



Food and Agriculture Organization
of the United Nations



FINAL REPORT

**Traunkirchen,
Austria,
13-15 October 2021**

EUROPEAN FORESTRY COMMISSION

**Working Party on the Management of Mountain
Watersheds**

Thirty third session

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
Rome, 2021**

INTRODUCTION

1. The 33rd Session of the European Forestry Commission Working Party on the Management of Mountain Watersheds (EFC WPMMW) was held on 13-14 October 2021, followed by a conference on “*Integral approach to the flood protection effect of the forest with special consideration of water and sediment retention*” from 14-15 October in Traunkirchen, Austria. Given the current COVID-19 situation and associated restrictions, participants could also attend the event online, via stream. The session and conference were jointly organized by the Austrian Federal Ministry for Agriculture, Regions and Tourism and FAO. The session programme is presented in ANNEX A.

2. The session was attended by delegates from Albania, Austria, Bosnia and Herzegovina, Bulgaria, Czech Republic, France, Germany, Italy, Poland, Slovenia and Turkey representing 11 out of 21 members of the Working Party. Delegates and observers from the following countries and international organizations attended the conference: Albania, Austria, Azerbaijan, Bosnia and Herzegovina, Bulgaria, Czech Republic, Cyprus, France, Germany, Hungary, Italy, Japan, North Macedonia, Serbia, Slovenia, Turkey, Ukraine and FAO. The list of participants can be found in ANNEX B.

3. All country reports presented during the session will be available for download at the FAO document repository. The links will be available on the WPMMW website: <https://www.fao.org/forestry/37705/en/>.

OPENING OF THE SESSION AND KEYNOTE ADDRESSES

4. Welcoming words were delivered by Florian RUDOLF-MIKLAU (Austria), the Working Party Chair, and Ewald RAMETSTEINER (FAO), Deputy Director of the Forestry Division.

5. Florian RUDOLF-MIKLAU, as the Chair, welcomed the participants on behalf of the institutions they represented. He further emphasized the challenges in organizing a hybrid event under the COVID-19 pandemic.

6. Ewald RAMETSTEINER provided a brief historical overview of the Working Party and expressed his gratitude to the local organizing committee for this session and colleagues involved in the preparations, including the current Working Party Chair, the Austrian Federal Ministry for Agriculture, Regions and Tourism, as well as the FOREST CAMPUS and the Municipality of Traunkirchen for hosting the event. He further highlighted the importance of the key topics to be discussed in the session and conference, emphasizing the role of the Working Party as a platform to engage the member countries, in order to advance the continuous improvement of watershed management in Europe.

OVERVIEW OF WORKING PARTY AND WORKING GROUPS

7. Rikiya KONISHI (FAO), Secretariat of the WPMMW, provided a brief overview of the Working Party, presenting its governance structure, as well as its current member countries. He further presented an overview of the main activities of the Working Party and the Working Groups in the last biennium, since the 32nd Session. He also recommended those countries in

observer status to contact competent authority in their countries in order to register for them as member countries.

PRESENTATION OF COUNTRY REPORTS

8. Mersudin AVDIBEGOVIC (Bosnia and Herzegovina), Faculty of Forestry, University of Sarajevo, presented the *Bosnian National Report*. The presentation focused on an overview of the forest resources and the main challenges for management in the country. The key points addressed in the presentation were:

- Bosnia and Herzegovina has a high percentage of forest area, which provides valuable ecosystem services for the country;
- Climate change will alarmingly increase the temperature and the occurrence of climate extremes in the region;
- Largest precipitation in 120 years affected Bosnia and Herzegovina in 2014, causing floods that led to substantial damages for the population and economy, including the forestry sector;
- The legal basis for flood protection and protective function of forests.

9. Albena BOBEVA (Bulgaria), Executive Forest Agency, presented the *Bulgarian National Report*. The presentation provided a perspective of the responsible organizations for flood protection in mountainous regions in the country, as well as the legal basis on the subject. The main topics addressed were:

- Flood risk management plans have been adopted in the four different basins of the country;
- There are several examples of successful afforestation experiences carried out by the Bulgarian Forest Service with the objectives to decrease erosion and flood risk;
- One of the main challenges is the management of coniferous plantations established 40-50 years ago for erosion control that have reached their upmost growth limit and now are prone to bark beetle infestations;
- Early warning systems developed by the Forest Service and the Meteorological Service are into force and are valuable tools for disaster risk management.

10. Josef KRECEK (Czech Republic), Czech Technical University in Prague, presented the *Czech National Report*. The presentation provided an overview of flood protection by managing mountain forests in the country. The key topics addressed were:

- The Czech flood protection strategy comprises flood protecting measures, forecasting service, and warning service, which requires inter-sectoral cooperation from Ministry of the environment, Ministry of Agriculture, Czech Hydrometeorological Institute and watershed authorities;
- Protected headwater areas are managed by five state watershed enterprises and are driven by the Water Act;
- Acid rain and climate change, which is expected to increase specific peak flows, are two challenges currently faced by the Czech Republic;
- Summer flash foods, especially extreme events, cause impacts on biodiversity, affecting the community richness and the survival of certain species.

11. Richard HEITZ (Germany), Bavarian State Institute of Forestry, presented the *German National Report*. The presentation focused primarily on the protective function of forests

against floods in the Bavarian Alpine region, in Germany. The main topics covered in the presentation were:

- The legal framework in Bavaria for flood protection and protective function of forests;
- The main challenges for forest management in the region are climate change, game browsing, forest pasture, conversion of pure coniferous forests into mixed, uneven-aged forests, loss of soil organic matter, and awareness regarding the importance of forests for flood control;
- A case study in Grosse Laine, Oberammergau, was presented, in which a well-managed torrent catchment integrated different functions, leading to an increase in the protective functions of forests against floods.

12. Laurent BELANGER (France), Office National des Forêts (ONF), presented the *French National Report*. The presentation focused on the flood protection framework and activities in mountainous regions in France. The main topics addressed in the presentation were:

- The legal basis for flood protection and protection function of forests dates back to 1882, when the law on restoration and conservation of mountainous areas was created;
- Major positive impacts of forests on flood protection include erosion control on slopes and riverbanks and improvement of hydrologic parameters in small watersheds, while negative impacts comprise floating debris and downstream river incision;
- The main questions currently faced by France comprise the real benefit of tree layer compared to other vegetal land cover, the influence of different flood parameters for large watersheds, how to manage forest stands liable to produce floating debris and how to optimize forest stands and improve forestry techniques in the face of climate change;
- Calculation and simulation approaches of flood protection, including hydrology simulation of the forest effect, as well as hydraulic models, can be complex and difficult to estimate, especially when it considers floating debris;
- Guidelines about multifunctional forest management, which takes into consideration the protective function of forests, are available for three regions of the country.

13. Christoph LAINER (Austria), Federal Ministry for Agriculture, Regions and Tourism, presented the *Austrian National Report*. The presentation provided an overview of the function of forests for flood protection and the main challenges faced by the country. The key points addressed in the presentation were:

- Severe events, including flooding events, as well as debris flows, affected Austria in 2021, causing substantial damages;
- Protection against natural hazards has a long tradition in Austria: the Austrian Forestry Service for Torrent and Avalanche Control was founded in 1884 and since then has focussed on mountain watersheds;
- By reducing precipitation reaching the soil, and increasing the interception of rainfall, roughness of forest surface, content of macropores in the soil and evaporation, forests have positive impacts on flood protection. The degree of protection, though, depends on the percentage cover and location of forested areas, as well as the extent and duration of the precipitation events;
- Main challenges include climate change (leading to increased frequency of forest fires, drought and favourable conditions for insect pests), natural disturbances (windthrows

and snow breaks), driftwood management and delayed reforestation (due to high browsing pressure by game).

14. Volodymyr KORZHOV (Ukraine, observer), Ukrainian Research Institute of Mountain Forestry, presented the *Ukrainian National Report*. The presentation had a focus on the Ukrainian Carpathians, providing an overview of the region and the main challenges currently faced. The key topics discussed in the presentation were:

- There has been recorded an increase in the frequency of historical floods in the region, with the last severe event recorded in 2019;
- One of the challenges faced in the region is the inefficiency of forest transport infrastructure, in which more than 90% of harvested timber is transported by skidding tractors or horses, affecting the quality of mountain watersheds;
- The Protocol on Sustainable Forest Management was adopted in 2014 within the framework of the Carpatian Convention;
- International projects have been conducted in the region aiming the better management of mountain watersheds, as well as the sustainable forest management, in face of climate change.

15. The *Italian National Report*, the *Turkish National Report*, and the *North Macedonian National Report (observer)* were submitted as written reports.

LAUNCH OF THE PUBLICATION "THE PROTECTIVE FUNCTION OF FOREST IN A CHANGING CLIMATE: EUROPEAN EXPERIENCE"

16. Florian RUDOLF-MIKLAU announced the official launch of the publication “The protective functions of forests in a changing climate: European experience”, which comprises experiences from 12 countries: Austria, Bulgaria, Czech Republic, France, Germany, Greece, Italy, Norway, Poland, Slovenia, Switzerland and Turkey. He emphasized the lack of recognition of the protective function of forests in the European level, highlighting the importance of the publication to bring attention to the topic. He acknowledged and thanked all the scientists who supported and contributed to the development of the publication, as well as the former WPMMW Secretary, Yuka MAKINO (FAO) for her collaboration and support in the development of the publication.

17. Ewald RAMETSTEINER acknowledged all the personal involved in the development of the publication, with special remarks to the Austrian Federal Ministry for Agriculture, Regions and Tourism, that coordinated together with the WPMMW Secretariat the process of publication. He further emphasized that this is a tangible work derived from the Working Party, reflecting the work carried out during the 32nd Session. He also highlighted the importance of the report to call for attention to the topic and as a proof of transboundary and transnational collaboration among the countries.

18. A hard copy was delivered to the Member Countries present at the venue and at least one copy will be shipped to each Country focal point. The publication is also available at the FAO document repository and can be accessed via the following link: <http://www.fao.org/documents/card/en/c/cb4464en>.

WORKING GROUPS IN THE WORKING PARTY

19. Christoph LAINER presented the updated flyers of the Working Groups 1 “Forest and Water”, Working Group 2 “Hazards and disaster risk management in mountains” and Working Group 3 “Protective functions of forests”, which have been updated since last session. The flyers are available at the FAO document repository and can be accessed via the following links:

- Working Group 1: <https://www.fao.org/documents/card/en/c/ca5637en>;
- Working Group 2: <https://www.fao.org/documents/card/en/c/ca5604en>;
- Working Group 3: <https://www.fao.org/documents/card/en/c/cb7054en>.

20. Josef KRECEK presented an overview of the Working Group 1 “Forest and water”. The group was created during the 29th Session in 2013 with the main task to understand better the interrelationship between forest and water. He presented the past activities of the Working Group, including the conference held in Prague “30 years of Headwater Control: Forest and Water in Changing Environment and Society” on 24-25 February 2020 which had 29 participants from 16 countries. Furthermore, the book on "Environmental Sustainability Education for a Changing World", was published by Springer in March 2021. Finally, a special issue on the 2020 Conference results will be published on the “International Soil and Water Conservation Research” journal. The plans for the next biennium (2022-2023) include finishing the special issue, a workshop on the effective legislative control of the management of headwater in Czech Republic, as well as other proposals that might be suggested.

21. Alison EVANS (France) and Thomas FINK (Austria) provided a presentation about the Working Group 2: “Hazards and disaster risk management in mountains”, also created during the 29th Session. Members currently include Albania, Austria, Czech Republic, France, Germany, Italy, Slovenia, Switzerland and Turkey, while North Macedonia is interested to join the activities. Due to the Covid-19 pandemic, the “Forestry and Technical Measures on Erosion-Torrent Control and Landslide Management in Mountain Watersheds” which was initially planned to happen in June 2020, was postponed and will occur from 13th to 15th September 2022 in Trabzon-Rize, Turkey. The workshop programme is already fixed and comprises three days of activities with practitioners. Additionally, the publication “Hazards and Disaster Risk Management in Mountains: International exchange of know-how and practices” was published in 2021 in the Austrian Journal for Torrent and Avalanche control and is available online on the WPMMW webpage.

22. Christoph LAINER presented the activities carried out by Working Group 3: “Protective Functions of Forests”, which has participants from 14 different countries (Albania, Austria, Bosnia and Herzegovina, Bulgaria, Croatia, France, Germany, Greece, Italy, North Macedonia, Romania, Serbia, Slovenia and Switzerland), including focal points and observers. Created in the 32nd Session, the Working Group had its strategic paper approved in June 2021. For the next activities, the suggestions include the organization of practical workshop with in-depth cooperation to work out a problem on site with focus on protective forests in relation to different topics, such as watershed management, game, adaptation to climate change, etc. For that, a discussion with the involved countries may happen in the beginning of 2022. Florian RUDOLF-MIKLAU mentioned a proposal of organizing a workshop on the topics of management of forest disasters following extreme climatological events and replacement of destroyed forests by resilient forest in the face of climate change.

23. Karem DEL CASTILLO VELAZQUEZ (FAO) mentioned the update of the WPMMW website, which will require new procedures regarding the upload of documents. Due to that reason, a Permission Request Form from FAO was shared with the participants, who should

send it back signed to the Secretariat, in order to allow the publication of the country reports at FAO's document repository.

ACTION PLAN FOR NEXT YEARS

24. Florian RUDOLF-MIKLAU welcomed the participants to the second day of activities and provided a brief overview of the programme for the day. Participants of the session were invited to share their opinions about the activities and structure of the Working Party. The main outcomes from the activity were:

- Laurent BELANGER highlighted the good job carried out in the Working Group 2 and the planned workshop that will happen in Turkey in 2022. He pointed out that if travel restrictions are still on place during 2022, organizing a hybrid format of the workshop should be discussed. He further mentioned that France is interested in the intersection point between protective forests and civil engineering, regarding flood protection. Simon CARLADOUS (France) mentioned climate change, forest fires and diseases in protective forests as possible topics to be covered in future meetings, as these are challenges currently faced not only by France, but also by other countries;
- Albena BOBEVA (Bulgaria) supported the idea of merging WG1 and WG3, and highlighted the possibility of focussing on the ecosystem services provided by the forests as well as its protective functions;
- Sitki ERAYDIN (Turkey) emphasized the willingness of Turkey to host the workshop of the Working Group 2 in 2022, that was not possible to happen in 2020 and 2021 due to the COVID-19 pandemic. He further highlighted the need for more cooperation for exchanging and developing new methods for managing protective forests, taking into account climate change;
- Ivan BLINKOV (North Macedonia) as an observer mentioned the interest to learn more about the Working Party activities and possibly become one focal point of the country in the future;
- Enrico POMPEI (Italy) highlighted that there are no issues from the Italian side regarding the merge of Working Groups 1 and 3. He further emphasized the forest fires in Mediterranean mountains as a possible topic to be covered by the Working Party;
- Simon POLJANSEK (Slovenia) shared his expectations on more cooperation in the Working Party in topics such as protective forests and soil erosion, looking for solutions with other countries. He further emphasized the need of silviculture measures carried out by forest owners in order to better manage the protective forests, especially considering the new EU Forest Strategy;
- Volodymyr KORZHOV (Ukraine) as an observer mentioned his willingness to include discussions on transport infrastructure in mountain forests;
- Richard HEITZ (Germany) highlighted the importance of protective forests, taking into account other process and aspects, such as the mapping of the protective function of forests, and soil conservation, with emphasis to soil organic matter;
- Florian RUDOLF-MIKLAU summarized the ideas proposed by other members, in which there was an overall willingness to focus on the forest topic, with two main approaches. At one side, understanding the risks and catastrophes that forests are subject

to, including natural hazards (such as floods), biological risks (such as pests), and climatological events (such as storms and windthrows). On the other hand, understanding the functions of forests against risks in a general, comprehensive way, covering different topics, such as erosion. In both aspects, the topic of protective forests and resilience against climate change was emphasized, as well as forest management, infrastructure, and governance. Furthermore, he emphasized and encouraged the knowledge exchange, through workshops and events, and the publication of other booklets and reports, in the working groups of the Working Party.

25. Given the lack of co-chairs for the different Working Groups and the convergence of topics between the two working groups, Florian RUDOLF-MIKLAU proposed the merge of Working Group 1 “Forest and Water” and Working Group 3 “Protective Function of Forests”. The votes of each country regarding the creation of the new Working Group were:

- Austria: Yes
- Bosnia and Herzegovina: Yes
- Bulgaria: Yes
- Czech Republic (delegated vote right to Austria): Yes
- France: Yes
- Germany: Yes
- Italy: Yes
- Poland: Yes
- Serbia (delegated vote right to Austria): Yes
- Slovenia: Yes
- Turkey: Yes

Since the quorum and the minimum number of votes for approval of the motion was reached, the merge of the Working Groups 1 and 3 was formalized. **AUSTRIA will be responsible to develop and share a concept note and the name of the new Working Group with other members.**

26. For the Working Group created from the merge of Working Groups 1 and 3, Florian RUDOLF-MIKLAU proposed Slovenia to take a co-leading role, as the topic is very related to the interests of the country, but Simon POLJANSEK could not confirm it at the moment. Enrico POMPEI mentioned that Italian commitment could be more active in the future, without assuring to take the co-lead of the Working Group. Florian RUDOLF-MIKLAU highlighted that Austria would be willing to contribute to the group as one of the co-chairs. A new meeting in the near future will happen in order to define the chair of the newly created working group. **The Secretariat will create and disseminate a questionnaire on the willingness of countries to co-lead and participate in the Working Group.**

27. As per RoP paragraph 7, rule IX of the EFC, the chair of the WPMMW is expected to change every 2 years, Florian RUDOLF-MIKLAU invited the participants to actively participate as the chair for the next session. Austria officially withdrew from the function of being the chair and asked for the opinion of the member countries:

- Laurent BELANGER expressed appreciation to Austria for hosting the session and being the chair for 4 years. He mentioned that France is willing to participate in the 2

working groups, and actively co-lead Working Group 2, but is not able to host the chair of Working Party;

- Albena BOBEVA mentioned that Bulgaria would be pleased to host the chair of the Working Party, but at this moment, the Bulgarian Forestry Agency does not have enough experience and resources. Furthermore, current political environment in Bulgaria does not allow to host next session;
- Richard HEITZ thanked Austria for their initiative and commitment to be the chair in the last 4 years and mentioned that Germany is not able to host next session;
- Enrico POMPEI emphasized that Italy was not able to give an answer at the moment, but will discuss with his superiors in respect to the possibility of being the next chair;
- Ali OZDERYA (Turkey) mentioned that Turkey would like to keep participating in the activities of the Working Party, without taking the lead of it;
- Simon POLJANSEK will have a meeting with superiors to discuss about the possibility of Slovenia to become the next chair.

The Secretariat will share a survey on the willingness of countries to be the chair of the Working Group for the next Session.

28. Christoph LAINER acknowledged the participation of the attendants both online and in person before closing the session and presented the programme for the conference on “Integral approach to the flood protection effect of the forest with special consideration of water and sediment retention”.

CONFERENCE ON “INTEGRAL APPROACH TO THE FLOOD PROTECTION EFFECT OF THE FOREST WITH SPECIAL CONSIDERATION OF WATER AND SEDIMENT RETENTION”

Introductory remarks

29. Florian RUDOLF-MIKLAU welcomed all the participants of the conference and provided a brief overview of the Working Party. He highlighted that forest abilities are limited, as they can retain a certain amount of water, but they are not able to retain all the water charge that climate change might increase. Therefore, he emphasized that there is a need to deal with the new picture with climate change, while managing and protecting forests to keep their functions. He further introduced the programme for the conference, providing details of the 3 sessions.

30. Maria PATEK (Director-General Forestry and Sustainability, Federal Ministry of Agriculture, Regions and Tourism, Austria) opened the conference highlighting the severe events that recently affected Europe, with special attention to floods. Furthermore, she emphasized the importance of the protective functions of forests, and practical knowledge for their management, particularly in the context of climate change and underlined the critical importance for human settlements and economic lands of watershed management in the alpine region.

31. Hermine HACKL (Head of Forest Training Center Traunkirchen and Coordinator FOREST Campus, Austria) welcomed the participants and provided a comprehensive overview of the FOREST Campus, the largest and most modern forest competence centre in Europe.

32. Ewald RAMETSTEINER delivered welcome remarks, providing an overview of the damage caused by heavy rainfalls in Europe in the past years, the role of forests in reducing risks from natural hazards, and FAO’s main approaches and programmes related to the issue, an increasingly important topic in the international agenda. Furthermore, he highlighted the need to share scientific knowledge in flood protection, underlining the role of the WP as a platform for close collaboration in order to ensure a resilient and sustainable approach for the wellbeing of people and ecosystems.

SESSION 1 “FLOOD PROTECTION FUNCTION OF THE FOREST – SCIENTIFIC STATE OF KNOWLEDGE”

33. Jürgen KOMMA (Institute of Hydraulic Engineering and Water Resources Management, Technical University of Vienna, Austria) presented *Monte Carlo simulations to evaluate the potential of Alpine retention measures*.

34. Gerhard MARKART (Institute of Natural Hazards, Federal Forest Research Centre (BFW) of Austria) and Christian SCHEIDL (Institute of Mountain Risk Engineering (IAN), University of Natural Resources and Life Sciences (BOKU) Vienna, Austria) presented *Flood protection function of forests in alpine watersheds: state of applied scientific research*.

35. The discussion session with the panellists comprised the following topics:

- Climate change in modelling flood events and the effects of afforestation and retention basins on runoff;

- Modelling short and large flood events;
- The influence of soil characteristics in rain and flood simulations, as the soil physics is a very important indicator;
- The importance of proper forest management to improve the protective function of forests;
- The difference between young and old forest stands on the runoff is not very much pronounced.

SESSION 2 “FLOOD PROTECTION IN AUSTRIAN MOUNTAIN WATERSHEDS – STATE OF THE ART”

36. Hellen DAVID (Austrian Federal Forests (ÖBf AG)) presented *Silviculture measures in the Austrian Federal Forests*.

37. Stefanie GRUBER (Forestry Division of the State of Upper Austria (LFD)) presented *Legal framework for protective forests in Austria*.

38. Michael SCHIFFER (Austrian Torrent and Avalanche Control (WLV)) presented *Flood protection in Austrian mountain watersheds: State of the Art*.

39. The discussion session with the panellists comprised the following topics:

- The definition of protective forests in Austria;
- Perspective of the effects of climate change on the growth of certain tree species;
- Hunting and influence of game in the regeneration of forests;
- Clarification about the responsible authorities for management regulations regarding subsidies;
- Strategies to raise awareness on the proper management of protective forests from the forest owners' perspective;
- Importance of comprehensive, integrated watershed management operative plans that comprise forestry measures, barriers against rockfall, technical measures and maintenance;
- Possible conflicts between natural protected areas and building of protective structures or carrying out forestry measures in those areas.

SESSION 3 “FLOOD PROTECTION IN MOUNTAIN WATERSHEDS – INTERNATIONAL STATE OF THE ART”

40. Francesco COMITI (Faculty of Science and Technology, University of Bolzano, Italy) presented *Role and management of mountain forests for flood hazard mitigation in Italy*.

41. Simon CARLADOUS (National Office of Forests (ONF), France) presented *Flood protection in mountain watersheds: historical evolution, governance and state of the art in France*.

42. Hideaki MARUI (Niigata University, Japan) presented *Forest conservation for the flood protection in mountain watersheds in Japan*.

43. The discussion session with the panellists comprised the following topics:
- Interlinkages between the presence of organic matter in soils and the presence of forests;
 - Importance of education to raise awareness on the protective function of forests;
 - Maintenance of riparian areas and the responsibilities of the government and forest owners in France;
 - Possibility of utilizing woody debris for production of energy and generation of income and the likely negative impacts of removing the wood from aquatic environments;
 - Ownership of the forests and responsibilities regarding the maintenance and conservation of protective forests in Japan;
 - Discussion on the operational costs regarding the maintenance of check dams when severe events become more common due to climate change.

Closing remarks

44. In his closing remarks, Florian RUDOLF-MIKLAU thanked all the presenters and expressed high appreciation for the comprehensive overview on the topic provided during the event, from ecosystem services provided by forests to the technical measures needed to be considered together with the forestry measures. Furthermore, he underlined the importance of raising awareness on the topic together with the general public, especially in face of climate change. Finally, he acknowledged the role of the WPMMW to build a network for knowledge exchange.

45. Participants thanked Austria for hosting the 33rd session and expressed warmest appreciation to Florian RUDOLF-MIKLAU, Christoph LAINER, Thomas FINK and others involved in the preparation of this meeting.

46. The field excursion on 15 October 2021 introduced the Model-Watershed “Rindbach”, in the municipality of Ebensee. The excursion included several sites: a landslide caused by a further spreading erosion, the catchment area of the Hasleck avalanche as well as the technical obstructions such as the open check dam filtering wooden debris, bank protection walls and a bridge with guiding function in the lower catchment area. Topics discussed included the positive effect of the forest for retention as well as the complexity of sustainable management adapted to it, also considering the long history of forestry use in the region as well as the influence of climate change on the tree species composition. Furthermore, forest development after large-scale disturbance events as well as the working methods of the Torrent and Avalanche Control were intensively discussed. Michael SCHIFFER, Head of the Regional Headquarter of the Torrent and Avalanche Control, and Matthias MOSER, Deputy Head of the Regional Office Traun/Innviertel of the Austrian Federal Forests, shared their experiences with the participants.

ANNEX A

 Federal Ministry
Republic of Austria
Agriculture, Regions
and Tourism



Food and Agriculture
Organization of the
United Nations



Invitation to the

33rd Session of the EFC Working Party on the Management of Mountain Watersheds (WPMMW)

Integral approach to the flood protection effect of the forest with special consideration of water and sediment retention

13th - 15th of October 2021

Traunkirchen, Austria or Online via ZOOM

The Austrian Federal Ministry for Agriculture, Regions and Tourism and the Working Party on the Management of Mountain Watersheds cordially invite to the 33rd Session of the Working Party on Mountain Watersheds at the FOREST CAMPUS in Traunkirchen.

The 33rd session will be held as a hybrid event. It is possible to participate on site or at home via stream (ZOOM). The link will be sent out one week before the event.

WALDCAMPUS Österreich / FOREST CAMPUS Austria



Forstpark 1
4801 Traunkirchen
Easily accessible by train
Train station 450 m or 6 min away

The session will be held based on Covid regulations in place at that time and may be adjusted based on the situation. Current measures include proof of whether vaccinated, recovered, tested, and mouth/nose protection (FFP2 mask) indoors (status 6/10/2021).

Contact and Disclaimer

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Program

13.10.2021 33rd Session of the Working Party on the Management of Mountain Watersheds

12:30-13:00 Arrival at FORESTCAMPUS Austria in Traunkirchen (Forstpark 1, 4801 Traunkirchen)

13:00-15:00 Session of the Working Party – Part 1

Welcome and Introduction

Overview of Working Party and Working Groups

Country Reports with focus on this year's topic I

15:00-15:30 Coffee break

15:30-17:30 Session of the Working Party – Part 2

Country Reports with focus on this year's topic II

Outcome since the last session:

- Publication "The protective function of forests in a changing climate: European experience"
- Presentation of the updated flyer of each Working Group

Working Groups in the Working Party

- Reports of the Working Groups
- Strategy Discussion for each Working Group

Welcome to new members to the WP

17:30-18:00 Summary and Closing

18:15 Boat trip on the lake "Traunsee"

19:30 Dinner invitation at Hois'n Wirt

14.10.2021 33rd Session of the Working Party on the Management of Mountain Watersheds

08:45-10:15 Final Session of the Working Party

Action Plan for the next years

A.O.B.

Conference on "Integral approach to the flood protection effect of the forest with special consideration of water and sediment retention"

- 10:30** **Opening Session**
Moderation: Florian Rudolf-Miklau (BMLRT/ Directorate III/4 – Torrent and Avalanche Control and Protective Forest Policy)
- Welcome remarks**
- Maria Patek**
 Director-General Forestry and Sustainability, Federal Ministry of Agriculture, Regions and Tourism
- Hermine Hackl**
 FOREST CAMPUS Austria
- Ewald Rametsteiner**
 Food and Agriculture Organization of the United Nations, Forestry Division
- 11:00** **Session 1 – Flood protection function of the forest – Scientific state of knowledge**
- Jürgen Komma**
 Technical University of Vienna (TU Vienna), Institute of Hydraulic Engineering and Water Resources Management
- Gerhard Markart* & Christian Scheidl****
 *Federal Forest Research Centre (BFW) of Austria, Institute of Natural Hazards
 **University of Natural Resources and Life Sciences (BOKU) Vienna, Austria, Institute of Mountain Risk Engineering (IAN)
- 12:30 Lunch break
- 13:30** **Session 2 – Flood protection in Austrian mountain watersheds – State of the art**
- Michael Schiffer**
 Austrian Torrent and Avalanche Control (WLV)
- Stefanie Gruber**
 Forestry Devision of the State of Upper Austria (LFD)
- Hellen David**
 Austrian Federal Forests (ÖBf AG)
- 15:00 Coffee Break
- 15:15** **Session 3 – Flood protection in mountain watersheds – International state of the art**

Gian Battista Bischetti* & Francesco Comiti**

*University of Milan - Italy, Department of Agricultural and Environmental Sciences – Production, Landscape, Agroenergy

**University of Bolzano - Italy, Faculty of Science and Technology Italy

Simon Carlados

France - National Office of Forests (ONF), Directorate of forests and natural hazards

Hideaki Marui

Japan – Niigata University

17:00 End of the conference

17:00-17:15 Summary and Practical Information for Evening Program and Excursion

Cooperating Partners of the Austrian Protective Forest Hub

Conclusion and closing words - Florian Rudolf-Miklau (Chair and Host)

18:00-18:30 Guided tour around the FOREST CAMPUS Austria

18:30 Dinner invitation at FOREST CAMPUS Austria

15.10.2021 33rd Session of the Working Party on the Management of Mountain Watersheds

9:00 Joint trip to Rindbach-valley

Field excursion to Model-Watershed “Rindbach”

Final discussion

13:00 End of 33rd session