

# 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>Tree species suitability maps (Baumarteneignungskarten)</b>
<b>Description</b> <i>[1 sentence]</i>	<b>Decision support tool to help forest managers during tree selection for climate adaption</b>
<b>Country, location</b>	<b>Germany (Baden-Württemberg)</b>
<b>Date</b>	<b>2010-2014</b>
<b>Contact e-mail</b>	<b>Biometrie.fva-bw@forst.bwl.de</b>
<b>Institution</b>	<b>FVA Baden-Württemberg</b>
<b>Net Risk Work Partner</b>	<b>FVA</b>
<b>Document type</b>	<b>Guidelines</b>
<b>Language</b>	<input type="checkbox"/> Catalan <input type="checkbox"/> English <input type="checkbox"/> French <input checked="" 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 checked="" type="checkbox"/> Risk assessment	<input type="checkbox"/> Risk Planning	<input type="checkbox"/> Risk Management
<b>Risk</b>	<input type="checkbox"/> <b>Wildfires</b>	<input checked="" 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 checked="" 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 checked="" type="checkbox"/> Regeneration and afforestation <input checked="" 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 checked="" type="checkbox"/> Risk and vulnerability assessment and mitigation	<input 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 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
<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 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
<b>Contribution to Sendai Targets</b>	<input type="checkbox"/> Reduce global disaster mortality <input type="checkbox"/> Reduce the number of affected people <input checked="" type="checkbox"/> Reduce the direct disaster economic loss <input 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

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

Tree species suitability maps are a decision support tool during the selection of tree species against the backdrop of climate change. These maps map at scale of 1:50.000 are available for every district of the German federal state of Baden-Württemberg for the tree species Norway spruce, European beech, sessile oak and silver fir. The projections are based on the IPCC scenario B2 and cover the situation today (2010) and in the future (2050). The suitability of the tree species is assessed via four categories: “suitable”, “possible”, “less suitable” and “unsuitable” based on the following criteria: competitive pressure of the species, maintenance intensity, damage likeability and yield. The maps are based on statistical models based on tree species distribution, phytosociological backgrounds and the assessment of the respective risk for the species due to climate change.

Place in national/regional policy *[Mentioned in the law/regulation/guidelines? Mandatory?]* The maps are the outcome of the project “Effect of climate change on forests in Baden-Wuerttemberg” and used as decision support in the state-owned forest stands as well as part of the forestry consultancy by the district foresters as guidelines.

*[free text – 5 lines max]*

Goals and achievements *[Objectives, goals and the achievements of the Good Practice]*

The maps are a decision support on local or stand level in order to fill the gap between global climate projections and forest or risk management on the local level.

*[free text – 5 lines max]*

Actors involved *[Explain who is involved in the development: practitioners, stakeholders, educators, ...]*

The maps were developed by the scientists of the Forest Research Institute of Baden-Wuerttemberg and are now openly accessible via download. The information is mostly used in forestry consultancy.

*[free text – 5 lines max]*

Implementation stage *[Is it operational? Since how long? Is it a pilot experiment?]*

The maps are available and in use.

*[free text – 5 lines max]*

State of technical knowledge *[state of the art and technical background of the Best Practice]*  
The maps are based on the IPCC SRES-scenario B2 and cover a situation with an assumed annual average temperature increase till 2050 of 1,95°C and a decreased annual precipitation of 25mm.

*[free text – 5 lines max]*

Context *[regulatory, socio-economic, political]*

See goals and achievements

*[free text – 5 lines max]*

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

Description of the implementation steps *[different stages in the implementation process, duration]*

The maps are available and in use on a voluntary basis.

*[free text – 5 lines max]*

Governance *[responsible authority and roles of the different actors involved]*

State ministry in charge resp. the state forest enterprise and the Forest Research Institute of Baden-Wuerttemberg are the driving forces in the development, distribution and implementation of the maps.

*[free text – 5 lines max]*

Necessary means to implement the Good Practice in efficient conditions *[human resources, materials, financial...]*

The maps are openly available at the website of the Forest Research Institute of Baden-Wuerttemberg. District foresters (state forest consultancy) had to be informed and other actors were informed via publications. The use of the maps is mostly dependent on the knowledge of their existence and trust in the applicability of the prognosis.

*[free text – 5 lines max]*

Challenges encountered during implementation and solutions incurred

Reservations regarding the applicability of the maps and their significance on stand level could be observed.

*[free text – 5 lines max]*

Priorities identified for successful implementation of the Good Practice

Working with the maps requires a basic understanding of climate change scenarios in general and the IPCC SRES-scenario B2 specifically. The maps need a certain amount of background information in order to identify their value for risk management decisions.

*[free text – 5 lines max]*

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

*[Added value on decision processes, on national policies or regulations, on relationship with stakeholders, etc.]*

The maps form an objective basis for tree species selection and preventive risk management decisions which is openly available for everybody in the respective region. The background information served as base for forest conversion in state forests and the content of subsidies.

*[free text – 5 lines max]*

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

*[Continuation, future improvements,]*

A revision of the maps is planned, a change from the IPCC SRES-scenario B2 to RCP-scenarios and a time horizon up to 2100 is planned. New tree species and influencing factors shall be added and a focus on climate change “hot spots” is planned.

*[free text – 5 lines max]*

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



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Attached materials	<i>[include format (document, photo, video...) and name of the file]</i>
Web links	<p>Overview (In German):  <a href="http://www.fva-bw.de/indexjs.html?http://www.fva-bw.de/forschung/bui/klimakarten.html">http://www.fva-bw.de/indexjs.html?http://www.fva-bw.de/forschung/bui/klimakarten.html</a></p> <p>All available maps (In German):  <a href="http://www.fva-bw.de/indexjs.html?http://www.fva-bw.de/forschung/bui/klimakarten.html">http://www.fva-bw.de/indexjs.html?http://www.fva-bw.de/forschung/bui/klimakarten.html</a></p> <p>Outlook on future developments (in German):  <a href="http://www.waldinventur.wzw.tum.de/fileadmin/risk2016/albrecht.pdf">http://www.waldinventur.wzw.tum.de/fileadmin/risk2016/albrecht.pdf</a></p>
Contacts	Dr. Axel Albrecht, Forest Research Institute of Baden-Wuerttemberg <b>Biometrie.fva-bw@forst.bwl.de</b>

### [Additional information - optional]

<b>Lessons learnt</b> <i>[Objective: compare the results obtained to the objectives set at the start of the Good Practice]</i>
Evaluation process, if exists (internal or external)
<i>[free text – 5 lines max]</i>
Assessment of results (quantitative and qualitative) and comparison with main goals
<i>[free text – 5 lines max]</i>
Negative aspects identified
<i>[free text – 5 lines max]</i>
Unexpected consequences (short / mid / long term) and corrective measures implemented
<i>[free text – 5 lines max]</i>

<b>Durability and transferability</b> <i>[Objective: evaluate the integration of the Good Practice and its sustainability, give recommendations for transferability]</i>		
<b>Is this information:</b>	<b>Replicable</b> <input type="checkbox"/>	<b>Measurable</b> <input type="checkbox"/>
Regulatory Framework		
<i>[free text – 5 lines max]</i>		
Stability of the human environment <i>[Stability of partnership, structures, population enabling successful implementation and positive impact in the long term]</i>		
<i>[free text – 5 lines max]</i>		
Financial requirements <i>[business model]</i>		
<i>[free text – 5 lines max]</i>		
Success factors <i>[political, technical, human, financial...]</i>		
<i>[free text – 5 lines max]</i>		
Risk factors <i>[legal, financial, safety...]</i>		
<i>[free text – 5 lines max]</i>		

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

*[free text – 5 lines max]*



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