

# Common template for risk assessment and management operational tools and best practices identification (Action B1)

Title: Operational Tools and Best Practices for Risk Assessment and Management

The identification of tools and best practices on risk assessment and management helps providing an idea of the state of the art in the field. By completing this form, the best practice will be included in the knowledge repository platforms and available for the practitioner community to use. We encourage the user to complete as many fields as possible from the template in order to provide the most relevant information needed to apply the best practice to other practitioners.

Instructions:

- Blue boxes are mandatory fields
- More than one item can be selected in multiple choice boxes

## Document classification

<b>Title</b>	<b>PPRIF - Prevention plan about wildfire risk (plan de prevention du risque incendie de forêt)</b>
<b>Description</b>	<b>Inscription of wildfire risk in French urban planning documentation</b>
<b>Country, location</b>	<b>France</b>
<b>Date</b>	<b>2017</b>
<b>Contact e-mail</b>	
<b>Institution</b>	<b>Municipalities</b>
<b>Net Risk Work Partner</b>	<b>EPLFM</b>
<b>Document type</b>	<b>Guidelines</b>
<b>Language</b>	<input type="checkbox"/> Catalan <input checked="" type="checkbox"/> English <input checked="" type="checkbox"/> French <input type="checkbox"/> German <input type="checkbox"/> Italian <input type="checkbox"/> Spanish <input type="checkbox"/> Other
<b>Source/origin</b>	<input checked="" type="checkbox"/> Partner's expertise <input type="checkbox"/> Expertise from the network <input type="checkbox"/> Other (internet)

## Topic

<b>Area</b>	<input type="checkbox"/> Risk assessment	<input type="checkbox"/> Risk Planning	<input type="checkbox"/> Risk Management
<b>Risk</b>	<input checked="" type="checkbox"/> <b>Wildfires</b>	<input type="checkbox"/> Fire behaviour patterns and typologies <input type="checkbox"/> Fire ignition and spread models <input checked="" type="checkbox"/> Wildland urban interface	<input type="checkbox"/> Fuel management <input type="checkbox"/> Fire service needs <input type="checkbox"/> Prescribed burning <input type="checkbox"/> Other <i>[Introduce which ones]</i>
	<input type="checkbox"/> <b>Storms</b>	<input type="checkbox"/> First measures after storm <input type="checkbox"/> Work safety during salvage logging <input type="checkbox"/> Timber storage and cost containment <input type="checkbox"/> Forest protection and pest control	<input type="checkbox"/> Regeneration and afforestation <input type="checkbox"/> Preventive silvicultural measures <input type="checkbox"/> Other <i>[Introduce which ones]</i>
	<input type="checkbox"/> <b>Avalanches</b>	<input type="checkbox"/> Technical protective measures <input type="checkbox"/> Maintenance of protection forests	<input type="checkbox"/> Other <i>[Introduce which ones]</i>
	<input type="checkbox"/> <b>Floods</b>	<input type="checkbox"/> Prevention through land use management <input type="checkbox"/> Technical protective measures	<input type="checkbox"/> Other <i>[Introduce which ones]</i>
	<input type="checkbox"/> <b>Other</b>		<i>[Introduce which ones]</i>
<b>Cross-sectoral topics</b>	<input type="checkbox"/> Risk and vulnerability assessment and mitigation	<input checked="" type="checkbox"/> Risk planning, governance and policy framework	

	<input type="checkbox"/> Cost-effectiveness assessment <input type="checkbox"/> Civil protection, emergency and post-disaster management	<input type="checkbox"/> Community involvement and risk communication <input type="checkbox"/> Other: [Introduce which ones]
<b>Level</b>	<input checked="" type="checkbox"/> Local <input type="checkbox"/> Regional <input type="checkbox"/> National <input type="checkbox"/> Cross-border <input type="checkbox"/> EU <input type="checkbox"/> Global	
<b>DRM cycle phase</b>	<input checked="" type="checkbox"/> Prevention <input type="checkbox"/> Preparedness <input type="checkbox"/> Response <input type="checkbox"/> Recovery	
<b>DRM domain</b>	<input checked="" type="checkbox"/> Policy making <input type="checkbox"/> Early warning system <input type="checkbox"/> Disaster response	
<b>Sendai priorities</b>	<input type="checkbox"/> Priority 1: Understanding disaster risk <input type="checkbox"/> Priority 2: Strengthening disaster risk governance to manage disaster risk <input type="checkbox"/> Priority 3: Investing in disaster risk reduction for resilience <input checked="" type="checkbox"/> Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction	
<b>Contribution to Sendai Targets</b>	<input type="checkbox"/> Reduce global disaster mortality <input checked="" type="checkbox"/> Reduce the number of affected people <input checked="" type="checkbox"/> Reduce the direct disaster economic loss <input checked="" type="checkbox"/> Reduce disaster damage to critical infrastructure <input type="checkbox"/> Increase the number of national and local disaster risk reduction strategies <input type="checkbox"/> Enhance international cooperation to developing countries <input type="checkbox"/> Increase availability of and access to multi-hazard early warning systems and disaster risk information and assessment	

## Description and analysis

<p><b>Summary: quick presentation of the Good Practice</b> [<i>Objective: summarize in a few lines the key elements of the good practice</i>]</p>
<p><u>Place in national/regional policy</u></p> <p>Risk prevention plans (planning documents) exist for different types of natural or technological risks in France. The PPRiF is the declination of this document specifically focusing on forest fires risk. It is the unique specific procedure concerning forest fire risk in urban and land planning. This measure is adopted at national level but is mainly used and applied in the Southern part of France.</p>
<p><u>Goals and achievements</u></p> <p>The formulation of a PPRiF allows for a better inclusion of the forest fire risk in the development project of a municipality. It has the following objectives:</p> <ul style="list-style-type: none"> <li>– Identify the risk prone areas and raise the public awareness</li> <li>– Limit the number of fire outbreaks</li> <li>– Reduce the vulnerability of people and goods already at risk</li> <li>– Prevent new establishments of people, buildings or activities in the fire prone areas</li> </ul>
<p><u>Actors involved</u></p> <ul style="list-style-type: none"> <li>– Prefect, State local services for the territory and the sea (DDTM) for ordonnance and instruction</li> <li>– Urbanism departments of municipalities for enforcement and control</li> <li>– Larger public (impact on individual building decisions)</li> </ul>
<p><u>Implementation stage</u></p> <p>Up until April 2016 (last assessment), 195 PPRiF are in effect in 17 departments, of which 190 are approved and 5 have been made effective against the public in advance. In addition, 69 PPRiF have been ordered and are being instructed.</p>
<p><u>State of technical knowledge</u></p> <p>The technical knowledge in this case is related to:</p> <ul style="list-style-type: none"> <li>– the scientific knowledge about wildfire risks (calculation of available fuel, combustibility and flammability of different species, etc.)</li> <li>– the performance of the fire propagation models used</li> </ul>
<p><u>Context</u></p> <p>Risk Prevention Plans (“PPR”) have been created by the Barnier Law of 2nd of February 1995 related</p>

to the protection of the environment. More details are provided by the Environmental Code (articles L562-1; R562-1 and followings), and the interministerial circular on PPRiF of 28th September 1998 (not published in the Official Journal). It entails a legal public easement that applies to all and to the planning documents (article L.562-4 of the Urbanism Code).

Unlike other natural risks, the “natural disaster” guarantee does not apply in the case of forest fires. The compensation for damages caused by forest fires can be claimed to fire insurance.

#### **Detailed Characteristics** [*Objective: detail the implementation conditions of the Good Practice*]

##### Description of the implementation steps

The PPRiF treats the three pillars of the forest protection against wildfires: brushing, access and water to facilitate suppression operations. It may also prescribe specific measures to increase the building resistance to fire.

The risk results from the crossing of the hazard (forest fire), the response capabilities and the economic and human issues (houses, campsites, schools...). To develop a PPRiF, all three layers need to be investigated by means of:

- Hazard mapping: using fuel characteristics, topography and wind. There are 6 classes from inexistent to exceptional.
- Points of interest mapping (scattered or isolated dwellings, infrastructures, networks, cultural patrimony, etc.)
- Protective measures mapping (presents the characteristics of the defence equipment like access roads, water flow of fire hydrant, brushing legal obligations, etc.)

The zoning (risk category defined for each parcel) is realized by superposing those three layers.

**Red zone** (or A): High to exceptional risk which does not allow for the defence of the exposed goods. Safety measures are applied to existing buildings and activities. Further development is prohibited. Reconstruction after a fire is most of the time prohibited as well.

**Blue zone** (B): distinction between different levels:

B1: medium to strong risk areas in which the protection measures are well adapted and the defence operations are possible in good technical and economic conditions. Urban development is possible provided that urban density conditions are respected and protective measures are integrated in the planning operations.

B2: medium risk areas in which the protection measures are well adapted and the defence operations are possible in good technical and economic conditions. Different types of urban development are possible provided that the relevant individual and collective prevention measures are implemented.

B3: Low risk areas in which the vulnerability of the buildings must be decreased and the defence capability increased.

**White zone** (C): very low to inexistent risk, no specific measures under the PPRiF (though the Forest Code provisions apply)

##### **Governance**

A 7 steps procedure:

1. A prefectural decree ordonning the formulation of a PPRiF
2. Instruction and development of the project by the DDTM in relation with the municipality and the relevant partners (local Fire and Rescue services, urban planning experts etc.)
3. Formal consultation of the municipality, local authorities and regional institutions
4. Public inquiry
5. Possible modification of the project
6. Approval decree from the Prefect
7. Insertion in the urban planning documents (PLU for instance)

##### Necessary means to implement the Good Practice in efficient conditions

The availability of the data (to develop the hazard map) is a crucial element, as well as the political



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will as it is a highly HR intensive procedure.

Challenges encountered during implementation and solutions incurred

The classification of an area as red may result in the increase of the risk as pointed out by the forest owners' association. Indeed, sustainable forestry and the development of ancillary activities may be considered as a limiting factor of forest fires. Scattered dwellings take part in the vigilance and early warning of fire outbreaks. Areas identified in the red class therefore must not be left derelicted. Prohibition of reconstruction after a fire in the red zones is a bone of contention in numerous cases. In several cases, the appeal against the PPRif has resulted in the authorization of reconstruction provided that certain measures are implemented (example in the Var department).

Priorities identified for successful implementation of the Good Practice

**Impact of the Good Practice** [Objective: evaluate the impact of the Good Practice].

The public enquiry being a mandatory step in the approval process, this has contributed to increase the public awareness about forest fire risks, and legal brushing obligations. This is also the case for the elected representatives of the municipalities, in charge of the control of their implementation. Also, the PPRif force the municipalities to build protection measures as a prerequisite to the urban development of fire prone areas.

The reluctance expressed by the municipalities' representatives is based on the inflexibility of the PPRif, they fear that it would prevent development opportunities for their territory. Also, it is difficult to revise the document (new public inquiry needed) to take into account the realization of protection measures allowing for further expansion of urban sprawl.

**Future developments** [Objective: understand the follow-up perspectives]

- Implementation of ordered PPIF;
- Possibility of ordering new PPIF.

**External resources** [Objective: provide further information]

Attached materials	[include format (document, photo, video...) and name of the file]
Web links	
Contacts	

**[Additional information - optional]**

**Lessons learnt** [Objective: compare the results obtained to the objectives set at the start of the Good Practice]

Evaluation process

After request by the municipality to the Prefect, the PPRif can be revised to account for a modification of the hazard, or new protection measures.

Assessment of results (quantitative and qualitative) and comparison with main goals

The evaluation carried out by the Senate in April 2016 underlines the delays in the implementation of the PPRif regulation. Indeed, among the 69 pending PPRif, 50% have been ordered more than 10 years ago.

In 2007, the report ROMAN-AMAT on the preparation of French forests to climate change recommended to set deadlines to the approval of ordered PPRif in the Mediterranean area. It suggested that 90% of them should be approved by 2012 and 100% of them by 2015.

Negative aspects identified

A lot of municipalities, including some that are confronted with a high level of in the



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Mediterranean area risks or those with a large population (for instance, Marseille) are still without a PPRif in place.

Unexpected consequences (short / mid / long term) and corrective measures implemented

**Durability and transferability** [*Objective: evaluate the integration of the Good Practice and its sustainability, give recommendations for transferability*]

**Is this information:**

**Replicable**

**Measurable**

Regulatory Framework

This measure is written in the Law, and detailed in several decrees and technical notes.

Stability of the human environment (partnership, structures, population)

Political stability at the municipal level is necessary to carry out this long process.

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Financial requirements

The rule is that the State shall cover the totality of the process. However, some elected representatives raise the issue that the municipalities are charged with the costs of the studies/surveys for revising the PPRif. This information is not verified.

Success factors

- Early involvement of the locally elected representatives
- Facilitation of modification and revision procedures (to allow further urban development provided that the right protection measures exist)
- Availability of hazard maps at the regional / zonal level to accelerate the process

Risk factors

Numerous appeals from land owners against the classifications of parcels in a certain risk class.

Additional and non-formal experiences contributing to the implementation of Good Practice

In a case law (January 2014) the State Council has confirmed that the PPRif purpose being the protection of the population, it is not subjected to environmental impact regulations.



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