



S E C A P

Methodologies for climate adaptation

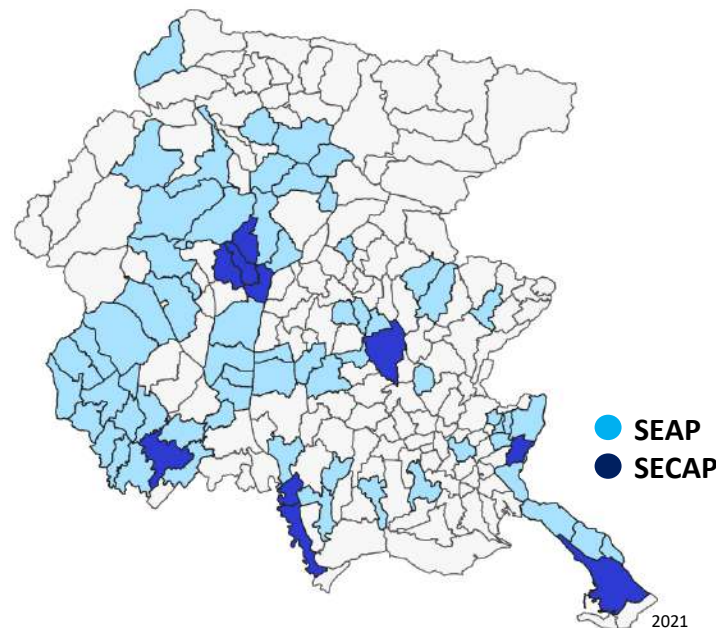
Nikola Holodkov, Area Science Park

Online, 30th March 2022



Sustainable Energy and Climate Action Plan (SEAP/SECAP)

- Long-term vision
- Baseline emission inventory (BEI)
- Risk and vulnerability assessment (RVA)
- Mitigation actions (-40% CO₂ by 2030)
- Adaptation actions
- ...
- Monitoring Emission Inventory (MEI)



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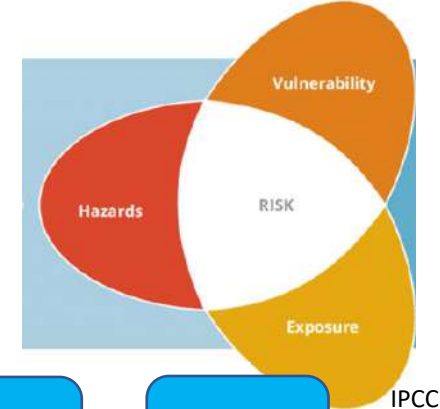
Risk and vulnerability assessment (RVA)

<u>Climate hazards</u>	<< Current <u>risk</u> of hazard occurring >>		<< Future hazards >>		
	Probability of hazard	<u>Impact</u> of hazard	Expected change in hazard intensity	Expected change in hazard frequency	<u>Timeframe(s)</u>
	Single choice: Low Moderate High Not known	Single choice: Low Moderate High Not known	Single choice: Increase Decrease No change Not known	Single choice: Increase Decrease No change Not known	Multiple choice: Short-term Mid-term Long-term Not known
<u>Extreme heat</u>	[Please choose]	[Please choose]	[Please choose]	[Please choose]	[Please choose]
<u>Extreme cold</u>	[Please choose]	[Please choose]	[Please choose]	[Please choose]	[Please choose]
<u>Heavy precipitation</u>	[Please choose]	[Please choose]	[Please choose]	[Please choose]	[Please choose]

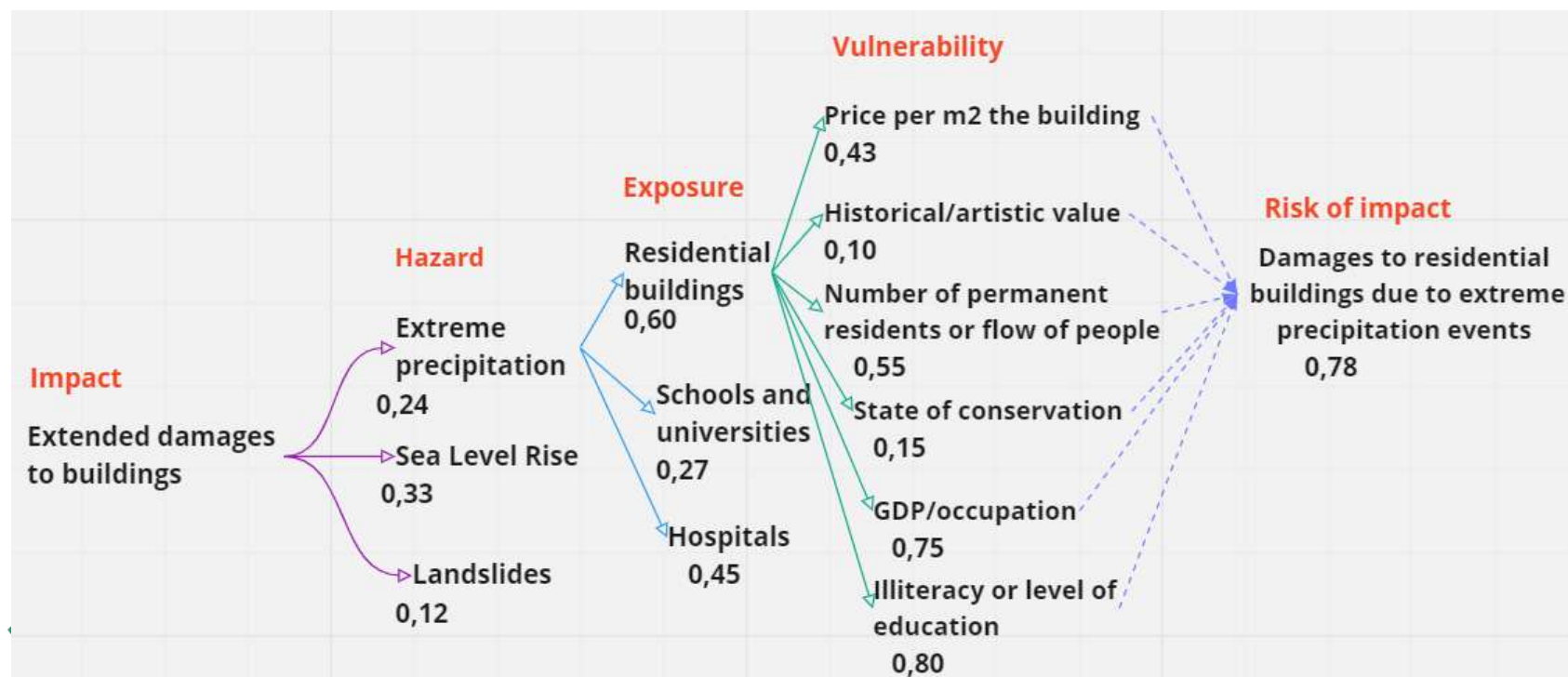
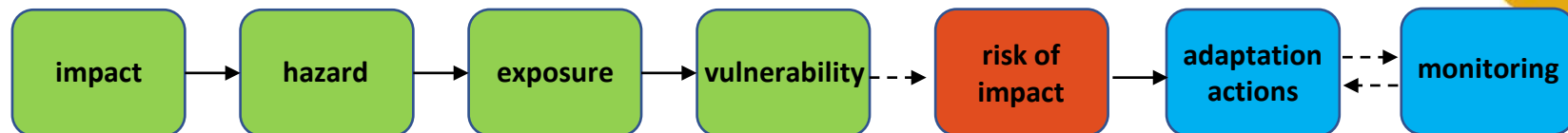
Climate hazards	Relevant vulnerable sector(s)	Current vulnerability level
	Multiple choice: Buildings Transport Energy Water	Single choice: Low Moderate High Not known
<u>Extreme heat</u>	[Choose from the list above]	[Please choose]
<u>Extreme cold</u>	[Choose from the list above]	[Please choose]
<u>Heavy precipitation</u>	[Choose from the list above]	[Please choose]

SECAP

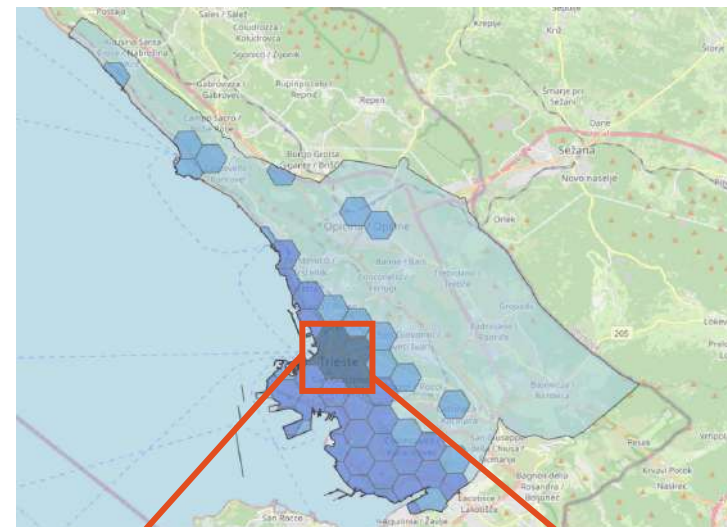




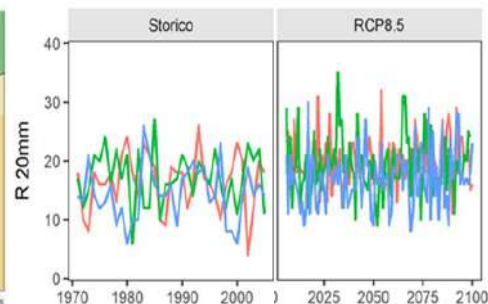
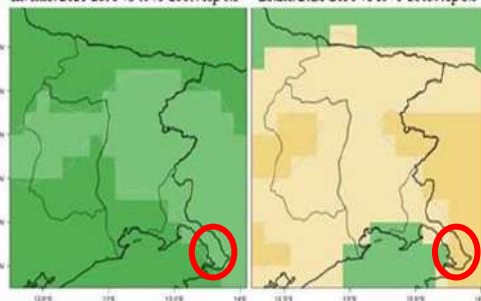
AREA method - methodology for RVA



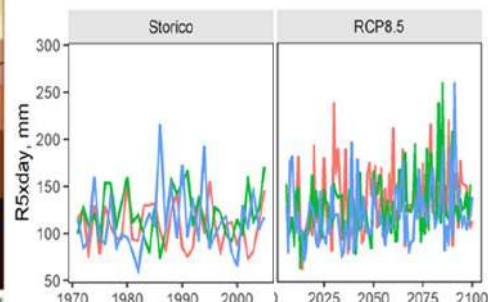
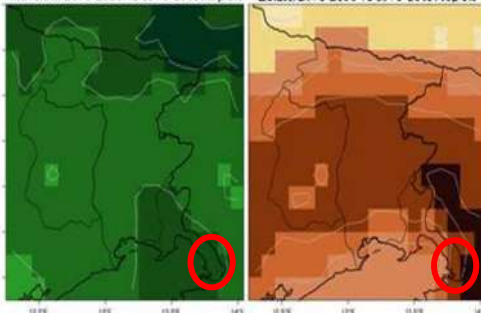
SECAP



c) Inverno: 2021-2050 vs 1976-2005: rcp 8.5 Estate: 2021-2050 vs 1976-2005: rcp 8.5



d) Inverno: 2071-2100 vs 1976-2005: rcp 8.5 Estate: 2071-2100 vs 1976-2005: rcp 8.5



— EC-EARTH_CCLM4
— HadGEM2-ES
— EC-EARTH_RACMO



A P



S E C A P



AA: Floods & storm surges

CE: Extreme heat

Fr: landslides

Impacts	AA	CE	Fr
Water			
Damage to water pipelines	0,70		0,70
Reduction in the quality and quantity of drinkable water		0,82	
Reduction in the land water content		0,92	
Agriculture and forestry			
Reduction in forest density		0,69	
Increase of forest fires and extension of fire seasons		0,69	
Loss of forest biodiversity		0,69	
Loss in agricultural productivity		0,92	
Environment & Biodiversity			
Alteration in the land-water and sea-water chemistry and physics	0,91	0,97	
Alteration in trophic networks		0,97	
Increase in alien species		0,99	
Alteration of marine organisms' physiology		0,97	
Loss of land-water and sea-water biodiversity		0,64	
Erosion of soil			0,64
Loss of terrestrial habitat and biodiversity		0,78	



Attack, defend, or retreat?



S E C A P



THANK YOU

Nikola Holodkov

nikola.holodkov@areasciencepark.it

