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 practioner 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

Title	**Legislative Decree on Regulation of classification and use of land according to the danger of avalanches, and mapping of regulatory zoning of the danger of avalanches**
Description	**Urban and land planning law according vulnerability zoning**
Country, location	**Andorra**
Date	**16/3/2016**
Contact e-mail	
Institution	**Government of Andorra**
Net Risk Work Partner	**CTFC**
Document type	**Other**
Language	☒Catalan ☐English ☐French ☐German ☐Italian ☐Spanish ☐Other
Source/origin	☐Partner's expertise ☒Expertise from the network ☐Other (internet)

Topic

Area	☐Risk assessment		☒Risk Planning	☐Risk Management

Risk	☐**Wildfires**	☐Fire behaviour patterns and typologies ☐Fire ignition and spread models ☐Wildland urban interface	☐Fuel management ☐Fire service needs ☐Prescribed burning ☐Other *[Introduce which ones]*
	☐**Storms**	☐First measures after storm ☐Work safety during salvage logging ☐Timber storage and cost containment ☐Forest protection and pest control	☐Regeneration and afforestation ☐Preventive sylvicultural measures ☐Other *[Introduce which ones]*
	☒**Avalanches**	☒Technical protective measures ☒Maintenance of protection forests	☒Other *[Land and urban planning]*
	☐**Floods**	☐Prevention through land use management ☐Technical protective measures	☐Other *[Introduce which ones]*
	☐**Other**		*[Introduce which ones]*

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

Description and analysis

Summary: quick presentation of the Good Practice *[Objective: summarize in a few lines the key elements of the good practice]*

Place in national/regional policy

National normative in the framework of land and urban planning general law. The land planning law specifies that the limits of urban development are defined according to the avalanche risk information. This determination is key factor for developing this regulation.

Goals and achievements

States the classification and use of land as well as technical and administrative conditions for the regulation and protection of urban development and affected land by avalanche risk.
Gives a new protection classification for the "avalanche defence forest" and conceives it as a "natural prevention". Therefore, protecting them from other natural hazards (i.e. forest fires), urban development or any action that reduce significantly their surface is necessary.

Actors involved

Land owners, local, regional and national administrations, avalanche experts and officers, forest managers and urban planners.

Implementation stage

Is an operational measure since 2016. The regulations must be applied before build or modify the buildings.

State of technical knowledge

The technical knowledge is based on the national French methodology for natural hazard prevention plans; the case of avalanches.

Context

Andorra is a little mountainous country in the middle of Pyrenees and economic activity is potentially

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vulnerable to the avalanches.
The lasts regulations/laws were out of phase. There was a need of improving the official risk cartography, the associated regulations and making compatible the urban development and natural risks mitigation.

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

Description of the implementation steps
Creation of an official cartography at national level (avalanche risk zoning); delimitation of different levels of hazard; creation of a specific regulation for each level (conditions for urban development, establishing technical issues, etc.); indentification of the key actors involved.

Governance
Urbanism department of government and municipalities.

Necessary means to implement the Good Practice in efficient conditions
Knowledge of (zoning) avalanche, preventive infrastructure (kiddle, rakes, etc.), assessment of forest cover with a potential protective role as a natural preventive measure and relation with other natural hazards.

Challenges encountered during implementation and solutions incurred
Inclusion of avalanche risk analysis on the forest planning/management as a regulatory measure for authorising forest interventions (at private ownership stand level).

Priorities identified for successful implementation of the Good Practice
Identification of the dangerous avalanche zones. Making compatible urban development and natural risks and defining each stakeholder and his responsibility. Considering the protective function of forests towards avalanche risk and zoning them in the official cartography.

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

A shared responsibility is established between all stakeholders directly or indirectly involved in the origin or the consequences of avalanche risk. Therefore, citizens and public administrations take part of the risk management.

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

External resources [*Objective: provide further information*]	
Attached materials	(PDF_catalan) "Decret d'aprovació del Reglament de classificació i utilització del terreny segons la perillositat d'allaus, i de la cartografia de zonificació reglamentària de la perillositat d'allaus" (Decree approving the Regulation of classification and use of land according to the danger of avalanches, and mapping of regulatory zoning of the danger of avalanches)
Web links	https://www.bopa.ad/bopa/028017/Documents/GD20160311_13_10_55.pdf
Contacts	

[Additional information - optional]

Lessons learnt [*Objective: compare the results obtained to the objectives set at the start of the Good Practice]*
Evaluation process, if exists (internal or external)
Assessment of results (quantitative and qualitative) and comparison with main goals
Negative aspects identified *Not applicable for existing buildings (before come into force this law).*
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			
Stability of the human environment			
Financial requirements			
Success factors			
Risk factors			
Additional and non-formal experiences contributing to the implementation of Good Practice			

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