Resilient Cities 2018

Standardisation of the development of a climate adaptation strategy

Possibilities, limitations and practical example

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Standardisation aim

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- Uniformity in:
  - Quality of decision process and results (walking the right path, doing the right things)
  - Considered aspects (looking at the right things)
  - Level of detail considered (zooming in to the right level)

Standardisation limitations

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- Process:
  - One complete process iteration is long and complex
  - By nature iterative, therefore any step within process is likely to be visited more than once
  - Urban, multi-stakeholder, political context ➔ limited control over sequence of steps
  - Usually combined effort of multiple people focusing on various topics related to climate adaptation ➔ several tracks of climate adaptation in parallel, hard to keep efforts aligned
- Conclusion: strict sequential process unpractical or impossible

Standardisation limitations

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- Outcomes:
  - Various ways (tools, methods) to complete any step in process, not always compatible, not always same quality / level of detail
  - Not every approach suited for every situation
  - Interdependency on choices for approaches ==> choose approach x in early step ==> no longer possible to choose approach y in later step
  - Need for guidance to produce consistent results, fitting the requirements of the city <> not always most detailed is best
- Conclusion: flexibility is needed, but comes at the cost of strict compatibility of results

RESIN e-Guide
Support for uniform process

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Flexibility in sequence process requires good overview and collaboration tools.

- Overview all steps and their relation ➔ know what's coming
- Structure allows for starting and stopping at any step, but with informed consequences: prerequisites to finish each step successfully, consequences for following steps*
- Functionality to:
  - Coordinate activities between various employees
  - Store results of adaptation process and make them available centrally
  - Monitor progress over the entire adaptation process

*optional: Restrict progress to allowing only starting steps for which all preconditions have been fulfilled

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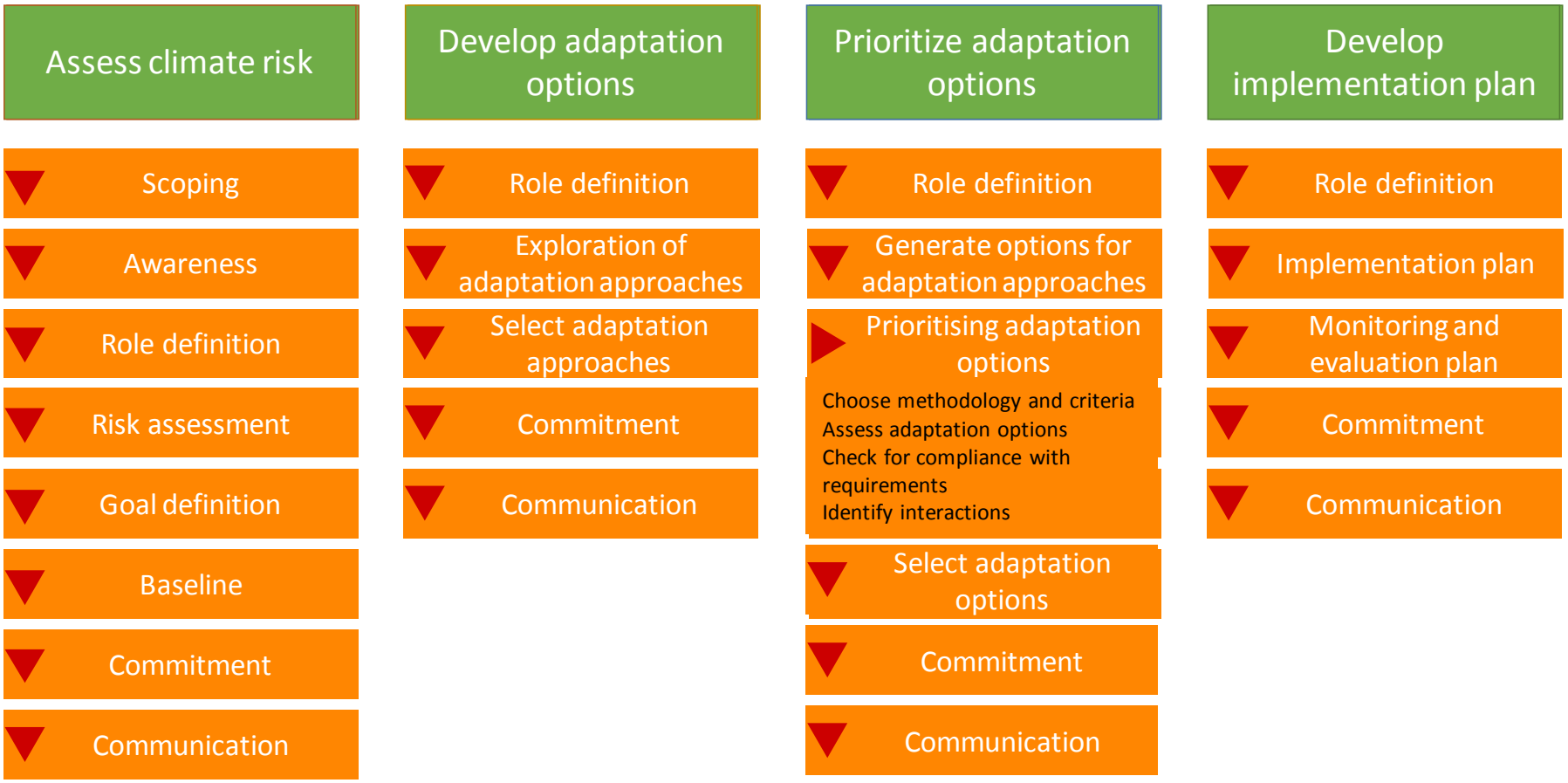
Support for uniform process

- Example overview steps



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Support for uniform process

- Example step description preconditions

Climate Threat.

Edit

Goal of this aspect

Having identified a problem in Problem definition, this aspect concerns the exploration of the underlying causes of this problem and gaining preliminary insight in their severity. With regards to climate change in Europe, five climate threats can be distinguished:

- heat waves/stress,
- pluvial flooding,
- fluvial flooding,
- coastal flooding and
- drought.

Preconditions

Having a clear Problem definition is essential for this step, as this determines what climate changes relate to the problem. Climate changes can be labeled a threat or not, depending on the defined problem at hand. Identifying the climate threats that might impact the city or asset requires an understanding of local circumstances such as geography, past extreme events and local/regional climate projections. This information needs to be available to successfully finish this step.

Results

The outcome is a list of climate threats that could potentially affect the city or asset, including a description of local historical events (frequency and severity) and a first insight in future occurrences (likelihood and potential impact), resulting in a first indication of the risk of a threat.

Guidance on performing this aspect

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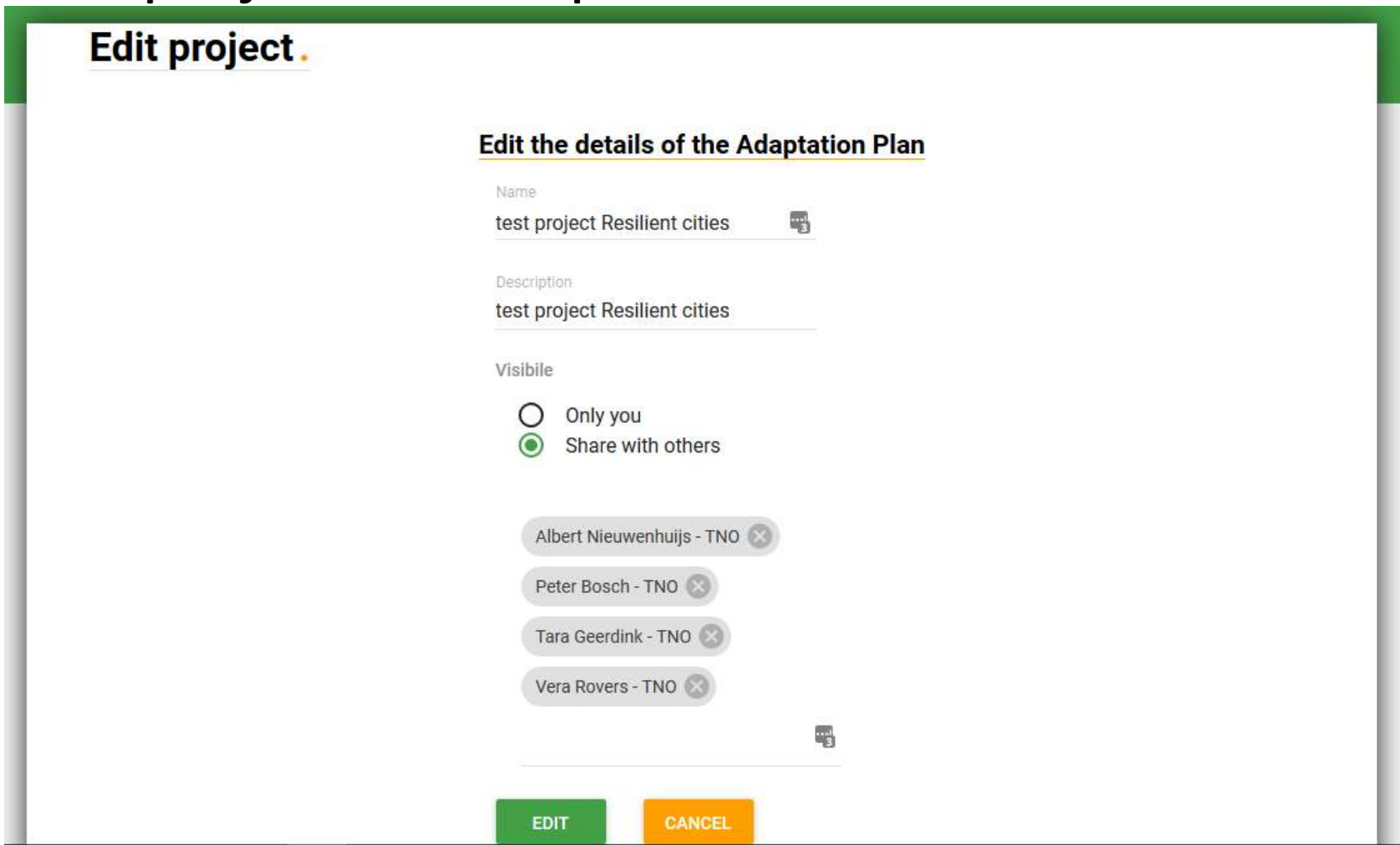
Support for uniform process

- Use of projects: Multiple users



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Support for uniform process

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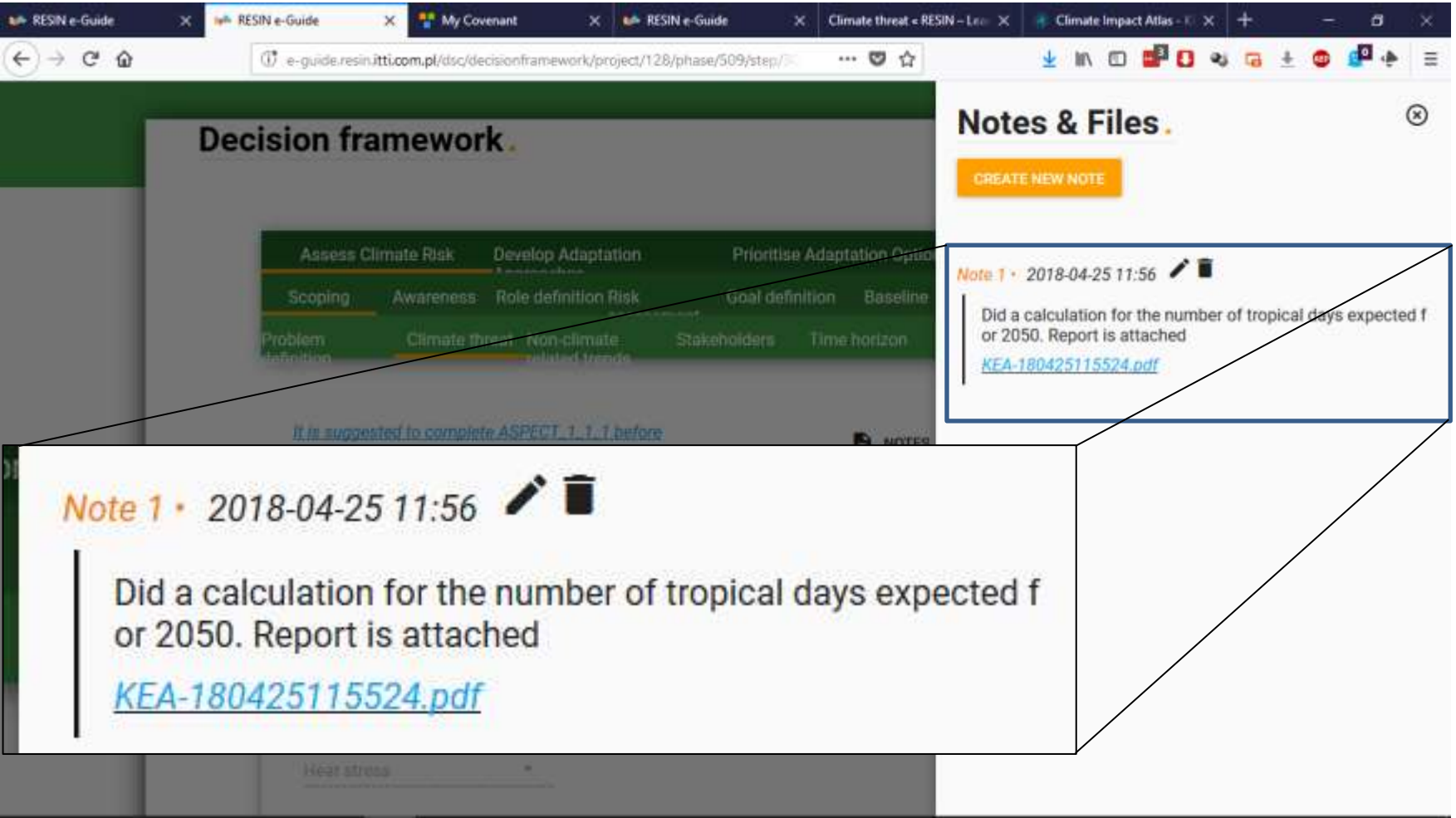
- Use of projects: Store information



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- Use of projects: Status overview

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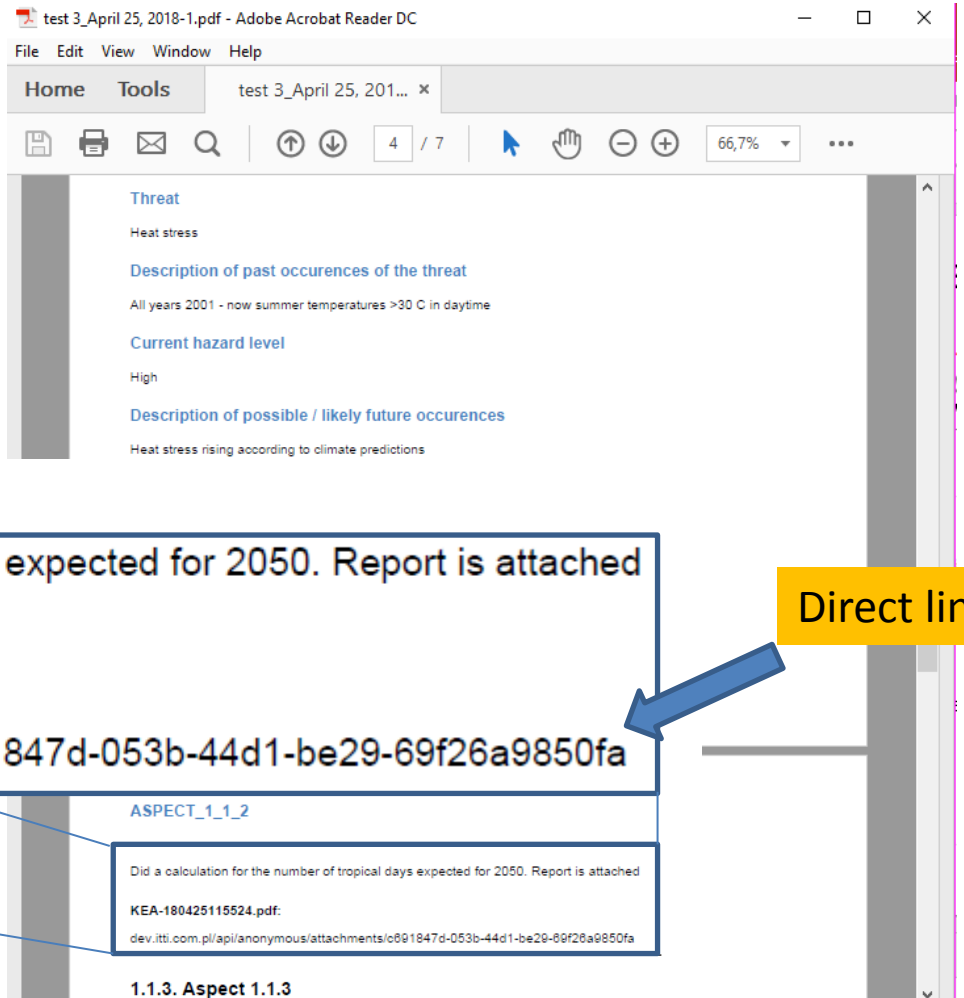
- Use of projects: complete status report in pdf



Did a calculation for the number of tropical days expected for 2050. Report is attached

KEA-180425115524.pdf:

dev.itti.com.pl/api/anonymous/attachments/c691847d-053b-44d1-be29-69f26a9850fa

Direct link

RESIN e-Guide

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Support for uniform outcomes

- Overview available methods and tools, both RESIN and external, when to apply, where to apply
- In each step, we provide general guidance how to perform the step and what tools might be suited to what situations (including heads-up for consequences down the line)
- Also each step, list of existing and new (RESIN) available tools **and concrete instructions how to use them to get relevant and good results for finishing the step**
- Forms for each step provide details and uniform structure to answers independently use used tools
- Use of uniform framework / terminology

RESIN e-Guide

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Support for uniform outcomes

- Overview of tools
  - Categorised in topics
  - Indexed on practical indicators
  - Short textual remarks with practical pointers
  - Complete description of tool or method

Overview of RESIN and external tools that can be used beneficially in urban climate adaptation planning:

Climate drivers, climate threats, exposure

	Method or tool	Free to use	Suited for beginner	Thorough	Quick	Autonomous use	Remarks
3Di	T			X			Only covers water management
Climate Impact Atlas	T	X	X		X	X	Only covers area of the Netherlands, Dutch language only
LCLIP (Local Climate Impacts Profile)	T	X	X	X			Systematic step-by-step method to assess exposure to weather conditions. Primarily aimed at the organisation level (not complete cities). Supported by Excel tool to gather and assess results.
RESIN Climate Risk Typology	T	X			X	X	Quick tool that produces indicators that are relevant for determining climate threats, drivers, stressors and risks, based on available statistics of your NUTS-3 region.
RAMSES Urban climate projections and climate impact detection	M	X		X		X	The method is intended to carry out a first assessment and lay the groundwork to keep track of the effects of climate change. Thorough for a first assessment.
CLIMADA Natural catastrophe damage model	T	X		X			Is limited to storm, earthquake, meteorite, volcano and flood hazards. Runs in MATLAB or GNU OCTAVE. Expert support required for practical use.
Risk Zone Map	T	X	X		X	X	Only covers flooding due to sea level rise
Blue Green Dream	T	X	X		X		Supports the modelling and calculation of water management situations before and after adaptation measures have been taken.

Vulnerability, Impact, Risk

	Method or tool	Free to use	Suited for beginner	Thorough	Quick	Autonomous use	Remarks
							Extensive systemic guideline describing all steps to perform a qualitative and quantitative Risk-based Vulnerability Assessment. Based on the German

RESIN e-Guide
Support for uniform outcomes

- Concrete instruction when and how to use tool for any step in process

HOME / ASSESS CLIMATE RISK / SCOPING / CLIMATE THREAT

Climate Threat.

Goal of this aspect

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- heat stress / heat waves,
- pluvial flooding,

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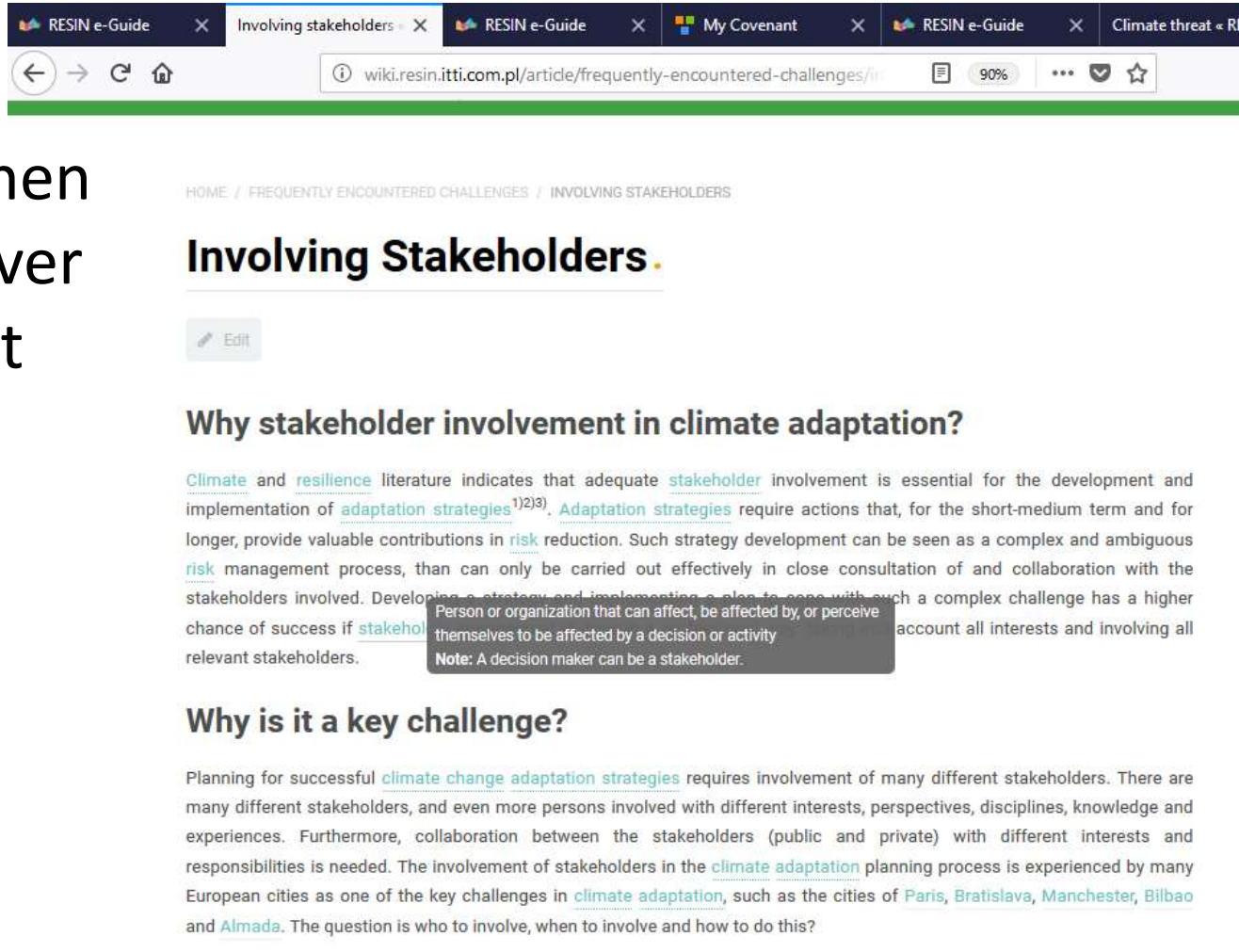
Support for uniform outcomes

- Consistent framework of terms
  - Definition appears when hovering over term in text



RESIN e-Guide
Support for uniform outcomes

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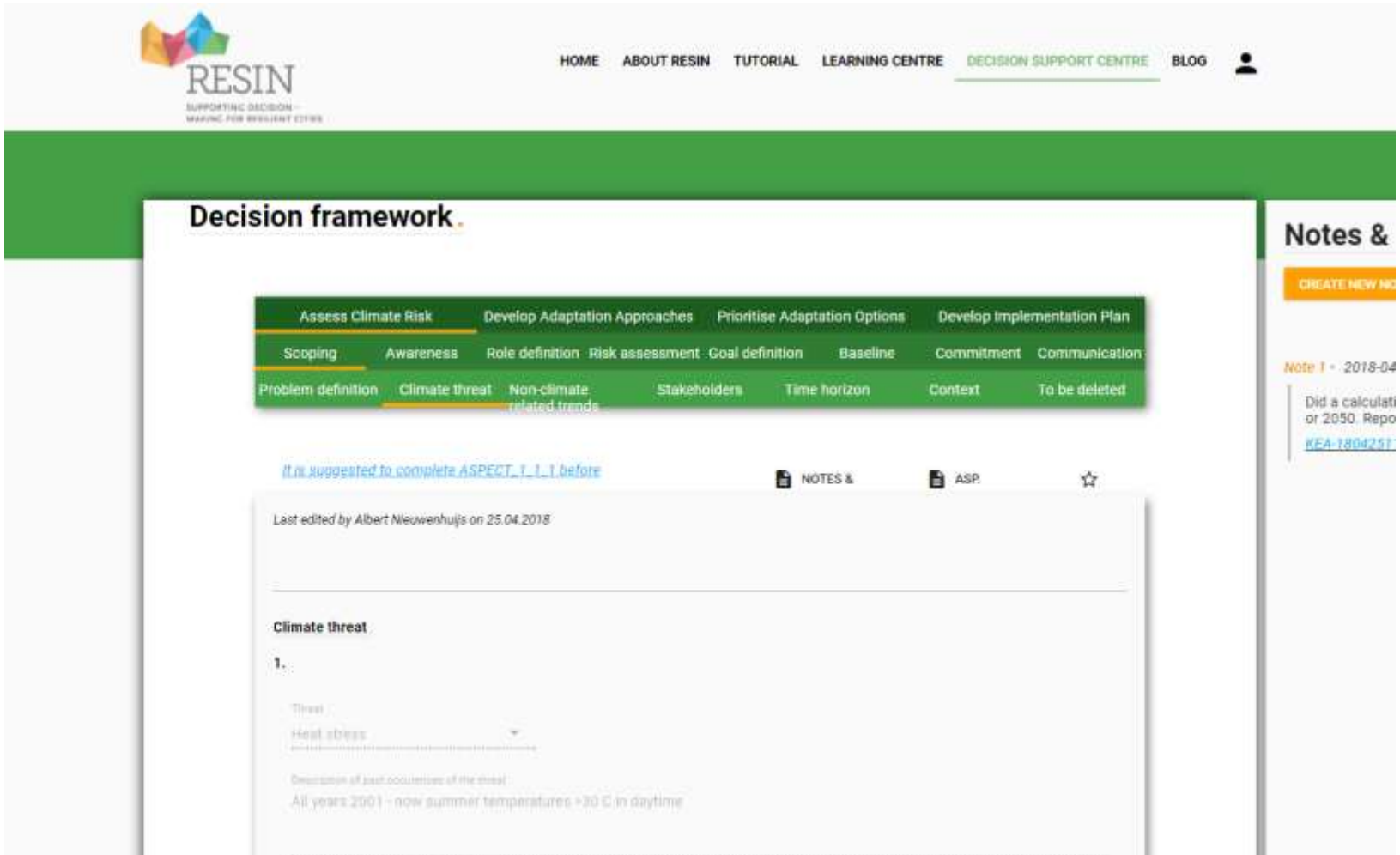
- Guidance in required information by use forms



RESIN e-Guide
relation to existing platforms

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- Results lined up with UAST and Mayors Adapt reporting tool
- Looking for possibilities for further integration of our solutions on existing platforms (Climate adapt, Mayors adapt)

Questions?

Visit the e-Guide at http://e-guide.resin.itti.com.pl/