

Self assessment tools as means of decision-support system

RAIN Workshop
*Critical Infrastructure
Safety in the Context
of Climate Change*
Delft
4th April 2016

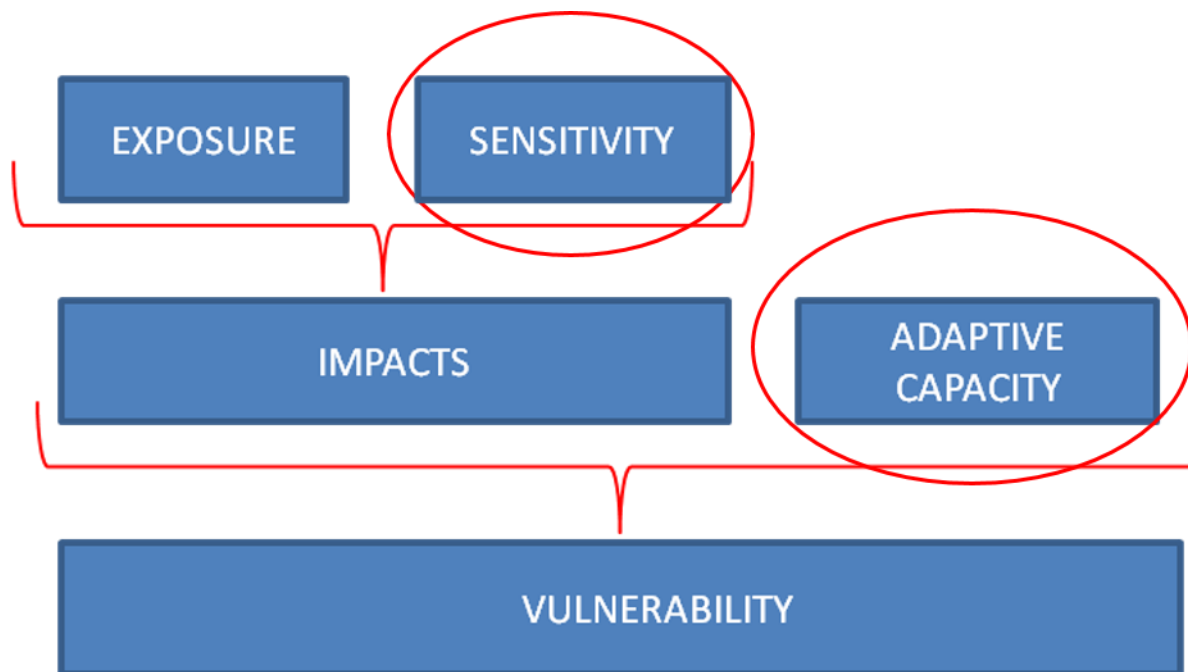
Chiara Bianchizza
Istituto di Sociologia
Internazionale di Gorizia (ISIG)
bianchizza@isig.it
www.rain-project.eu

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608166. The contents of this presentation are the author's views. The European Union is not liable for any use that may be made of the information contained therein.



This project is funded by
the European Union

Components of vulnerability



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608166. The contents of this presentation are the author's views. The European Union is not liable for any use that may be made of the information contained therein.



This project is funded by
the European Union

Integrated vulnerability assessment

Vulnerability of communities/systems to climate change is a multidimensional concept.

In fact it implies

- biophysical,
- social,
- economic
- cultural,
- institutional and
- management variables

Thus, vulnerability calls for an **integrated framework** for its assessment.

The social components of vulnerability contribute to the definition of sensitivity and adaptive capacity of a given community/system

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608166. The contents of this presentation are the author's views. The European Union is not liable for any use that may be made of the information contained therein.



This project is funded by
the European Union

SeAT

Within the ECOSTRESS DG ECHO Project (2013-2015), www.ecostress.eu, ISIG has developed a Self Assessment tool for local managers, to evaluate the vulnerability of their community in terms of **sensitivity** (pre-existing condition of the system) and **adaptive capacity** (capacity of the system to cope with stress).

- SeAT – Self Assessment tool –is targeted to policy makers to help them structure the relevant information needed to assess their vulnerability to external stress;
- It is meant as a tool for local administrators to support them in informed decision making.



SeAT

SeAT – Self Assessment tool – is available online at:

<http://ecostress.eu/social-vulnerability-self-assessment-tool/>

Its video tutorial is available at:

<https://youtu.be/YD8aHxUdp4>

This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608166. The contents of this presentation are the author's views. The European Union is not liable for any use that may be made of the information contained therein.



This project is funded by
the European Union

How SeAT works

A - Users fill in the data-gathering grid, where they are asked to evaluate their local community (in terms of both sensitivity and adaptive capacity) for what concerns the following dimensions (internal and external to the community):

- Social
- Economic
- Infrastructural
- Institutional

These dimensions are composed of variables, extrapolated from relevant literature and then verified for relevance in the context of reference (i.e. for ECOSTRESS, the Italian Northern Adriatic coast).

Internal dimension variables shape **sensitivity** (they are related to static elements); external dimension variables shape **adaptive capacity** (dynamic components)



PHASE 1/8 - ASSESSING INTERNAL SOCIAL VARIABLES

Please assess the social well-being of your community, by defining the impact (from extremely negative to extremely positive) that each of the following factors has in currently shaping it.	Extremely Negative	Negative	Not relevant	Positive	Extremely positive
Presence of minority groups within the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Level of education – people with at least an high school diploma	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population with access to a vehicle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elderly people	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ratio between non-working young population and work force (dependency)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ratio between retired population and work force (dependency)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population under 6 years of age	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population living in condition of crowding	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population density	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elderly people living alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funds available for assistance and social services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Potential increase of families in potential lack of assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Population density of specific inhabited areas and/or industrial settlements	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Capacity of local hospitals to satisfy health/assistance needs of the population	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Incidence of active NGOs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



This project has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608166. The contents of this presentation are the author's views. The European Union is not liable for any use that may be made of the information contained therein.



This project is funded by
the European Union

B - Once the last assessment grid is completed, users are redirected to the SUMMARY table, where factors previously selected as “Extremely Negative” or “Extremely Positive” are highlighted (in red and green respectively).

- Depending on whether such factors belong to the Sensitivity (i.e. Internal) or Adaptive Capacity (i.e. External) components of the SeAT, selected factors will either appear as Weaknesses/Strength or Threats/Opportunities (in the left and right-hand columns respectively).



SUMMARY TABLE - VARIABLES SELECTED AS RELEVANT

Internal		External	
VARIABLE	VARIABLE STATUS	VARIABLE	VARIABLE STATUS
SOCIAL DIMENSION		SOCIAL DIMENSION	
Presence of minority groups within the community	<i>Weakness</i>	Soft mitigation strategies in place	<i>Threat</i>
Level of education – people with at least an high school diploma	<i>Weakness</i>	Soft mitigation strategies brokered to wider public	<i>not relevant</i>
Population with access to a vehicle	<i>not relevant</i>	Soft mitigation strategies brokered to stakeholders	<i>not relevant</i>
Elderly people	<i>not relevant</i>	Volunteers/CSO involvement in mitigation strategies	<i>Opportunity</i>
Ratio between non-working young population and work force (dependency)	<i>not relevant</i>	Implementation of targeted risk communication tools for locals (e.g. newsletters, public events, etc.)	<i>not relevant</i>
Ratio between retired population and work force (dependency)	<i>not relevant</i>	Implementation of targeted risk communication tools for tourists (e.g. board signs in different languages, brochures, etc.)	<i>not relevant</i>
Population under 6 years of age	<i>not relevant</i>	Level of risk awareness among the population	<i>not relevant</i>
Population living in condition of crowding	<i>not relevant</i>	Level of knowledge on risk-reducing behaviors among the population	<i>Threat</i>
Population density	<i>Strength</i>	Reactivity of CP volunteers association networks in emergency	<i>not relevant</i>
Elderly people living alone	<i>Strength</i>	Level of participation of the population in local policy making	<i>not relevant</i>
Funds available for assistance and social services	<i>Strength</i>	Capacity of local CSOs to engage population in territorial management activities	<i>not relevant</i>
Potential increase of families in potential lack of assistance	<i>Strength</i>		

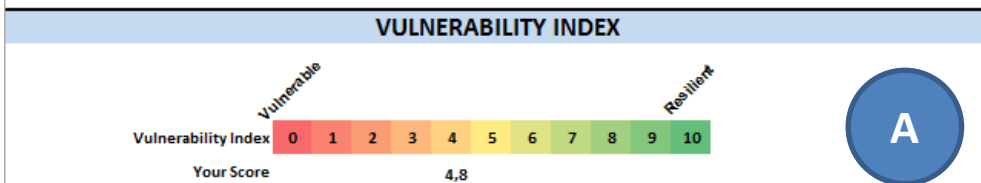
This project has received funding from the European Union’s Seventh Framework Programme for research, technological development and demonstration under grant agreement no 608166. The contents of this presentation are the author's views. The European Union is not liable for any use that may be made of the information contained therein.



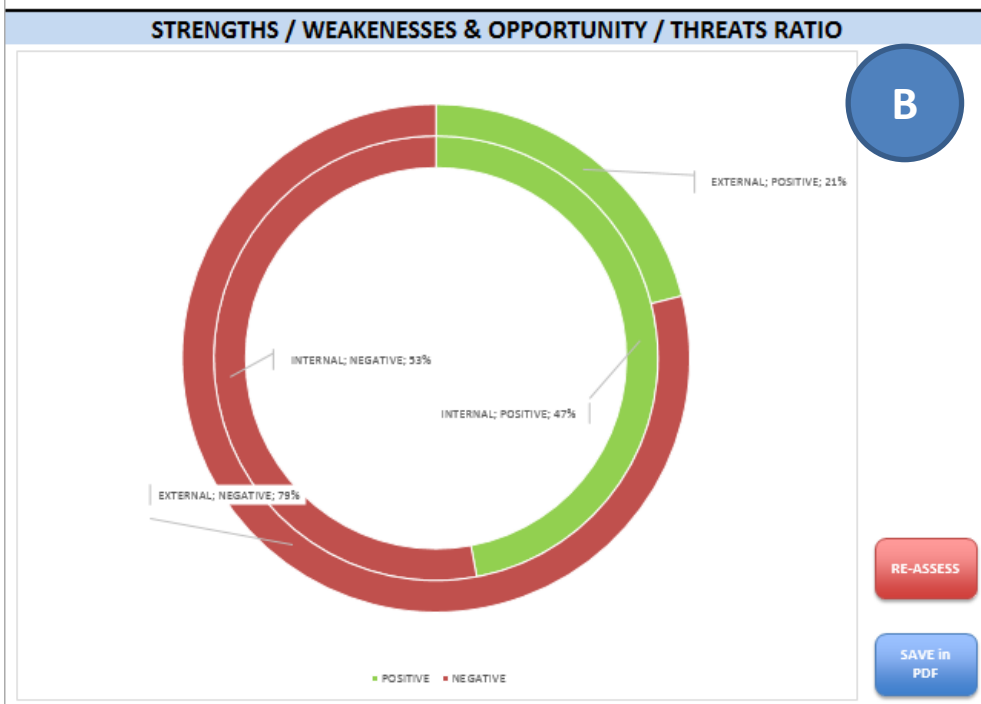
This project is funded by
the European Union

C - A graph is then produced by the tool, detailing the percentage of positive and negative internal and external elements characterizing their system. Starting from here, users are re-directed to possible action strategies for overcoming obstacles to their resilience-reducing process.

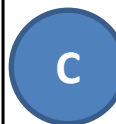




A – policy makers can see how their area/community is set on a 0 to 10 scale (where 0 represents a total social vulnerability scenario and 10 a totally resilient 1)



B – policy makers can see the interaction among (relevant) positive and negative factors both at the sensitivity (internal) and adaptive capacity level



C – proceed to re-assessment

