

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

Title	Use and classification of the land according to the flood risk
Description	Urban and land planning law according vulnerability zoning
Country, location	Catalonia, Spain
Date	18/7/2006
Contact e-mail	
Institution	Government of Catalonia, Department of Territory and Sustainability
Net Risk Work Partner	CTFC
Document type	Other
Language	<input checked="" type="checkbox"/> Catalan <input type="checkbox"/> English <input type="checkbox"/> French <input type="checkbox"/> German <input type="checkbox"/> Italian <input checked="" type="checkbox"/> Spanish <input type="checkbox"/> Other
Source/origin	<input type="checkbox"/> Partner's expertise <input checked="" type="checkbox"/> Expertise from the network <input type="checkbox"/> Other (internet)

Topic

Area	<input type="checkbox"/> Risk assessment	<input checked="" type="checkbox"/> Risk Planning	<input type="checkbox"/> Risk Management
Risk	<input type="checkbox"/> Wildfires	<input type="checkbox"/> Fire behaviour patterns and typologies <input type="checkbox"/> Fire ignition and spread models <input 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"/> Storms	<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"/> Avalanches	<input type="checkbox"/> Technical protective measures <input type="checkbox"/> Maintenance of protection forests	<input type="checkbox"/> Other <i>[Introduce which ones]</i>
	<input checked="" type="checkbox"/> Floods	<input checked="" 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"/> Other	<i>[Introduce which ones]</i>	
Cross-sectoral topics	<input type="checkbox"/> Risk and vulnerability assessment and mitigation <input type="checkbox"/> Cost-effectiveness assessment <input type="checkbox"/> Civil protection, emergency and post-	<input checked="" type="checkbox"/> Risk planning, governance and policy framework <input type="checkbox"/> Community involvement and risk communication	

	disaster management <input type="checkbox"/> Other: [Introduce which ones]
Level	<input type="checkbox"/> Local <input checked="" type="checkbox"/> Regional <input type="checkbox"/> National <input type="checkbox"/> Cross-border <input type="checkbox"/> EU <input type="checkbox"/> Global
DRM cycle phase	<input checked="" type="checkbox"/> Prevention <input type="checkbox"/> Preparedness <input type="checkbox"/> Response <input type="checkbox"/> Recovery
DRM domain	<input checked="" type="checkbox"/> Policy making <input type="checkbox"/> Early warning system <input type="checkbox"/> Disaster response
Sendai priorities	<input checked="" type="checkbox"/> Priority 1: Understanding disaster risk <input checked="" 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 type="checkbox"/> Priority 4: Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction
Contribution to Sendai Targets	<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 checked="" 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

Summary: quick presentation of the Good Practice [Objective: summarize in a few lines the key elements of the good practice]
<p>Place in national/regional policy</p> <p><i>Regional normative in the framework of urban planning regulation/law. In this case, a common article referred to natural risks stating that all infrastructures should be protected against natural hazards, is complemented with one specific article about the integration of flood risk into land planning. The Water Agency (inside Department of Territory and Sustainability) undertakes flood risk zoning and vulnerability cartography. This reference cartography is the framework for establishing the urban regulations.</i></p>
<p>Goals and achievements</p> <p><i>Integration the flood risk in the urban normative. The possible use and classification of the land according to the different risk zone defined is stated.</i></p>
<p>Actors involved</p> <p><i>Hydrological administration, municipalities, flood experts and flood risk officers, urban planners.</i></p>
<p>Implementation stage</p> <p><i>At the time the law came into force the urban and land plans should be modified for adapting them to the regulations of this law.</i></p>
<p>State of technical knowledge</p> <p><i>The flood risk in Catalonia is the only natural risk with a specific zoning and normative.</i></p>
<p>Context</p> <p><i>Tragic flood events in the past forced the necessary change at the urban planning. In the past, lots of housing were done into river beds or in flood risk zones. In consequence, the integration of flood risk into the urban planning law wants to solve this inconsistent planning. This is in consonance with a Spanish law which can be enlarged at regional level.</i></p>

Detailed Characteristics [Objective: detail the implementation conditions of the Good Practice]	
Description of the implementation steps <i>Creation an official reference cartography and developing the regulation into the urban regional law. Zoning is divided at different risk levels according to the “return period” (10, 50, 100 and 500 years).</i>	
Governance <i>Autonomous agency named Water Agency of Catalonia into the Department of Territory and Sustainability of the Government of Catalonia.</i>	
Necessary means to implement the Good Practice in efficient conditions <i>Good knowledge of flood risk zoning and capacity of transforming it in a “official” reference cartography.</i>	
Challenges encountered during implementation and solutions incurred <i>Water management is governed under each one hydrographical basin. Regional watersheds (those occurring only into a regional territory) are managed by the Regional Government, while interregional watersheds are under the management of the Estate Government. In Catalonia both types of basins exist, and there is no perfect coordination between the two institutional levels.</i>	
Priorities identified for successful implementation of the Good Practice <i>Identification of flood risk zones, create an official reference cartography and include the corresponding regulation for housing and infrastructures risk mitigation into the legislation.</i>	

Impact of the Good Practice [Objective: evaluate the impact of the Good Practice].	
<i>Decrease the risk impact in goods and services, increase prevention policies, make compatible urban development and flood risk, promote risk awareness among land planners, municipalities and citizens.</i>	

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

External resources [Objective: provide further information]	
Attached materials	(PDF_catalan) “Reglament de la Llei d’urbanisme. Article 6” (Article 6. Regulation of Urbanism Law)
Web links	http://governacio.gencat.cat/web/.content/jurat_dexpropiacio_de_catalunya/documents/arxiu/d305-06.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
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 <input type="checkbox"/>	Measurable <input type="checkbox"/>	
Regulatory Framework <i>Hierarchical regulatory system: European directive and national normative about flood risk evaluation and management. National and regional urban normative.</i>			
Stability of the human environment			
Financial requirements <i>The cost of risk integration into new developing plans following the legislation are assumed by the promoters. Most costly actions are with regards the elements already built at risk.</i>			
Success factors <i>Technical and political coordination, perception risk by municipalities and citizens.</i>			
Risk factors			
Additional and non-formal experiences contributing to the implementation of Good Practice			