Pro-active management of forests to combat climate change driven risks

Policies and measures for increasing forest resilience & climate change adaptation

Forest Europe *growing life*

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3 - 4 September 2019, Istanbul

WORKSHOP REPORT

Ministerial Conference on the Protection of Forests in Europe

The workshop was organized by FOREST EUROPE Liaison Unit Bratislava in cooperation with the Turkish General Directorate of Forestry, and with scientific support of the European Forest Institute.

This report was compiled by FOREST EUROPE Liaison Unit Bratislava and the Expert Group on adaptation to climate change summarizing the views and facts provided in presentations and those resulting from the follow-up discussions among the panellists, moderators and other participants of the workshop and these do not necessarily reflect the views of the workshop organizers. In any case, the report does not represent position of FOREST EUROPE signatories.

Presentations delivered at the workshop are accessible at the FOREST EUROPE website at: https://foresteurope.org/event/14917/
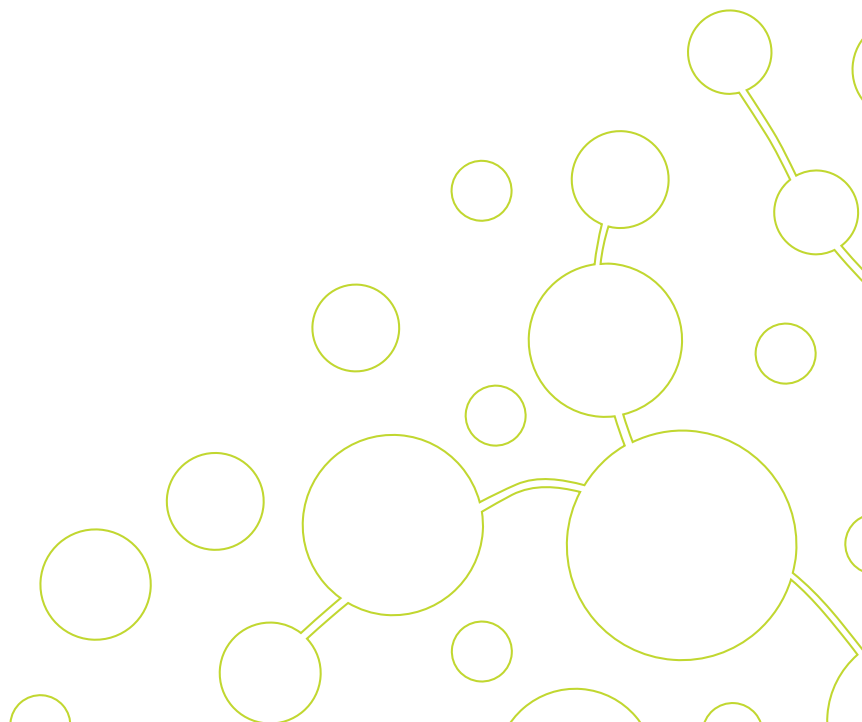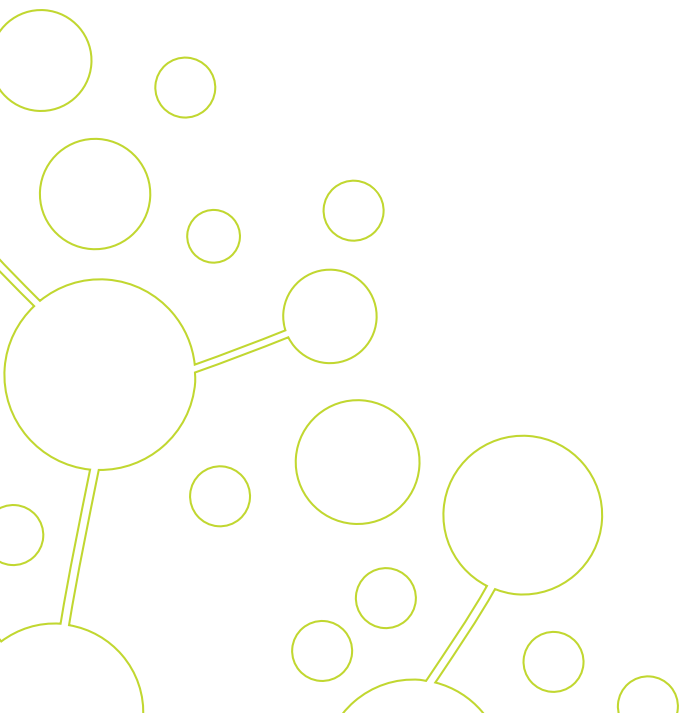
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Acknowledgments

Content

Background

Recent observations prove that extreme climatic events and associated disturbances are affecting forests across different bioclimatic regions in Europe. Rising atmospheric CO2 concentration, higher temperatures, changes in precipitation, flooding, duration and frequency of drought periods have significant impacts on forests. These climatic changes will also consequently influence and cause biotic (frequency and consequences of pests and diseases outbreaks) and abiotic disturbances (changes in fire occurrence, changes in wind storm frequency and intensity) with strong implications within forests ecosystems.

The ministers responsible for forests in Europe at the Ministerial Conference in Madrid 2015 recognised that European forests are vital in combating climate change and that adaptation of forests to climate change will be necessary. Forests play an active role in climate change mitigation and are simultaneously influenced by its effects. Sustainable forest management should therefore support the adaptation of forests to climate change to maintain all forests' productive and protective functions.

European countries have recently experienced a series of noticeable forest disturbances (several storms in the fall/winter 2017-2018; extended drought in 2018 and 2019 with subsequent bark beetle outbreaks and forest fires). Cumulative evidence proves that climate change is contributing to the increased frequency and intensity of forest disturbances. For traditional crisis management it is becoming increasingly demanding to handle such large-scale events. Moreover, these disturbance trends do not halt at country borders, and therefore ask for increased cooperation across Europe.

The challenges from the increased disturbance risks witnessed across the whole continent - amplified by climate change - can only be successfully addressed through increased international and trans-national collaboration and support, capacity building and knowledge transfer, leading to better informed decision-making in the holistic forest disturbance risk management with strong emphasis on prevention and preparedness.

The workshop therefore brought together policy makers, researchers and practitioners from across the pan-European region, to discuss these issues, and look for effective policy measures at international, national or sub-national levels to promote implementation of appropriate adaptation measures and disturbance risk management. In this respect, the workshop also strived to identify the necessary further work for future cooperation among the countries.

Workshop Objectives

In order to promote adaptation of forests and forest sector to the impacts of climate change, the workshop aimed to:

• exchange views on potential adaptation options for increasing resilience of the European forests and forest sector in the view of the projected impacts of climate change

• discuss existing adaptation policies and their possible future development in forest sector and beyond at different levels, including needs for coherence with related policies and policy objectives in other policy domains

• discuss feasibility, reliability and effectiveness of adaptation measures based on presentation of the existing examples under different climatic conditions across Europe promoting shift from emergency response to prevention of disturbances and so enhancing forest resilience

• understand success factors and challenges in the implementation of adaptation measures and effective disturbance risk management practices

The Adaptation Challenge

There is a need to provide a broader framework for climate change adaptation and pro-active disturbance risk management based on solid scientific evidence combined with expert-knowledge that should be endorsed at the policy level in order to promote its application at the operational level. The present rate and magnitude of climate change exceeds the natural migration and adaptation capacities of forest tree species. Measures to enhance the adaptive capacity of natural forest ecosystems (e.g. by increasing genetic diversity in forest regeneration or adopting silvicultural systems favouring structural diversity) and disturbance risk prevention should be complemented with artificial regeneration to facilitate assisted migration scientifically duly justified and proved as feasible through various projects and developed decision support tools[1].

Outcomes

The following key messages and recommendations are the outcomes of the workshop, which were compiled and further elaborated by the FOREST EUROPE Expert Group at its fourth meeting held back to back with the workshop.

Key messages and workshop recommendations on
Legal framework

- At international and national levels, the legal frameworks and policies may hamper the possibility of adapting sustainable forest management practices to the needs of the changing climatic conditions, e.g. by limiting proactive forest management or movement of forest reproductive material.

    - FOREST EUROPE signatories should establish favorable conditions for supporting adaptation to climate change through appropriate policy revision.

    - Strategies and programs, including the National Forestry Programs (NFP) or their action plans should promote adaptation to climate change including pro-active forest management, assisted migration, etc.

    - National or transnational guidelines and/or legislation regulating transfer of forest reproductive material should be revised and updated in order to allow assisted migration and selection of suitable provenances considering the recent and projected changes in climate.

- Climate change will impact all forests, including those in protected areas or protective forests, which are under specific management requirements (e.g. NATURA 2000, areas important for water protection, protection from land-slides, etc.)

    - FOREST EUROPE signatories should revise, if needed, their policies and legislation, to allow pro-active approaches and management measures in different types of protective forests and protected areas.

- Continuous climate warming and dynamically changing extreme events and disturbance risks require a longer-term time horizon to employ adaptation measures.

    - The effort of signatories of FOREST EUROPE should be intensified in order to implement forward-looking adaptation measures taking into account projected climate change in the time horizon of the whole rotation periods. Possible support schemes should accommodate longer-term commitments of forest owners to implement such adaptation measures.

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[1] For example, projects such as SUSTREE and its decision support tool SUSSELECT.

Key messages and workshop recommendations on
Forest governance

- Disturbance management is practiced across European countries in different ways. Appropriate governance needs to cover the whole disaster risk management cycle, addressing the goals defined in the UN SENDAI framework[2].

    - A wider uptake of the best practices in disturbance prevention, preparedness, efficient rapid response and recovery should be ensured.

    - Better harmonization and coordination of disturbance management and contingency plans between countries should be encouraged.

- To cope with large scale disturbances, countries should improve coordination of human and other resources (incl. infrastructure, machinery, etc.) within and among countries in consultation with forest sector stakeholders along the value/supply chain.

- Active forest management is often crucial for disturbance risk prevention (e.g. managing the fuel load in fire-prone ecosystems or favouring species mixtures to mitigate insect calamities). Such practices should be promoted in forward looking disturbance risk management as a component of sustainable forest management.

- Cross-sectoral cooperation and consensus building are crucial for successful implementation of climate change adaptation and disturbance risk management. Bringing different policy stakeholders into a joint planning process supports planning and setting priorities for future management. By shifting the perspective on shared conflicts and shared goals, resources can be shared to optimize solutions.

    - Participatory planning approaches with interactive group decision making should be promoted as they allow considering diverse stakeholder perspectives and balancing community interest with government perspective. Benefits of such approaches include creating ownership of strategic action, the identification and clear delineation of responsibilities and agreement about who can contribute with which resources.

- In such cases, where various processes, institutions and organisations at international or national levels are working on similar subjects, there are opportunities to collaborate and share resources. An example is the identification of common work and capacity building needs in the work on introduced and invasive species.

Key messages and workshop recommendations on
Economics and financing

- It is crucial to inform politicians on economic consequences of disturbance impacts. Special attention is necessary to avoid misleading messages.

    - For example, environmental accounting should ensure that not only possible increase in GDP from salvage logging is documented, but also reduced stock values are accounted because of extreme climatic events and disturbances.

    - Benefits of the whole range of ecosystem services should be evaluated using standardized methods, taking into account disturbance impacts and how these can be mitigated by adaptive measures.

- The concept of payments for ecosystem services is promising for financing adaptation to climate change and disturbance risk management and could be incorporated to public funding schemes.

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[2] Sendai Framework for Disaster Risk Reduction: https://www.unisdr.org/we/coordinate/sendai-framework

- Appropriate solutions which may motivate landowners and forest managers to adopt the adaptation measures and disturbance risk management can also include other economic tools or market-based instruments. Such solutions should consider both short-term and long-term climate change adaptation needs and promote private-public partnerships.
  - Insurances can also offer a possible approach, which could be supported to encourage larger uptake by private land owners.
- Mainstream disturbance risk management measures such as fire suppression entail very high costs, but their effectiveness to protect society from risks is increasingly questioned in science and fire-service practice if not coupled with appropriate prevention measures.
  - Disturbance risk prevention measures should be advocated and supported as these may be more cost-efficient, using both traditional and innovative instruments such as provision of technical assistance and public funding schemes.
  - Funding risk prevention measures may support local livelihoods and promote local economies (e.g. local market for firewood supplied through fuel load reduction in fire-prone landscapes, open spaces and specific land use practices such as vineyards that create natural firebreaks).
- In the revision of the public support to forestry, it would be desirable to strengthen the link between payments for restoration with measures to enhance resilience in the recovery process (good practice examples already exist in some regions).
- For effective forward-looking climate change adaptation, prevention should prevail over restoration, including in public funding schemes. As an example, the planned and already implemented actions under the forestry measures of the EU Rural Development Program show a ratio of 2.5 times higher funding for the prevention comparing to the restoration.

Key messages and workshop recommendations on
Exchange of experience and capacity building

- In case of managing large disturbance events local expertise is often lacking as these events are rare. The recent extreme heat waves and consecutive drought and disturbance events affected regions with little experience in managing wildfire risks and insect pest outbreaks of comparable magnitude.
  - Appropriate forms of international cooperation and experience sharing on good practices are needed to build capacities in climate change adaptation and pro-active disturbance risk management (e.g. through international training events, exchange of expert programs) as well as to provide resourcing and ensure coordinated responses in case of cross-border events.
  - There is also significant value in understanding shortcomings or avoiding mistakes. This information can be used to improve both political responses and practice implementation (e.g. providing good practice guidance documentation).
- Some countries have specific capacities and areas of expertise that could be used to assist other countries to achieve goals where the necessary knowledge or experience is lacking.
  - An international support network[3] could provide assistance over a period of an "event" (wildfire, flooding etc.).

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[3] An example of such a support network is RescEU (https://ec.europa.eu/echo/what/civil-protection/resceu_en), established in the EU as a reserve in disaster risk management capacities.

- Capacities and expertise could be further shared through a possible European forest risk facility. Such a facility could furthermore collect information, develop protocols and prepare fact sheets on disturbance events, and share these for common action to facilitate collecting experience, learning lessons, deriving best practice recommendations, and to build awareness.

- Contrasting solutions can be shared to inspire others and foster mutual learning in capacity building as experience and approaches differ enormously across regions and countries (e.g. southern France and Tuscany use contrasting approaches in wildfire risk management as for the use of professional fireman versus voluntary operators).

• There is an urgent need to promote necessary skills development on disturbance management among managers and forest workers.

- Targeted education programs on adaptation measures at forestry colleges, universities and training courses for forest managers and workers should be developed and launched without any delay.

- In some countries there is very good fire management training available which can also be shared internationally. For example, the Pau Costa Foundation in Spain or the Forest Fire Center in Antalya, Turkey, offer training courses to international audiences. Opportunities like these need to be promoted.

Key messages and workshop recommendations on
Silviculture and practical forest management

• European forests are diverse and serve different societal needs. Moreover, climate change impacts and disturbance risks also depend on bioclimatic and topographic conditions as well as on socio-economic factors. Consequently, different adaptation strategies are needed to respond to local circumstances and there is no one-size-fits-all strategy. The following recommendations may fit to specific forest management regimes; they are not meant to be generally applicable:

- possible benefits of close-to-nature forest management and continuous cover forestry (e.g. more diverse tree species composition, high genetic and structural diversity, increased individual tree stability) may be considered as those that could increase forest resilience,

- disturbance risks in intensive wood production systems may be mitigated and selection of better adapted forest reproductive material may be carried out more frequently due to shorter rotation cycles to keep forest stands resistant,

- water availability for remaining trees in drought condition can be increased by more intensive tending (cleaning and thinning). Restoring natural water regimes by discontinuing maintenance of artificial drainage systems may also improve availability of water in the landscape.

• Traditional and innovative disturbance risk prevention measures (e.g. managing ground cover by grazing/pasture, biomass extraction in fire prone forests, advanced regeneration and conversion of monocultures into mixed species stands, managing fragmented small properties through cooperatives) should complement disturbance suppression, emergency responses and recovery.

• Revision of policy instruments should consider also fire smart landscape management e.g. through diversifying the species composition and establishing natural firebreaks between monocultures of fire-prone species (pine, eucalypts).

• Use of natural regeneration following disturbance events can be considered if sufficient seeds or saplings is already present on site. However, this requires that the natural regeneration is site adapted under the projected climate conditions.

- High ungulate density may hinder successful implementation of adaptation measures such as tree species conversion and this can prevent the restoration of resilient forests following disturbances. Wildlife and hunting policies therefore should be adjusted to enable the development of resilient forests. With efficient hunting strategies habitat-adapted ungulate densities have to be implemented, otherwise the potential of natural regeneration as well as diversified tree species composition in our forests cannot be realized.

- Following disturbance events there is an increased risk of secondary disturbances (e.g. insect outbreak following a storm damage) or ecosystem deterioration due to e.g. soil erosion (after wildfire), enhanced risks of avalanches and floods. These risks should be mitigated via appropriate preventive measures, e.g. rapid sanitation fellings, bark stripping following storm damage or building technical avalanche protection after the loss of protection forest. However, it should also be considered that dead lying wood is important as a nutrient source for regeneration and for protecting seedlings from erosion, avalanches, and browsing.

- Innovative remote sensing technologies can provide guidance to plan harvesting activities following windstorm disturbances. This may enable the identification of dangerous overhanging and semi-uprooted tree before entering a damaged forest to reduce the risk of injuries. Such information can also be useful to reduce costs and estimate the realistic value of wood.

Key messages and workshop recommendations on
Development of technical capacities and infrastructure

- Building appropriate storage capacities for timber and sawn wood should be encouraged in order to limit over flooding the markets with wood in case of large-scale disturbances.

- Adapting infrastructure for agile access and management of forest is important to simplify forest management operations, facilitate fast response to disturbance events and to maintain machinery accessibility of forest areas with organic soils that are no longer frozen in warmer climate areas.

- Maintaining and increasing capacities for the whole chain of forest reproductive material supply (seed collection, storage, transport, nurseries) is vital for both, regular forest management and coping with large-scale disturbances events. Particular importance should be paid to the ability of the nursery sector to provide sufficient quantities of suitable forest reproductive materials that can enhance forest resilience. Enough qualified personnel are needed to plant trees with good results and by appropriate planting techniques etc.

- Recent restructuring of forest services in many countries has often resulted in the loss of forestry staff and there is a general need to invest more in well qualified forestry staff.

- Harvesting companies should also prepare for future extreme events and disturbances, e.g. through training of staff and adopting specialised supply chains for salvage cutting. Transport logistics are often the bottle necks in the salvage operations. Public support to test, consolidate and share experience in wood market chain organization (e.g. savage wood price monitoring, reduced soil erosion practices, infrastructure for emergency logistics) is much needed[4].

- Finding new markets in case of large-scale disturbances and too much timber on the market is another challenge. This is often limited by technical capacities in industry. Expanded processing capacity for hardwood will be required in the future, and developing this may promote the local economy. Countries should provide wood supply projections to inform decision making in the wood and energy sectors.

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[4] An example for this is the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI), which offers tools and instruments such as operational groups to speed up innovation in agriculture and forestry (https://ec.europa.eu/eip/agriculture/en/my-eip-agri/operational-groups).

Key messages and workshop recommendations on
Genetics and forest reproductive material

- Use of appropriate forest reproductive material, choosing species, provenances and seed sources that are both suitable for local site conditions and also sufficiently genetically diverse to be self-sustaining over time with changing environmental conditions should be promoted.

- Efforts should be made towards the development of guidelines for the choice of climatically adapted forest reproductive material.

- Countries are encouraged to keep long-term records of stand level forest reproductive material origin in order to make this information available for adaptive management. This information would allow the correlation of performance in the stand to the origin of forest reproductive material, and would support the development of large-scale recommendations for the future use of such forest reproductive material.

- Species distribution and seed transfer models could be integrated into forestry decision making and planning processes.

Key messages and workshop recommendations on
Monitoring needs

- Evidence based climate change adaptation and pro-active disturbance risk management should be supported by wider forest monitoring efforts than are currently available.
  - To inform climate change adaptation practice, improved access and interpretation of climatic and site water balance observations (e.g. soil water deficits as early warning signal) would be desirable.
  - With the exploration and testing of adaptive forest management practices such as assisted migration new monitoring needs arise to gather and review empirical evidence of the effectiveness of climate change adaptation measures.

- Existing services based on Copernicus remote sensing data and the European Forest Fire Information System (EFFIS) have proven to be helpful in fire risk and damage assessment globally and such services could be further improved through additional parameters. Besides the EFFIS fire danger assessment, also other monitoring efforts should expand beyond the current focus on damage assessments.
  - States can request European Copernicus data and images and this service could be used more widely, e.g. to provide better evidence to different agencies, media and public.
  - Remote sensing-based monitoring can be complemented with other tools for assessment and preparation for disturbances. Whereas burned and clear-cutting area assessment is efficiently carried out with remote sensing, bark beetle risk and damage assessment might require other tools.
  - National forest monitoring data based on field measurements (e.g. forest inventories, monitoring networks) remain of high importance, also as in situ information to support remote sensing data interpretation.

- To plan and target pro-active risk management it is important to expand the scope of monitoring also to inform on preparedness and prevention as well as the recovery phase after the immediate disturbance impact. Defining purpose and setting strategic objectives for each stage of the disaster risk management cycle should be the starting point for determining monitoring procedures for each situation to steer efforts towards an optimal outcome.
  - New technologies should be adopted for monitoring, mapping, risk assessment, and informing decisions, e.g. on prioritizing areas, where to allocate resources. Specific tools, datasets and methods can be chosen from the diversity of what is available on the market, depending on the level of detail needed and diverse requirements to inform general public, the government, or private sector.

- Analyzing data from historical wildfire events in addition to the current fire risk index can help understand the behavior of fires in landscape and allow to assess wildfire vulnerability and how to allocate resources strategically.

- Insect population dynamics and associated damages are currently monitored to different degree by regional and national institutions, but not systematically compiled at international level.

  - The scale and speed of recent outbreaks calls for enhanced coordination of national monitoring activities. Responsible entities and platforms should be identified. It would be desirable to make international compilations frequently available, e.g. through the discussed European forest risk facility. Regular compilations would be valuable to inform trans-national pro-active disturbance risk management.

- Detection and recognition of new threats is of increasing importance and monitoring the risk of invasive species and pests should be continued, and appropriate preventive measures should be applied.

- Monitoring the resilience of forests can be supported by Sentinel and new HyperSpectral satellite data to determine species diversity, as well as forest stand structure and height.

Key messages and workshop recommendations on
Public awareness building

- Public awareness building must be strong as to be prepared for and to react to disasters. Specific for forests, the public should be informed about extreme events and how foresters and management actions are reacting to past damages as well as explaining ways of preparing for and preventing future damages. Appropriate tools to create awareness should be developed.

  - Remote sensing products can be used to improve public awareness about disturbances and associated reaction and measures, e.g. to communicate via media the political reaction to disturbances.

  - Maps of wildfire risk can be shared with the public to communicate information on wildfire damage risk, fuel load and associated risks.

  - Maps of current forest decline and projected future climate conditions are also useful to inform the public.

  - Communication should explain which necessary steps to take in response to a disturbance and to facilitate the recovery - why are they important?

- More efforts could be directed towards communicating the characteristics that affect forest resilience (species diversity, etc.) to raise awareness among public and private owners.

- As most wildfires in the Mediterranean and temperate European forest regions are caused by human neglect or technical faults, it is crucial to connect citizens' involvement to professional firefighting.

- Community awareness on the issues such as wildfires or floods can be increased via awareness programs for schools and children and also for land managers.

- Improved cooperation with experts from media/communication is desirable for effective public awareness raising more effectively.

Day I. - 3 September 2019

9:00 – 9:30   **Opening and welcome**

Bekir Karacabey - *Director General, Directorate General of Forestry, Turkey*

Viorel Gutu - *Subregional Coordinator, FAO Subregional Office for Central Asia*

Representative of FOREST EUROPE

9:30-10:45   **Sustainable Forest Management (SFM) needs to be adapted to changing climate**

Climate Change and Adaptation Challenge
Marcus Lindner - EFI

Operational Level Guidance for Sustainable Use of Genetic Resources of Forest Trees in Climate Change in Central Europe
Roman Longauer - Slovakia

Potential Adaptation Options for Increasing the Resilience of Forests and the Forest Sector in the View of the Projected Impacts of Climate Change
Peter Spathelf - Germany

Discussion: Adaptation to climate change and Sustainable Forest Management

11:15 – 12:30   **Policies and governance needed to implement adaptation, risk prevention and disturbance management**

Rural Development Programmes and State Aid in the EU Supporting Adaptation of Forests to Climate Change
Tamas Szedlak - European Commission

Policy and Governance Needs in Response to the Vaia Windstorm Damage in Northeastern Italy – a Call for Multi-actor Collaboration
Davide Petenella - Italy

Development of a Cross-sectoral Vegetation Fire Policy for Northern Ireland Based on International Expert Knowledge
Colum McDaid & Mark Smyth - Northern Ireland, UK

Implementing Forest Management Applications to Respond to Climate Change Issues
Mehmet Misir - Turkey

Discussion: Policy and governance needs

14:00 – 15:30   **Countries´ experience in implementation of adaptation measures to prevent and mitigate natural hazards**

Enhancement of Ecological Stability of Forest Stands and Their Resistance to Biotic and Abiotic Agents
Michal Synek - Czech Republic

Networking to Develop Capacity in Preventing Wildfires – International Knowledge Transfer
Oriol Vilalta i Caellas - Spain

Experiences in Managing Drought Impacts and/or Spread of Invasive Species
Ihor Buksha - Ukraine

Reacting to Effects of Climate Change on Forests in Turkey: Case of Trace
Mehmet Özdemir - Turkey

16:00 – 17:30   **Barriers and drivers for implementation of adaptation measures and disturbance risk prevention in Europe – Panel discussion**

How to shift focus from emergency response to prevention of disturbances and enhancing forest resilience?

How can cross-border collaboration in a Forest Risk Facility be used to spread efficient and cost-effective practices?

How to prepare wood processing industry for changing quality and quantity of wood supplies from European forests in future?

17:30 – 18:30   **Poster Session**

Day II. - 4 September 2019

9:00 – 11:00   **Developing recommendations for integration of adaptation measures and disturbance risk prevention into SFM and natural resource management**

Presentation of key messages of the first day (presentations and discussion)
Discussion in two groups focusing on

i) adaptation measures

ii) disturbance risk prevention; in a cross-sectoral landscape context

Report back from discussion groups and conclusions

11:15 – 18:00   **Excursion**

Marcus Lindner

Dr. Marcus Lindner is the Principal Scientist in the Resilience Programme at the European Forest Institute. He studied forest science at the University of Freiburg, Germany and obtained a PhD degree from the University of Potsdam, Germany with his dissertation in Geoecology. He has been the Adjunct Professor "Climate change and the sustainability of the forestry sector in Europe" at the Faculty of Science and Forestry, University of Eastern Finland, Finland (since 2008) and "Forest Ecology: Ecosystem services and sustainability assessment" at the Faculty of Agriculture and Forestry, University of Helsinki, Finland (since 2015). He has had 25 years of experience in research on climate change impacts and the development of response strategies in forest management, forest sector sustainability assessment and biomass resource assessments from European forests. He is currently leading the German national project SURE "SUstaining and Enhancing REsilience of European Forests" and is also the coordinating expert of the EIP-Agri Focus Group 24 on Forest Practices and Climate Change. He has also been involved in over 20 European projects as a coordinator (e.g. CASTLE, Northern ToSIA, bioE-bioD), a WP Leader (e.g. EFORWOOD, EUwood, MOTIVE, OPERAs, VOLANTE) or as a partner.

Roman Longauer

Dr. Roman Longauer is a specialist in the conservation of genetic resources, forest reproductive material and tree improvement at the National Forest Centre of Slovakia. He is a lecturer at the Faculty of Forestry and Wood Technology of Mendel University, Brno, Czech Republic. He is involved in nationally and EU funded projects, currently the "Conservation and sustainable utilization of forest tree diversity in climate change" of the EU INTERREG Programme for Central Europe. He is also one of the partners of the "Establishment of European Information System and Forest Genetic Resources EUFGIS", co-funded by the EU Agri Gen Res Programme. His working experience includes also position as a FAO consultant, implemented a foreign development assistance SlovaAid. He is in charge of the National Programme for Forest Genetic Resources and represents Slovakia in the European Programme for Forest Genetic Resources - EUFORGEN.

Peter Spathelf

Peter Spathelf, has been a professor of applied silviculture at Eberswalde University for Sustainable Development (since 2006). After having studied forestry sciences at the Freiburg University during 1983 -1988, he entered the state forest service of the federal state of Baden- Württemberg. In 1997 he finished his PhD studies at the Institute for Forest Growth (University of Freiburg). From 1998 until 2001 he was a lecturer of the German Academic Exchange Service (DAAD) at the Brazilian Federal University of Santa Maria. At the moment he holds the position of the Dean of the faculty and is in charge of internationalization of Eberswalde University. Moreover, he is in charge of climate change and forest adaptation with the German Forestry Association (Deutscher Forstverein).

Tamas Szedlak

Tamas Szedlak graduated as a forester in 1978, and then he received an MSc in forestry in 1987. In 1992, he wrote his thesis on agroforestry and got his second degree on tropical agriculture and forestry. After working more than 10 years in forests at the Hungarian State Forest Service, he became an official of the Ministry of Agriculture in Budapest, and he contributed to the country's preparation for the accession to the EU. Since 2004, he has worked for the European Commission in the Directorate General for Agriculture and Rural Development. He deals with a variety of forestry related issues, particularly related to forestry in rural development and practical aspects of forestry under the changing climate. He follows the forestry and agroforestry related policy development, including the preparation of the legislative background for the CAP post 2020 period.

Colum McDaid

Colum McDaid is a government scientist working within the Northern Ireland Environment Agency (NIEA). His particular expertise has been the involvement in landscape management since 1994, where he has overseen the management of all of Northern Ireland's high value landscapes including 8 Areas of Outstanding Natural Beauty (AONBs) and the Belfast Hills. More recently he has become a leading government official on wildfire issues. He has worked in partnership with the Northern Ireland Fire and Rescue Service (NIFRS) since 2013 to develop and deliver a wildfire community engagement initiative. He has completed wildfire management and response training with the NIFRS and the Northumberland Fire and Rescue Service. During Wildfire spate conditions across Northern Ireland in 2017 he attended wildfires as part of the NIFRS specialist wildfire strike team. He also has built up an International Network of Associates sharing knowledge and experience which has been useful to response and for policy development in Northern Ireland.

Mark Smyth

Mark Smyth has been a firefighter for 26 years and Wildfire Lead Officer for Northern Ireland Fire & Rescue Service (NIFRS). He developed an internal Wildfire Training Team and fully developed Wildfire Strike Team with a high level of training and response knowledge and understanding. He is the UK National Resilience Wildfire Tactical Advisor representing NIFRS as lead on the UK National Fire Chief's Council. He was trained in Catalonia and has experience riding alongside the GRAFF at many incidents. He developed an interagency awareness training programme of Wildfire Incident Command and implemented an interagency response plan for large escalated Wildfire incidents across the Northern Ireland. He is also a Cross Border liaison officer specializing on Wildfire Management of Emergency Services across the island of Ireland. Currently, he is an Area Commander within NIFRS responsible for Operational Performance, Assurance and Improvement.

Mehmet Misir

Mehmet Misir graduated from Karadeniz Technical University at the Faculty of Forestry in 1991. At the same time, he started to work as a research assistant in the Forest Management Department in 1993. In 1995, he completed his master's degree in Forest Management, Department of Forest Engineering, KTU Institute of Natural Sciences, and his PhD degree in 2001. He was awarded the title of an Associate Professor in 2007 and Professor in 2012. He is currently working as a professor at KTU Faculty of Forestry. He took part in many national and international projects.

Oriol Vilalta i Caellas

Oriol Vilalta i Caellas is a bachelor of Biology from the UAB. After finishing his studies, he began working in the Forest Fire Support Group (GRAF, Firefighters of the Generalitat de Catalunya) within the framework of the Fireparadox project, and continued to be trained as a fire analyst and actively participated in tasks of fire suppresion both locally and internationally. He has improved his training at ESADE business school, taking the degrees of Management of Non-Governmental Organizations (DGONG) and Leadership and Social Innovation (LIS). He has trained forest fires in various academies and universities, has participated at conferences at national and international level and has coordinated and created different projects. He has also been an active member of the Volunteer Fire Department of the Generalitat de Catalunya since 2006.

Davide Pettenella

Davide Pettenella is a full-time professor and the head of a PhD School at the University of Padova (Italy) teaching Forest Economics. He has published more than 400 papers in the field of forest economics and wood products marketing as a result of his research activities within the programs financed by the European Commission, FAO, European Forestry Institute, and the World Bank.

Silvia Melegari

Silvia Melegari is the Secretary General of the Sawmill Industry Organisation. She holds a degree in European law and joined EOS from the European Panel Federation (EPF), where she was holding the position of Environment & Research Adviser. She has an extensive experience in working for the promotion of wood working industries and in European affairs, including trade promotion and environmental matters.

Nesibe Köse

Nesibe Köse is a Professor at the Faculty of Forestry, Istanbul University – Cerrahpasa. Her interests focus on dendroclimatological reconstructions and dendroecological, dendroarcheological and dendrogeomorphological researches by using tree rings. She built an extensive network of climatically-sensitive tree-ring chronologies in Turkey. Using this tree-ring network she contributed to revealing reconstruction of movements of the tropical belt as well as precipitation, stream flow, temperature, drought index reconstructions. Currently she is working on a long-term fire regime of black pine forests in Turkey to determine fire-climate relations and possible effects of climate change on black pine forests.

Ihor Buksha

Ihor Buksha, PhD is the Head of forest Monitoring and Certification Department of Ukrainian Research Institute of Forestry and Agroforestry Melioration (URIFFM) State Forest Resource Agency of Ukraine and National Academy of Science of Ukraine. He has his PhD in Forestry (1989), and worked as a Senior Researcher in Forest Management (2001), Corresponding Member of the Ukrainian Forestry Academy (2009), Laureate of the State Prize of Ukraine in Science and Technology (2013). He is the author of more than 250 scientific publications in the fields of forest inventory and monitoring, forests, climate change and global warming, sustainable forest management, forest certification, scenario analysis and usage of advanced information and measurement technologies in forestry.
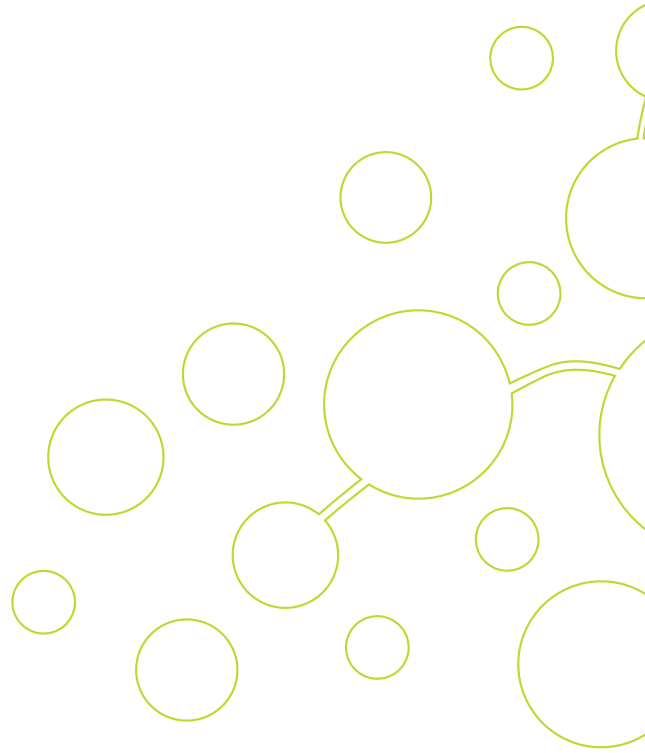
Michal Synek

Michal Synek finished his master degree in Forestry and doctoral degree in Applied Geoinformatics. He has been working on different positions in the Forest Management Institute (FMI) for nineteen years, mainly in data processing and their analyzing. On the international level he has cooperated on different tasks with UNECE/FAO representing the Czech Republic. He is a member of the UNECE/FAO Team of Specialists on Forest Sector Outlook and the UNECE/FAO Team of Specialists on Forest Products Statistics.

Mehmet Özdemir

Mehmet Ozdemir was born in Trabzon, Turkey. He is currently Institute Director to Marmara Forestry Research Institute in İstanbul. He obtained his doctoral degree (PHD) at the Silviculture Division, Forestry Faculty of Karadeniz Technical University, Trabzon, Turkey. He worked 20 years as a manager in the Forest District Directorates. He is experienced in forestry practices. He worked in Yalova Model Forest project in terms of International Model Forest Network for 5 years. He managed a research project concerning the development of Yalova Model Forest. He managed the project named "Integration to Forest Management Plans of Functions of Soil Conservation and Hydrological". He worked as a researcher in various projects.

Aigar Kallas

After graduating from the Estonian Agricultural University as a forest engineer in 1995, Aigar Kallas entered into the government service in Estonia, with a task to assist on National Forest Policy formulation and preparation for restructuring the public forestry administration. He received a Master of Science degree (MSc) from the University of California, Berkeley, in Agricultural and Resource Economics in 2000. He has held several managerial jobs in forestry, in both the public and private sectors, in Estonia and neighbouring countries. Since 2007, he has been the Managing Director of the Estonian state-owned forestry company RMK.