

Report

Cooperation initiatives between the forestry sector and fire suppression services in the Nordic region

Best practice examples and knowledge sharing

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Context of our report

SNS (Nordic Forest Research, or SamNordisk Skogsforskning)

- **Nordic cooperating body** under the Nordic Council of Ministers
- **Vision**
 - **advance research** in multiple, sustainable uses of forests to increase benefits for the Nordic region and **contribute to a sustainable society**
- **Mission**
 - promote, coordinate and enhance **joint Nordic forest research efforts**
 - **link research with policy** by providing sound, evidence-based, policy-relevant information to policymakers
- **Members**
 - Denmark, Finland, Iceland, Norway, Sweden
- **Observers**
 - Åland islands, Faroe Islands, Greenland

Activities

- Nordic Council of Ministers for Fisheries and Aquaculture, Agriculture, Food and Forestry (MR-FJLS) set up a **working group to examine the challenges facing Nordic forestry** in a future with more extreme weather conditions



- Nordiska nätverket för skogs- och vegetationsbrand (<https://skogsbrandnorden.org/>)

Purpose of our report

Gather knowledge on cooperation initiatives between the forestry sector and fire suppression services in the Nordic region

Provide best practice examples

Facilitate knowledge sharing



Main takeaways



Case study conclusion



Trends and challenges

Report: Main takeaways

- **Joint actions and cross-sector cooperation** are needed to create effective fire prevention
- **Structures** for these interactions and cooperation are required to create synergies among the involved actors

- **Entities adapting and sharing existing data** with benefiting parties
 - additional networking and development activities

- **Entities creating new knowledge, rules, and practices** through facilitation of cooperation
 - can also be initiated by an information-holding entity



Forest inventory maps in Finland

Case description

- To enhance forest fire preparedness, the **Finnish Forest Centre** has developed a local map initiative into a **large-scale forest inventory map effort**
- A **network of multiple actors** (listed in the figure below) sharing knowledge, data, and maps to **enable effective responses to forest fires**
- Expected results: better **understanding of local conditions** and hence **facilitated fire preparedness and firefighting efforts**

Challenges

- Organisational form and culture differences
 - Varying local divisions
 - 22 fire organizational units
- Budget securing and project-based nature of the case
 - Potential solution: maps less costly than fires

Figure 1 Overview of central aspects of case 1.





CASE 2

Forest fire warning services in Finland

Case description

- The **Finnish Meteorological Institute's** meteorological data is important to detect early signs of fire risk. The FMI cooperates with multiple actors (listed below) to emit **forest fire risk warnings**
- The FMI's forest fire warnings are the result of an **automatised process** and are shared with actors impacted by forest fires
- Fire **risk identified**: open fires (campfires, barbecues etc.) are immediately **prohibited**. Additionally, information is communicated on **TV and radio broadcasts**.

Challenges

- Further development of the project require involving **more actors**
 - Combine the index for fire risks with forest maps
 - Finnish Forest Centre (presented in case 1)
- Further digitalisation and automatisation is required
 - **Testing and development** is underway

Figure 3 A graphical overview of the organisation of case 2.





Forest Fire Advisory Board in Norway

Case description

- The purpose of the Forest Fire Advisory Board (1985) is to **bring relevant sectors closer** together and **give advice** to the fire authorities in terms of **forest fire prevention**
- Discuss readiness and preparedness for forest fires and storms as well as give advice to DSB (Norwegian directorate for civil protection)
- Through **recurrent communication** and meetings, occupational and organisational separations are prevented. In case of emergencies, **synergies can be set more effectively**
- **Map development** and **knowledge sharing** involving various actors (listed below)

Challenges

- Fire services are organised **locally** in Norway
 - **Discrepancies** occur between **regions**
 - **Local direct contact** with each fire department
- Almost 40 years of experience, noticeable results!
 - Frequency of interactions
 - Handbook to inspire and guide municipalities wishing to set up volunteer forest fire reserves.

Figure 5 Graphical overview of the organisation of case 3.





Multilevel prevention and preparedness in Norway

Case description

- To address **forest fire preparedness**, Skogbrand (independent mutual insurance company funded by forest owner) implemented a **multi-level cooperation** initiative with actors listed below
- Activities arranged by Skogbrand include courses, agreements, R&D, and awareness and prevention campaigns
 - Implement regional and national standard agreements and management support schemes (listing of resources and responsibilities)
 - Prevention targets: forest machine operators, the public

Challenges

- Preparedness requires **set communication channels** and **formalised processes known** by involved actors before emergency situations
 - Pre-emptive collaboration
 - Create awareness between forest sector, fire sector and the public
 - Encouraging regular updates
 - Exchange of ideas and practices

Figure 7 A graphical overview of the organisation of case 4.





Data sharing and awareness raising in Sweden

Case description

- To raise **awareness** and provide firefighting services with **data and support**, the Swedish Forest Agency (Skogsstyrelsen) has established a **network** of actors involved in the forestry sector and firefighting
 - Data sharing and awareness raising initiative (2021)
 - Digital information, equipment, and network sharing
- Raising **awareness** and **motivation**: network of **local** forest damage coordinators (lokal skogsskadesamordnare)
 - Make **contact** with **local** fire services

Challenges

- Importance of **local context** for organisation of fire services
 - **Regions** are organised autonomously
 - Discrepancies in terms of **awareness** and **systems** used

Figure 9 A graphical overview of the organisation of case 5.





Preparedness, guidelines, and R&D in Sweden

Case description

- To address **forest fire preparedness** and improve **cooperation**, Skogforsk organises various **working groups** and **meetings**, shares **data**, and leads **R&D activities** through AG brand (2015)
 - responsibility, planning, fire risk, consultation, equipment, competency, observations, communication, alarm procedures, site directive, and firefighting
- Need for **national guidelines** for the forest sector as **overlapping** guidelines amongst companies led to **confusion** regarding **responsibility** assignment
 - Ensure that **decisions** are made at a **local level** where on-the-ground **knowledge** is the most developed

Challenges

- **Knowledge** shortcomings and trouble shooting
 - Importance of **international** cooperation
- Fuzzy responsibility boundaries and varying concerns/interests
 - Financing sources, central actors, society and local and national level
 - Balance between digitalisation, forest management and regulatory solutions
- Unexpected impact: shortages in recommended equipment (fire extinguishers in 2017)

Figure 11 Graphical overview of the organisation of case 6.



Case study conclusion

Entities adapting and sharing existing data



- **Network building and forest inventory**

Finnish Forest center

- Sharing forest
- Inventory maps
- Networking



- **Forest fire warning services**

Finnish Meteorological Institute

- Forest fire risk warnings



- **Multilevel prevention and preparedness**

Skogbrand

- Courses
- Standard agreements

Entities creating new knowledge, rules and practices



- **Network building and knowledge sharing**

DSB

- Network and meetings
- Sharing maps provided by members



- **Data sharing/awareness raising**

Skogsstyrelsen

- Awareness and interest
- Network of local coordinators



- **Preparedness, guidelines, R&D**

Skogforsk

- Working groups
- R&D and networking

Trends and challenges

Trends

- Importance of the **local knowledge, expertise, and resources** gathered within the forest sector
- General awareness of the **critical role** that actors in the **forest sector** can play in times of crisis
- Many solutions revolve around the improvement and/or dissemination of **maps by the forestry sector**
- **Diffuse responsibilities:** spontaneous initiatives tend to develop into a **bigger scale** and that roadmaps and **tasks are fine-tuned over time**

Challenges

- Varying **organisational cultures** and wide array of **local specificities**
 - **Flexibility** is required: local **adaptations**
- **Budget shortfalls**, impact on projects' ambitions (meetings, activities etc.)
 - Informal organisation of work
 - Regional fundings
- General **awareness**, impact on receptiveness and motivation
 - Impact of 2018

**Thank you for your attention
and please do not hesitate to get in touch with us!**



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