



**net risk work**

# Networking for the European Forest Risk Facility initiative



Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

## 2ND NATURAL HAZARDS RISK MANAGEMENT WORKSHOP: EMERGENCY MANAGEMENT AND RISK GOVERNANCE TOWARDS RESILIENT SOCIETIES

Cagliari (Sardinia, Italy), 10-13th April 2018

### 1st workshop results





**net risk work**

2ND NATURAL HAZARDS RISK MANAGEMENT WORKSHOP:  
EMERGENCY MANAGEMENT AND RISK GOVERNANCE TOWARDS RESILIENT SOCIETIES  
Cagliari (Sardinia, Italy), 10-13th April 2018  
1st workshop results presentation



Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

## **1ST NATURAL HAZARDS RISK MANAGEMENT WORKSHOP: Managing forest risks towards disaster reduction: the case of wildfires, storms, floods and avalanches**

*Solsona (Catalonia, Spain), 4-6th October 2017*

Fourteen experts on different forest risks and risk management domains  
from research to practitioners from 11 countries.

3 days workshop with key notes, discussion groups and field trips sessions.





net risk work



Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

## Key note conferences on each risk

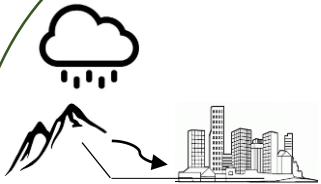
H<sub>z</sub>



“New changing risk contexts are **jeopardizing stated paradigms and current regional planning** when fires are impacting inhabitants and infrastructure”



“Climate change is increasing the large storms events across Europe, with severe past examples of high relevance in the central parts. Storms have **economic and social impacts in the field of forests and related activities**”



“(….)new flood risk mitigation approaches through the **involvement of forest management** looking forward to **the upcoming challenges posed by climate change context**”

P<sub>r</sub>



“Afforestation of avalanche release areas is the most cost-efficient defense (...) protective function of forest to minimize avalanche formation, and **how climate change will entail new vulnerabilities for forest resilience**”



**net risk work**

2ND NATURAL HAZARDS RISK MANAGEMENT WORKSHOP:  
EMERGENCY MANAGEMENT AND RISK GOVERNANCE TOWARDS RESILIENT SOCIETIES  
Cagliari (Sardinia, Italy), 10-13th April 2018  
1st workshop results presentation



## **Key note on risk theory and multi-risks R+D projects**

### **Awareness-raising on risk in theory and practice**

“What affects our risk perception?”, “What is awareness?” and “Raising risk awareness in practice” (...) to understand **the multiple dimensions of the concepts**”

### **PLAtform for Climate Adaptation and Risk reDuction “PLACARD Project”**

“constituted as a common space where the different **Climate Change Adaption (CCA) and Disaster Risk Reduction (DRR) communities** can meet, share experiences and create opportunities for collaboration”

### **Transnational Plans for the management of forest risks “PLURIFOR Project”**

“The aim is to incorporate the latest scientific understanding of hazards to forests in the south-west of Europe **into the civil planning** mechanisms dealing with these hazards and their impacts”

### **Fire and Rescue Innovation Network “FIRE-IN Project”**

“improving the national and European Fire & Rescue (F&R) capability development process (...) network will be linked at cross-domain and cross-border level and will feed **harmonised operational requirements** (or challenges) into national and EU capability development”

### **The flood risk management plan of Sardinia “Directive 2007/60/EC”**

“The plan contains all knowledge and information about flood risk in Sardinia, and is also **useful for urban planning**”



net risk work

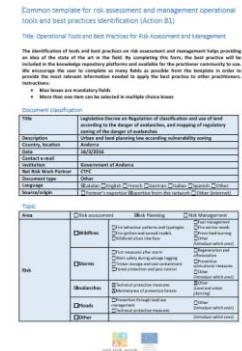


Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

## NET RISK WORK project outcomes

Best practices  
compilation

“common template to describe the identified tools and best practices on risks assessment and management”



Risk  
interaction  
matrix

“capitalizes and shares the knowledge and possibilities in respect to single risk and risk interaction (...) thinking in risk formula concepts (vulnerability, exposure and hazard) as well as natural and human influences”

Risk Platform

“is a social media platform to share experiences, events, knowledge, documents, feelings, etc., about risk. The users are academics, practitioners, and public in general.”

Wildfire  
regional  
nodes

“Regional Node is the spatial or virtual location where knowledge domains, networks and repositories intersect (...) the objective is to establish a central point to be used as a link for existing networks, individual practitioners and communities that possess expert knowledge on fire risk.”



**net risk work**

## **DS 1: How are risks affecting society? How are they interacting in a CC context?**

**“Natural forests hazards are evolving together with **global change**” ; *need of understanding both drivers (climate change, land-use changes) plus social changes!?***

**“Global change is (..) **increasing the risk** in already vulnerable sites (..) making risks **appear in no usual areas**. Beyond physical changes, social vulnerability is highly influenced by these changes in terms of **culture of risk**”**

**“the necessary **role of urban and spatial planning** to reduce exposure and vulnerability becomes more and more **crucial**”**

**“a paradigm shift will be necessary, which **sets priorities** according to social values and implies **socialization of risks** (from “protecting everything” towards “protect the crucial”). More and more, **civil protection issues** seem to be a **strong criterion for forest risk planning at spatial/urban level**”**



**net risk work**

Discussion session 1: How are risks affecting society? How are they interacting in a CC context?

“risk interactions (..) Together with the spread of “extraordinary” “unusual” or “new” events, **best practices and lessons learned exchange** appears to be a powerful tool to **accelerate the learning process** and the development of adaptive plans”

“Integrative and **multidisciplinary approaches** within the public bodies (commonly segmented on different administrative competences), **complemented with participatory approaches**, should help to deal with increasing risk **complexity and uncertainties**”



“Wildfire risk has increase across EU (..) fire behaviour is reaching **anomalous values**, regarding its historical records”

“As forest fires are increasingly impacting communities and infrastructure (..) **new actors have to be involved** into the risk planning and management phases”





net risk work

Discussion session 1: How are risks affecting society? How are they interacting in a CC context?



**“less vulnerable forest to a fire’s spread as a main strategy to reduce wildfire risk” ;**  
*harmonisation of fire prevention objectives with productive ones?*

*Main risk interactions; fire – avalanche & fire – floods & storms - fire*

**“Storms are unavoidable and their occurrence cannot be prevent. There is no way to influence their spatial distribution and intensity”**



**“Characterized to appear too seldom at a single location, which makes it difficult to consolidate a social risk culture among forest owners and citizens”**

**“Secondary direct effects, such as bark beetle exposure (..) planned management strategy, far from premature actions aiming at overcoming the most visible effects”**

*Main risk interactions; storm – bark beetle - fire*





net risk work



Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

Discussion session 1: How are risks affecting society? How are they interacting in a CC context?

“Pluvial floods and flash floods (..) are likely to become more frequent throughout Europe. However, **quantitative projections** of changes in flood frequency and magnitude **remain highly uncertain**”



“**Forest plays a crucial role** in the regulation and mitigation of flood risk (..) as **climate change** will have important effects on the composition and development of **forest communities**, this will also change the water retention capacity of forests with all its consequences”

“All mountainous countries have recognized and ensured the conservation and maintenance of this **forest function** through **specific legal regulations**”



“Switzerland has strongly done research and development on **decisions support tools** for managing protection forests and for **prioritizing public resource allocation** according to the damage avoided by protection forests in each Canton”



net risk work

Discussion session 1: How are risks affecting society? How are they interacting in a CC context?

“As wildfire will become more frequent in alpine areas, the **promotion of fire adapted species** and a change in forest structures should increase ecosystem resilience” ; *What about wood industry / forest managers preferences?*



*Example of double effect of climate change: (+) increase tree line level and protection forest effects (-) more fire risk - cascade effect*



net risk work

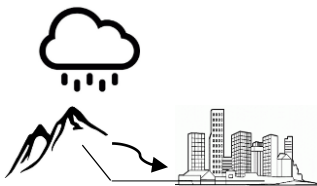
## DS 2: How to be effective in mitigating risks? Achievements towards risk assessment, mapping, and cost-effectiveness

“more and more risk management has to deal with **uncertainties** posed by a climate change context”

“there is still work to do in integrating vulnerability assessments into **insurance accountability** as a means of **motivating social awareness** and **own responsibility** in managing risk”

“Independently of the event’s magnitude, **analysis and reflection afterwards** can offer useful information for improving risk management”

“Knowing the **stochastic occurrence, distribution, and intensity** of natural hazards offers significant advantages for **risk mapping**. Contrary, **random distribution** (..) add difficulties in connecting the benefits of prevention actions compared to avoided risk impacts”





**net risk work**

2ND NATURAL HAZARDS RISK MANAGEMENT WORKSHOP:  
EMERGENCY MANAGEMENT AND RISK GOVERNANCE TOWARDS RESILIENT SOCIETIES  
Cagliari (Sardinia, Italy), 10-13th April 2018  
1st workshop results presentation



Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

Discussion session 2: How to be effective in mitigating risks? Achievements towards risk assessment, mapping, and cost-effectiveness

“needs more **cooperation at all administrative levels**, nationally and internationally, for data sharing and homogeneous risk assessment, as well as mapping procedures based on geographic limits instead of administrative boundaries” ; *how is risk planning&mngmt organised?*

“Planning of forest risks should be developed and linked to the main **management objectives** (recreation, biodiversity, protection, incomes...), as no unique solution preventing risk, nor a threshold of perturbation tolerance exists”

“**forecasting protocols** are being affected by new climate change scenarios” ; *also emergency services*

“Typical outputs on maps, indicating colours according to the danger level have to be strongly rigorous, as information must be credible and trustworthy for building up confidence with the risk managers. At the end, risk **prevention actions are often affecting societal/individual rights and duties**”



**net risk work**

2ND NATURAL HAZARDS RISK MANAGEMENT WORKSHOP:  
EMERGENCY MANAGEMENT AND RISK GOVERNANCE TOWARDS RESILIENT SOCIETIES  
Cagliari (Sardinia, Italy), 10-13th April 2018  
1st workshop results presentation



Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

Discussion session 2: How to be effective in mitigating risks? Achievements towards risk assessment, mapping, and cost-effectiveness

**“visualisation of trade-offs between prevention-preparedness-response** and recovery efforts improves technical and social acceptability in decision making processes, while offering better cost-efficient solutions”

**“Incommensurability of most forest’ services** outside of market prices (externalities) add difficulties in evaluating the benefits of prevention actions” ...

... **“quantitative approaches assessing protected goods and values can be complemented with qualitative analysis and social appraisal methods”**



net risk work

## DS 3: How to be effective in mitigating risks? Achievements towards risk planning, governance and communication to build up a resilient society

### Integration of risk planning into the legal framework

“willingness of **authorities** is important, their **own awareness about the issue of decision making** (lack of knowledge, and lack of time) **is key**”

“The **inertia** (*and timing*) **of the legislative process** can be a constraint to develop risk management, as by the time the law or regulation comes into force and is being implemented, new solutions can arise and the addressed change might already be outdated” ...

... “how to approach **“what we don’t know”** from a legal perspective and how flexible should the law be”

“**Windows of opportunity** (..) appear most of the time after a catastrophe (..) should be **prepared before**” ; *proactive communication strategy*

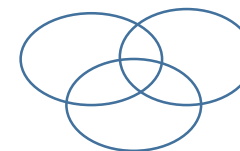


**net risk work**

Discussion session 3: How to be effective in mitigating risks? Achievements towards risk planning, governance and communication to build up a resilient society

**“For an effective integration of forest risk into spatial/urban planning, it is necessary to adapt the risk assessment information to the **requirements of land planners**”**

- ✓ **“include the expertise** on forest risks in the initial stages of the planning phases”
- ✓ **“quality** of risk assessment information, a **strong legal framework**”
- ✓ **“having measures and tools for putting the needs of risk management before private (even other public departments) interests”**
- ✓ **“strong institutional coordination for being able to assume the transverse dimension of factors affecting the phases of the risk cycle and its domains” ; several risks’ interactions**
- ✓ **“participatory processes (..) for promoting the corresponding awareness and (..) own risk mitigation responsibility (..) Uncertainties”**



Spheres of  
knowledge





**net risk work**

Discussion session 3: How to be effective in mitigating risks? Achievements towards risk planning, governance and communication to build up a resilient society

## Risk culture

“the introduction of the “**acceptable risk**” concept, which indicates the risk that people collectively and individually are willing to accept, is needed (..) Some technological solutions (..) can lead to the perception of a false sense of security based on the “technological myth”

“Risk communication has to **be clear, precise and understandable**. (..) Being credible, inspiring and confident are core elements of risk communication and awareness”

“since new hazard scenarios are arising faster than the necessary **cultural processes** to adapt social resilience (..) Extreme events beyond the “normal” patterns (..) social demands in terms of security and protection are the same”

“Individual responsibility managing risk should not be overshadowed by public prevention and emergency services, and (*public / individual*) rights and duties should be clarified according to each situation (..) changing risk context makes it necessary to explore deeply the “**risk property**” concept”



net risk work

2ND NATURAL HAZARDS RISK MANAGEMENT WORKSHOP:  
EMERGENCY MANAGEMENT AND RISK GOVERNANCE TOWARDS RESILIENT SOCIETIES  
Cagliari (Sardinia, Italy), 10-13th April 2018  
1st workshop results presentation



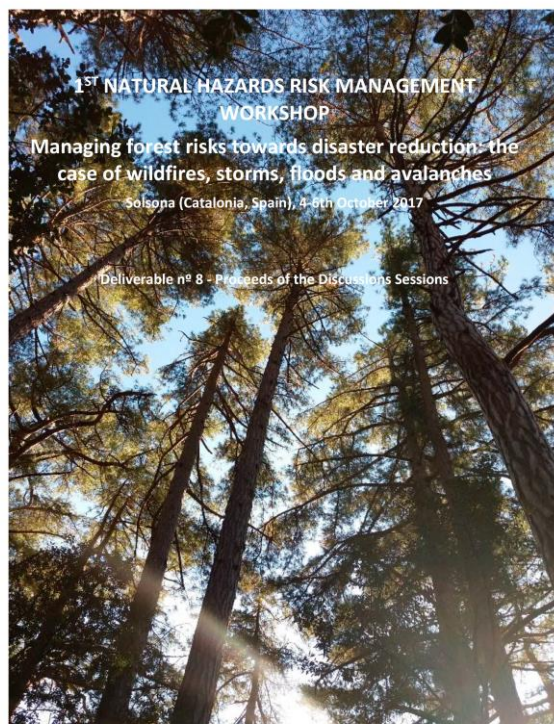
Funded by  
European Union  
Humanitarian Aid  
and Civil Protection

**Deliverable #8**

<http://netriskwork.ctfc.cat/results/>



Networking for the European Forest Risk Facility initiative – NET RISK WORK



**Thanks for your attention**