority: International Collaboration

- Build on existing international networks, for example: UN technical agencies and other UN organizations, IUFRO, EFI, IIASA and others.
- Strengthen close collaboration with donors, including in philanthropy.

How to support

- Short-term: Seek Horizon Europe consortium membership for Ukrainian researchers through the newly established office in Kyiv.
- Medium-term: Launch Ukraine-specific project calls to set the agenda on priority fields for research at the national and EU levels.
- Long-term: Fully integrate Ukrainian forest science and education in EU research and innovation programs.



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About the Forum

The *Forum on Ukraine Forest Science and Education: Needs and Priorities for Collaboration* was held from 21-22 November 2023, hosted by the International Institute of Applied Systems Analysis (IIASA) in Laxenburg, Austria. The hybrid event was jointly organized by IIASA, the National University of Life and Environmental Sciences of Ukraine (NUBiP), and the International Union of Forest Research Organizations (IUFRO), with support from the Austrian Federal Ministry for Agriculture, Forestry, Regions, and Water Management (BML), and built on previous work by Forest Europe and the International Science Council (ISC).

The Organizing Committee for the forum consisted of representatives from the three hosts, IIASA, NUBiP and IUFRO. Preparations for the forum were informed by a Scientific Advisory Committee made up of representatives of major research and education institutions from Ukraine (FAS, NUBiP, UNFU, URIFFM,) and internationally (BFH/HAFL, IFSA, IIASA, IRET-CNR, LUKE,). Concerted efforts were made to ensure that a broad range of stakeholders were included in the forum, from across Ukraine's forest sector and from relevant international bodies.

The two-day forum aimed to assess the **current status and needs** of the forest sector in Ukraine (day 1), and identify priorities and actions for **the way forward** (day 2).

Three input sessions were hosted on the first day. In the first session, representatives from international organizations (the United Nations Environment Programme - Carpathian Convention, the Food and Agriculture Organization of the United Nations, the European Commission, the European Forest Institute, ISC, and the International Forestry Students' Association) presented updates on their activities to support the forest sector in Ukraine. In the second session, Ukrainian early and mid-career forest scientists presented their research on the impacts of war and climate change on Ukrainian forests and forestry. In the third session, senior researchers, including representatives of the largest ongoing project in forestry on maintaining a National Forest Inventory, presented research on forest assessment and monitoring approaches, needs and support in Ukraine. The input sessions were followed by a 'World Cafe' session, where three break-out groups identified and summarized priorities for Ukraine forest science, education and collaboration.

On the second day, three roundtables on these topics were held to develop the priorities further, and participants identified possible activities and solutions to support forest science and education in Ukraine. To wrap up, a special final session was held to discuss strategic actions to support a way forward.

In closing, forum participants thanked the organizers, sponsors and hosts for their attention to Ukraine's concerns for its forest sector, and welcome further similar activities to monitor progress towards implementation of the priorities and actions identified, and to continue discussion and strategy development for building capacity for Ukraine forest science and education, to the benefit of the sector.



List of Participating Institutions

Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management (BML)
 Austrian Research Centre for Forests (BFW)
 Bern University of Applied Sciences, School of Agricultural, Forest and Food Sciences (BFH HAFL)
 European Commission (EC), Directorate General on Agriculture and Rural Development
 European Forest Institute (EFI)
 Food and Agriculture Organization of the United Nations (FAO)
 Forest Europe
 Forest Release
 Forest Stewardship Council (FSC) Ukraine
 German Federal Ministry of Food and Agriculture (BMEL)
 International Forestry Students' Association (IFSA)
 International Institute of Applied Systems Analysis (IIASA)
 International Science Council (ISC)
 International Union of Forest Research Organizations (IUFRO)
 National University of Life and Environmental Sciences of Ukraine (NUBIP)
 Natural Resources Institute Finland (Luke)
 Regional Eastern Europe Fire Monitoring Center (REEFMC)
 Research Institute on Terrestrial Ecosystems, National Research Council of Italy (IRET-CNR)
 SILVA Network
 State Agency of Forest Resources of Ukraine (SAFRU)
 Swedish University of Agricultural Sciences (SLU)
 Ukrainian National Forest University (UNFU)
 Ukrainian Research Institute of Forestry and Forest Melioration (URIFFM)
 United Nations Environment Programme (UNEP) - Carpathian Convention
 University of Eastern Finland (UEF)
 University of Natural Resources and Life Sciences, Vienna (BOKU)
 World Wide Fund (WWF) Ukraine

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