

# **Executive Summary**

Following the Bratislava Ministerial Resolution "Adapting pan-European forests to climate change" (2021), the Liaison Unit Bonn focused in its work on the establishment of the pan-European forest risk facility (FoRISK) to support forest adaptation to changing climatic and site conditions as well as to enhance the resilience and mitigation potential of forests at a pan-European level. The vision of the FoRISK is to provide relevant evidence-based forest risk and adaptation related information to political decision-makers based on trustful cooperation with scientists, practitioners and society.

In order to assess the added value and to test the concrete tools, a FoRISK pilot was running from September 2022 to December 2023 with a subsequent comprehensive external evaluation. During the FoRISK pilot implementation, three specific forest damage agents were prioritized based on signatory and observer selection in addition to the overarching focus on interrelations of forest risks and improving cross-border collaboration.

The FoRISK concept paper provides the basis for the FoRISK pilot and the ongoing collaborative work during the implementation of the FOREST EUROPE work programme 2021 -2024 in close cooperation with signatories and observers. The concept has been regularly updated based on the feedback of experts nominated by signatories and observers and will further serve as comprehensive reference for the development of the terms of reference (ToR) annexed to the Ministerial Decision "Sustainable forest management as a tool to enhance forest resilience" and the planned full-scale launch of the pan-European forest risk facility at the 9th Ministerial Conference in October 2024.

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#### 1. Introduction

By implementing the Bratislava Ministerial Resolution "Adapting pan-European forests to climate change" and the FOREST EUROPE work programme 2021 – 2024, signatories and observers underpin the need to further increase work on forests adaptation to changing climatic and site conditions as well as to enhance the resilience and mitigation potential of forests at a pan-European level.

Building on this joint commitment, the Liaison Unit Bonn (LUBo) initiated the work towards the pan-European forest risk facility (FoRISK) with the support of the EFI FOREST EUROPE Team as outlined in Workstream 2 (WS 2) of the FOREST EUROPE work programme 2021–2024 (WP).

The concept paper at hand provides the basis for the ongoing collaborative work with signatories and observers and will be further developed during the implementation of the WP. The concept shall provide a comprehensive reference for the development of the terms of reference (ToR) and the planned full-scale launch of the pan-European forest risk facility 1-2. October 2024 at the 9<sup>th</sup> Ministerial Conference of FOREST EUROPE.

#### 2. Objectives

The foreseen pan-European forest risk facility will seek to:

- support policy makers on how to enhance forest resilience and foster adaptive capacity based on science-based information and best practice;
- strengthen transboundary cooperation and networks on disturbance risk management and forest adaptation among policy, science and practice;
- improve the ability to cope with future disturbance events with specific focus on risk prevention and preparedness within the frame of sustainable forest management;
- inform political decision makers and forest practitioners on early response and recovery best practices after disturbance events;
- enhance knowledge exchange opportunities in order to build expert capacity in the field of disturbance risk management and forest adaptation;
- foster information sharing on forest-related impacts and dynamics of climate change, natural hazards and diseases;
- increase proactive engagement with the public and media, and dissemination of information in an accessible and appropriate format.

FOREST EUROPE will conduct the work towards the pan-European forest risk facility in close coordination with existing and emerging initiatives on forest risks to ensure synergies and avoid duplications.

#### 3. Vision

The vision of the foreseen FoRISK is to support the adaptation of pan-European forests to climate change by providing relevant evidence-based forest risk and adaptation related information to political decision-makers based on trustful cooperation with scientists, practitioners and society.

## 4. Conceptual framework

In the context of the Bratislava Ministerial Resolution signatories provided the mandate to work towards a facility which connects and coordinates national and international activities related to pan-European forest risk knowledge.

#### 4.1 Architecture

The foreseen FoRISK architecture will include different fora and actors with individual tasks and objectives. Methods of work comprise virtual or physical meetings combined with continuing work to enhance collaboration and use of synergies. In close cooperation with signatories and observers, reports will take stock of the work and outcomes, summarise recommendations and provide suggestions on the way forward in the context of forest risks and damages as well as forest adaptation.

## Core actors and their procedural role:

#### a) Ministers

Ministers responsible for forests in the pan-European region are the central addressee of FOREST EUROPE's work. Therefore, the strategic development of FoRISK needs to aim towards the provisioning of minister-relevant information as basis for political decision making. Hereto, the identification of impacts and deliverables which are of added value for ministers are of utmost importance. In this regard, the synthesis and development of relevant evidence-based information associated with forest risk and forest adaptation will be a key output (e.g. via policy briefs) of a successful developed FoRISK. In 2024, ministers will be also the key actors during the planned formal FoRISK launch which is based on their potential approval of the ToR annexed to the Ministerial Decision.

## b) Signatories and observers

Signatories and observers are invited to nominate national experts as members of the FoRISK Expert Group in line with their internal procedure. The nominated experts will support the work towards FoRISK with their valuable expertise. Relevant information associated with the implementation of WS 2 will be shared with the nominated experts. Nominated experts are asked to disseminate the information to other relevant experts and within their country or organization. The adequate incorporation of signatory's and observer's requirements and interests will be ensured via regular consultation at Expert Group meetings.

Signatories and observers are encouraged to inform LUBo about possible changes of focal points and experts at their earliest convenience to secure smooth communication and the delivery of meeting documentation.

#### c) Liaison Unit Bonn (LUBo)

LUBo serves as the secretariat of the FOREST EUROPE process during the German chairmanship (2021 – 2024). In the course of the implementation of WS 2, LUBo acts as a liaison point for the overall coordination and facilitation between FOREST EUROPE signatories, observers and external experts. Furthermore, LUBo will administer all workstream-related activities and related budgets.

## d) Expert Group (EG)

The EG represents the core fora for the overall work on the objectives of the pan-European forest risk facility. Furthermore, the EG will provide guidance to LUBo in its work related to the activities and actions of WS 2. The EG is composed of national experts nominated by signatories and observers (focal points). In addition, external experts on specific topics of forest risks and forest adaptation may be invited temporarily, depending on the expertise required.

## e) External partners

Cross-sectoral partnerships and a close involvement of forest risk related expertise based on e.g. scientific and practical external experts will be incorporated to ensure a sound FoRISK development, and at the same time provide evidence-based and holistic information for political decision makers while enhancing the effectiveness of the WS 2 implementation.

## f) Outreach Team (OT)

The OT consists of LUBo and EFI Forest Europe communication experts to combine activities and measures targeted to proactively engage with the public, media and forest-related stakeholders (e.g. via targeted communication channels). Back-to-back activities (e.g. workshops and online events) will supplement capacity building and knowledge exchange with partners to increase synergies, effectiveness and efficiency. Partners and participants are invited to inform the OT on relevant stakeholders, including politicians, scientists and practitioners in addition to interested society for outreach. The OT will also provide material for signatories and observers for their national outreach in English language.

## 4.2 Deliverables

The output of the foreseen FoRISK is paramount in order to create added value for FOREST EUROPE. Therefore, LUBo ensures regular close exchange with signatories and observers via different fora such as the EGs to adequately incorporate the needs and expectations in the context of the work towards FoRISK. In addition, the provisioning of deliverables already before the formal planned FoRISK launch in 2024 is identified as essential in order to achieve a successful WS 2 implementation. Therefore, the FoRISK pilot is key as addressed in detail in the Annex.

The following FoRISK deliverables are identified as most relevant with the flexibility to be adjusted based on signatory and observer feedback:

## I. Policy briefs;

- II. Raising society's awareness via social media activities and professional communication products (e.g. video clip);
- III. Reference pool and networking platform, summarizing relevant, existing activities and connecting relevant actors;
- IV. Capacity building and knowledge exchange via workshops (by invitation) and webinars.

Deliverable	Actors	timeframe	
I. Policy briefs			
Brief and informative summary on most relevant issues for signatories	LUBo, EG, external partners	FoRISK Pilot	2022 - 2023
and observers associated with forest related risks and forest adaptation that brings background and recommendations to policymakers.		FoRISK	from 2025 onwards
II. Communication products			
Activities and measures targeted to engage with public, media and forest-related stakeholders.	LUBo, EG, External partners	FoRISK Pilot	2022 - 2023
related staneriolaers.		FoRISK	from 2025 onwards
III. Expert network and reference pool			
Contact and networking platform for forest risks, information pool of	LUBo, EG, External partners	FoRISK Pilot	2022 - 2023
existing initiatives and references related to forest risks and forest adaptation.		FoRISK	from 2025 onwards
IV. Capacity building			
Building on close cooperation with relevant actors and initiatives, forest	LUBo, EG, External partners;	FoRISK Pilot	2022 - 2023
risk and adaptation related activities (e.g. trainings, workshops etc.) and reports (e.g. science-based best practice recommendations etc.) will be supported and facilitated by		FoRISK	from 2025 onwards
FoRISK to increase synergies.			
Evaluation report			
Brief summary and documentation of the FoRISK pilot, its background, planned and achieved objectives, deliverables and impacts based on transparent criteria, selected evaluation techniques and close involvement of signatories.	LUBo, External partner	FoRISK Pilot	December 2023
Terms of Reference (ToR)			
ToR will define the formal format of FoRISK incl., among others, stable	LUBo,	9 <sup>th</sup> Ministerial Conference	during 2024

funding and the potential role of national focal points.

Signatories and Observers

## **Transition plan**

Layout of tasks and activities to be performed in order to efficiently continue from FoRISK pilot to the full-scale FoRISK launch.

LUBo, Signatories and Observers during 2024

#### 4.3 Added value

A wide variety of initiatives and actions addressing the improvement of forest adaptation and forest health exists inside and outside the pan-European region. Therefore, the work towards FoRISK will thoroughly involve closed and ongoing forest risk related initiatives and regularly consult signatories and observers in order to successfully aim towards the following added values:

#### a) Innovation

The foreseen FoRISK has the potential to significantly strengthen the forest risk and adaptation related information exchange within the policy-science-practice interface. A successful developed FoRISK would introduce a new process of collaboration between key stakeholders leading to evidence-based information provisioning as basis for political decision making by European ministers responsible for forests. Consequently, the emphasized context of forest risk governance provides an innovative added value building on available actions and initiatives (e.g. projects, programs etc.).

#### b) Inclusiveness

With 46 signatories and 63 observers, FOREST EUROPE is a unique process capable to facilitate an inclusive FoRISK where the rich diversity of European regions and forest-related stakeholders is adequately reflected. Building on the common vision of FOREST EUROPE to shape a future where all European forests are vital, the cooperation of signatories, observers, partners and society via an inclusive FoRISK would create an added value by uniting different forest related perspectives.

## c) Efficiency

This concept proposes to develop a FoRISK, which fosters cooperation between existing initiatives and actions facilitated by LUBo in order to increase synergies leading to the support of political decision-making based on sound and evidence-based forest risk and adaptation related information. Hereby, the foreseen collaboration would provide a maximum of output for all stakeholders while avoiding additional burden and duplications. Thus, the foreseen FoRISK would aim for an efficient format to add value to existing actions and initiatives.

## d) Flexibility

Based on the rapid and dynamic development of forest risks, the foreseen FoRISK aims for a format, which allows for flexibility when defining potential focus topics. In this regard, the joint selection of relevant forest disturbance agents (e.g. wildfire, bark beetle

etc.) by signatories as temporary focus incl. associated deliverables (see 4.2) to be developed would be one example. This approach also enables the opportunity for further FoRISK prioritization by incoming chairmanships depending on future demands. In addition, the current FoRISK concept provides strong interlinkages to rapid responses and emerging issues as described in the FOREST EUROPE work programme 2021 – 2024. Hereby, forest risk events (e.g. large-scale forest fires, bark beetle calamities etc.), which require coordinated responses, can be adequately addressed by FoRISK.

## e) Continuity

An added value of the planned FoRISK is associated with the long-term proposal for its implementation. In fact, and compared to common initiatives (e.g. projects, programs etc.), the FoRISK shall be installed along with the FOREST EUROPE process based on regular consideration for its continuation by signatories and observers. Hereby, an efficient and smooth knowledge transfer is supported building on a stable FoRISK. In order to enable a successful continuation from the current to the upcoming chairmanship, the role of a comprehensive transition plan is key (see 4.4.2).

#### 4.4 Timeline

#### 4.4.1 Phases with milestones

#### a) Preparation

From 2021 to mid-2022 the FoRISK concept was developed, which identifies the objectives, a formal structure and a preliminary timeline towards the planned launch of the FoRISK and FoRISK pilot taking into consideration the needs and interests of the FOREST EUROPE signatories and observers.

The milestone of the preparation phase was the approval of the FoRISK pilot building on the FoRISK concept at the FOREST EUROPE Expert Level Meeting in August 2022.

#### b) Pilot

Based on the prepared FoRISK concept, the pilot was implemented from September 2022 until December 2023. The pilot delivered concrete deliverables and enabled adjustment of the FoRISK concept based on an ongoing evaluation in close cooperation with the signatories and observers. The final evaluation of the pilot (December 2023) investigated on the feasibility, usefulness, impact, effectiveness and efficiency of the FoRISK pilot. Detailed information related to the FoRISK pilot and its phases is presented in the Annex.

The milestone of the FoRISK pilot is the final evaluation report, which will incorporate the documentation and monitoring of the individual pilot phases.

#### c) Launch

Building on the implemented FoRISK pilot and the constantly updated FoRISK concept, the ToR of the pan-European forest risk facility are developed and submitted to the FOREST EUROPE signatories and observers for their consideration and possible adoption before the 9<sup>th</sup> Ministerial Conference in 2024.

Consequently, the approval of the FoRISK ToR and the herewith associated formal launch of FoRISK would be the final milestone of WS 2.

## 4.4.2 Transition

The potential formal FoRISK launch is planned for the 9<sup>th</sup> Ministerial Conference in autumn 2024. This event will also end the German FOREST EUROPE chairmanship. In order to enable a smooth and efficient continuation of collaboration between the involved stakeholders and to successfully build on the FoRISK pilot, a comprehensive transition is essential. Therefore, a transition plan will be developed until end 2024 to comprehensively structure and prepare the possible implementation from 2025 onwards.

## 4.5 Funding and resources

The allocation of stable funding and resources is key in order to work towards a FoRISK with long-term vision. Therefore, the development and thorough consideration of possible funding options (e.g. in-kind contributions by signatories and observers, multidonor trust fund, voluntary contributions associated to specific measures, mixed approaches etc.) will be in the center of the FoRISK development with close and transparent involvement of signatories and observers. Concrete proposals addressing different funding alternatives will be developed and introduced to signatories and observers. Yet, innovative and proactive support by signatories and observers is appreciated in order to promote and enlarge the planned FoRISK and its pilot actions and to incorporate first-hand experiences of possible funding models into the FoRISK ToR development.



# Annex - FoRISK pilot implementation



Workstream 2 - pan-European forest risk facility

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#### 1. Introduction

From September 2022 until December 2023, a small-scale implementation of the FoRISK concept, the FoRISK pilot, was taking place during which signatories and observers together with LUBo could assess the feasibility, usefulness, impact, effectiveness and efficiency of the concept proposed. This detailed implementation plan of the FoRISK pilot focuses particularly on the description and planning of the different FoRISK pilot phases and the anticipated deliverables. Throughout its course the FoRISK pilot was subject to a comprehensive ongoing evaluation process in order to enable, if required, flexibility for adjustments and before concluding with a final evaluation report. Building on the results of the pilot and the final evaluation report, LUBo, together with the national experts, is working on the FoRISK Terms of Reference (ToR) for the launch of the full-scale FoRISK after 2024.

#### 2. Resources

The resources (e.g. staff, financial funding) related to the FoRISK pilot will be covered by the FOREST EUROPE budget 2021 – 2024. However, voluntary additional contributions (e.g. financial, in-kind etc.) by signatories and observers based on prioritized focuses (e.g. related to specific forest damage agents etc.) have been well received and supported the performance of the FoRISK pilot.

## 3. Pilot description

## 3.1 Conception and planning

During the conception and planning of the FoRISK pilot, the main goal was to ensure that the signatories' and observers' needs and expectations (e.g. deliverables) are being met. Through continued bilateral and multilateral exchange (e.g. in Expert Group Meetings or written feedback in questionnaires) the effective alignment of expectations as well as the likelihood to deliver useful results was increased. In addition, each pilot phase and its achievements were captured in a pilot monitoring and the final evaluation report.

## 3.2 Implementation and monitoring

#### 3.2.1 General procedure

The FoRISK pilot was proposed to focus on the following implementation and monitoring levels: Three specific forest damage agents were identified as most relevant for signatories and observers based on the feedback related to the "Questionnaire-WS 2" (see 3.2.2, 3.2.3 and 3.2.4). Therefore, the pilot was proposed to cover three specific focus topics of which each shall be prioritized during a six month FoRISK pilot phase. For each pilot phase preparedness, prevention, response and restoration are foreseen focuses to be covered in the context of the selected forest damage agents.

Secondly, the importance of considering interlinkages between different forest ecosystem risks and damages is paramount. As a consequence, an overarching FoRISK pilot phase with the aim to adequately cover the holistic relationships associated to forest risks and for better cross-country collaboration (see 3.2.5) was included. In this context, particularly the focus on forest resilience and adaptation is in the center of interest. During the implementation, LUBo will perform the agreed planning tasks (see 3.1) while coordinating with partners, ensure quality control, manage resources and update signatories, observers and partners.

The key objective of the pilot implementation phases is to demonstrate the added value and feasibility through ongoing provision of improvements and performance reviews

related to the FoRISK concept paper. Thus, each pilot phase will be monitored and reported to the national experts as well as signatories and observers to identify bottlenecks and initiate essential discussions or improvements followed by a final FoRISK pilot evaluation (see 3.3.2). Based on the interim monitoring already during the FoRISK pilot implementation potentially required additional adjustments or resources can be communicated to signatories.

With regard to the selection of deliverables for each pilot phase, the following principle considerations will be applied and regularly consulted with the experts:

- a. Focusing on top priorities based on signatory and observer input
- b. Feasibility checks which particularly consider the available time frame
- c. Check financial implications of proposals to optimize cost efficiency
- d. Create added value which lasts after the respective pilot phase implementation

## 3.2.2 Pilot phase #1 "Wildfire" (9/2022 - 2/2023)

The risk associated to wildfires is of highest relevance in Europe based on signatory and observer feedback on the FoRISK questionnaire and recent references such as the UNEP report "Spreading like Wildfire: The Rising Threat of Extraordinary Landscape Fires". The reasons are manifold, yet particularly climate and associated drying conditions as well as land-use change (e.g. land abandonment) leading to fuel accumulation drive an increase in burning throughout Europe. Wildfire events, especially large-scale events, were prominent in the media throughout recent years which increased the awareness of fires among society and policy-makers.

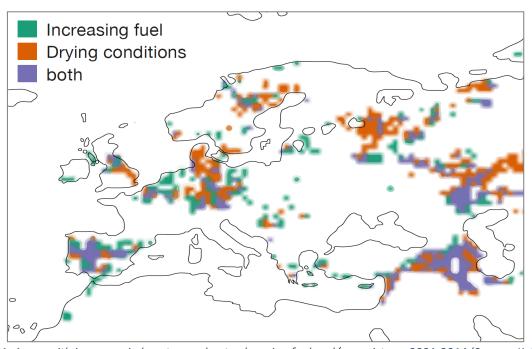


Figure 1: Areas with increases in burnt area due to changing fuel and/or moisture, 2001-2014 (Source: Kelley et al. 2019<sup>2</sup>, GRID-Arendal/Studio Atlantis, 2021<sup>1</sup>)

The available and further evolving knowledge and expertise related to wildfire risks and forest-related measures covering prevention, preparedness, response and recovery are rich across Europe. In this regard, the role of sustainable forest management (SFM) can

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<sup>&</sup>lt;sup>1</sup> https://wedocs.unep.org/bitstream/handle/20.500.11822/38372/wildfire RRA.pdf (23 February 2022)

<sup>&</sup>lt;sup>2</sup> https://www.nature.com/articles/s41558-019-0540-7

lead to an important preventive impact by maintaining or reducing the vulnerability of forest ecosystems to wildfire disturbances. In addition, the support of desired recovering forest ecosystem developments (e.g. restoration, resilience) following wildfires can be also closely linked to SFM.

Therefore, building on the relevance for signatories and observers as well as the important role of SFM in relation to minimize negative impacts of wildfires on pan-European forests, LUBo proposes to focus on wildfires during the first FoRISK pilot phase.

During the successful first pilot phase, the following deliverables were achieved (see also point 4.2 in the FoRISK concept paper).

Table 1: Definition and testing of policy tools for phase #1

Table 1: Definition and testing of policy tools for phase #1			
Policy tool	Result		
I. Policy Brief	Policy Brief "Reducing Wildfire Risk in Europe through Sustainable Forest Management"		
	Supporting the BioAgora Knowledge Synthesis for Policy – "Deadwood and fire risk"		
II. Social media activities and professional	Raising awareness in the society via posts and videos on Twitter and LinkedIn		
communication products	Press release on FoRISK webpage: summary report and take- home messages of the Barcelona workshop;		
III. Reference pools and expert networks	Webinar "Manage to Conserve Forest Genetic Resource conservation as part of Sustainable Forest Management" with EUFORGEN on 11 October 2022		
	Expert Group Meeting, Online, 25 - 26 January 2023		
	Presenting FoRISK at 8th International Wildland Fire Conference in Porto, Portugal, 16 - 19 May 2023		
	Collaboration with Firelogue, joining the Environment/Ecology working group – from 2023 onwards.		
IV. Capacity building and knowledge exchange via workshops and	Joint workshop "Develop, adopt and transfer innovative solutions and actions to prevent and control wildfires" with SilvaMed and OGM in Antalya, Türkiye, 24-27 October 2022 Workshop on "Communicating the important role of		
webinars	sustainable forest management to prevent wildfires" with CTFC, EFI and PCF; Barcelona, Spain, 7 – 9 February 2023		
Report	Monitoring FoRISK pilot phase #1 - Wildfires		

## 3.2.3 Pilot phase #2 "Pests & diseases" (3/2023 - 8/2023)

Building on the relevance for signatories and observers as well as the important role of SFM in relation to minimize negative impacts on pan-European forests, FOREST EUROPE focused on pests and diseases, and especially spruce bark beetle outbreaks, during its second FoRISK pilot phase.

Extreme heat events and droughts have intensified due to climate change and spruce bark beetle outbreaks have reached unprecedented levels in conifer forests challenging traditional management approaches in production forests and leading to increasing public and political awareness. FOREST EUROPE has recognized the need for

coordinated international actions and for more comprehensive management frameworks recognising also the social dimension of the bark beetle outbreaks.

During the second pilot phase the following deliverables were achieved:

Table 2: Definition and testing of policy tools for phase #2

Policy tool	Results
I. Policy brief	Policy Brief "Managing Bark Beetle Outbreaks in the 21st Century"
II. Social media activities and professional	Raising society's awareness via posts and videos on Twitter and LinkedIn
communication products	New layout of the FoRISK landing page <a href="https://foresteurope.org/workstreams/risk-prevention/">https://foresteurope.org/workstreams/risk-prevention/</a>
	Press release on FoRISK webpage: summary report and take- home messages of the workshop
III. Reference pools	Expert Group Meeting, Online, 30 June 2023
and expert networks	Collaboration with Climate-Adapt, knowledge platform for adaptation in the forestry sector - Ongoing
IV. Capacity building and knowledge exchange via workshops and webinars	Workshop "Managing biotic threats in forests – lessons learned from bark beetle calamities", with Ministry of Agriculture of Czech Republic, Breznice, Czech Republic, 30 May- 1 June 2023
Report	Monitoring FoRISK pilot phase #2 – pest and diseases

## 3.2.4 Pilot phase #3 "Storms" (9/2023 - 12/2023)

Building on the relevance for signatories and observers as well as the important role of SFM in relation to minimize negative impacts on pan-European forests, FOREST EUROPE will elaborate to focus on windstorms during its third FoRISK pilot phase.

While windstorms are rare events, damage caused by storms occur suddenly and measured by the volume of damaged timber, storms are considered the most devastating risk. During its last pilot phase FoRISK provided guidance to mitigate the risk for storm damage in forests by proactive sustainable forest management and by improving forest resilience. As for phase #1 & 2 the objective was to provide recommendations for the development of comprehensive national and regional crisis management plans, including measures for prevention, preparedness, response and recovery and creating the legal framework for implementing these concepts already before the next storm event.

The following deliverables were achieved during the pilot phase #3:

Table 3: Definition and testing of policy tools for phase #3

Table 3. Definition and testing of policy tools for phase #3			
Policy tool	Results		
I. Policy brief	Policy Brief "Mitigating windstorm damages on European Forests"  Policy Brief "A vision of cooperation and networking in the field of risk and crisis management across Europe"		
II. Social media activities and professional	Raising society's awareness via posts and videos on Twitter and LinkedIn		
communication products	German translation and dissemination of phase #2 policy brief  Press release on FoRISK webpage: summary report and take- home messages of the workshop		
III. Reference pools	Expert Group Meeting, Online, 7 December 2023		
and expert networks	Collaboration with FORWARDS, Observatory for the resilience of European forests – Online meeting, 8 December 2023		
IV. Capacity building and knowledge exchange via workshops and webinars	Workshop "Living with windstorms in pan-European forests", with FVA-BW and WSL (CH), Freiburg, Germany, 26-28 September 2023		
Report	Final Evaluation report on FoRISK by external evaluator		

## 3.2.5 Pilot phase - forest risk interrelations (9/2022 - 12/2023)

Forest risk and damages are interrelated; some damage agents (e.g. storm) can increase the severity for following damage agents (e.g. bark beetles). Some damage agents can cause more severe impacts when occurring together (e.g. droughts and wildfire).

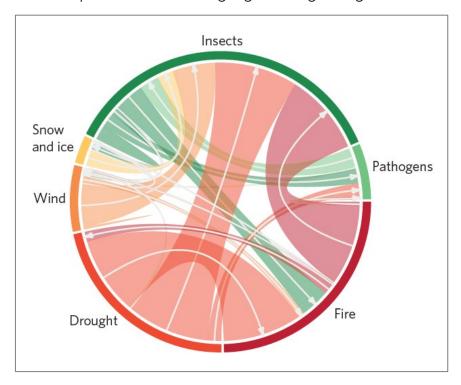


Figure 2: The sector size in the outer circle indicates the distribution of interactions over agents, while the flows through the centre of the circle illustrate the relative importance of interactions between individual agents (as measured by the number of observations reporting on the respective interaction). Arrows point from the influencing agent to the agent being influenced by the interaction.

(Source: Seidl et. Al 2017³)

As consequence, associated measures and considerations need to involve the complex interrelations of forest risks (e.g. natural disturbances and climate change). Therefore, the FoRISK pilot aims to address prominent interrelations of forest risks in order to synthesize and provide promising long-term support for signatories and observers. In this context, overarching focuses will be related to forest resilience and adaptation and on improving collaboration across borders.

## 3.3 Evaluation

#### 3.3.1 Pilot phase monitoring

The FoRISK pilot monitoring shall enable a systematic and objective assessment of the ongoing implementation with the aim to determine the relevance and level of achievement of the pilot deliverables, its effectiveness, efficiency and impact. Furthermore, the monitoring shall provide lessons learned for the ongoing implementation and provide input for the ongoing development of the FoRISK concept paper and ToR.

<sup>3</sup> https://www.researchgate.net/publication/317248864\_Forest\_disturbances\_under\_climate\_change

The preliminary pilot phase monitoring approach is closely related to signatory and observer feedback building on the respective pilot phase deliverables. Hereto, qualitative information based on surveys or interviews will be applied to help, explain or add perspective to quantitative data (e.g. number of policy briefs) in order to monitor the progress during the pilot implementation phase. Using qualitative information provides advantages compared to only quantitative-focused data by allowing an open, flexible range of input based on direct experiences related to the pilot implementation.

## 3.3.2 Final evaluation

During the final pilot evaluation, criteria and indicators will be applied. The identification and collection will follow a preliminary evaluation framework including the identification of evaluation criteria, selection of evaluation techniques (e.g. working groups, questionnaires or interviews etc.), time schedule, involvement of signatories etc.

The final pilot evaluation is performed by an external evaluator and results in an evaluation report planned to be shared with signatories and observers and published for general dissemination as one key deliverable of the FoRISK pilot.

#### 3.4 Pilot closure

In the pilot closure phase, all the previous phases and activities are concluded. This will involve the submission of the final FoRISK evaluation report (see 3.3.2) in combination with the final version of the FoRISK concept paper which will be the basis for the FoRISK ToR as final deliverable presented to signatories and observers for their potential approval leading to the formal launch of the full-scale FoRISK.

During the project closeout, accompanying deliverables are foreseen including the pilot documentation and the transition plan (see FoRISK Concept paper point 4.4.2)

#### 4. Pilots overview and milestones

Pilot phase	Timeframe	Focus	Milestone(s)	
Conceptualization and planning	1/2022 - 8/2022		Pilot implementation plan	
Implementation and monitoring	9/2022 - 12/2023			
Pilot phase #1	9/2022 - 2/2023	Wildfire		
Pilot phase #2	3/2023 - 8/2023	Pest and diseases (tbd)	<b>Deliverables</b> : Policy brief(s), communication,	
Pilot phase #3	9/2023 - 12/2023	Storm (tbd)	reference pool(s), capacity building, report(s) etc.	
Pilot phase – forest risk interrelations	9/2022 - 12/2023	Resilience, adaptation		
Evaluation	12/2023		Evaluation report	
Closure	During 2024		Transition plan ToR	

Please note that some tasks (e.g. partnering, screening, transition planning) will cover a longer timeframe than the associated FoRISK pilot phase.