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How can we improve our capacities to adapt to climate change?

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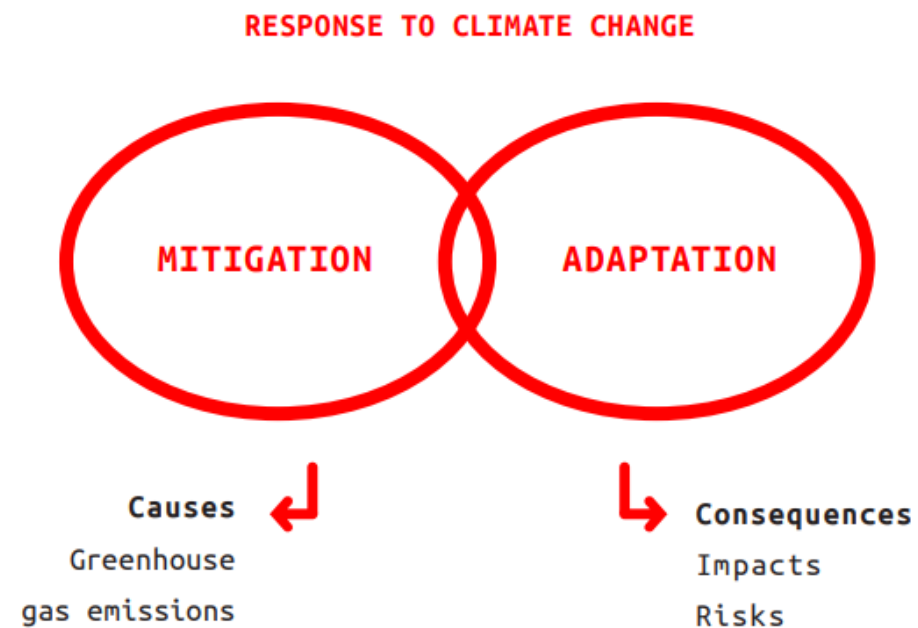


Figure 1. Responses to climate change: mitigation and adaptation

Complementary strategies:

MITIGATION

Reduce the sources and emissions of greenhouse gases (reduction of emissions, improve efficiency, use of renewable energies) and increase the rates of atmospheric carbon capture and its fixation in carbon stores.

ADAPTATION

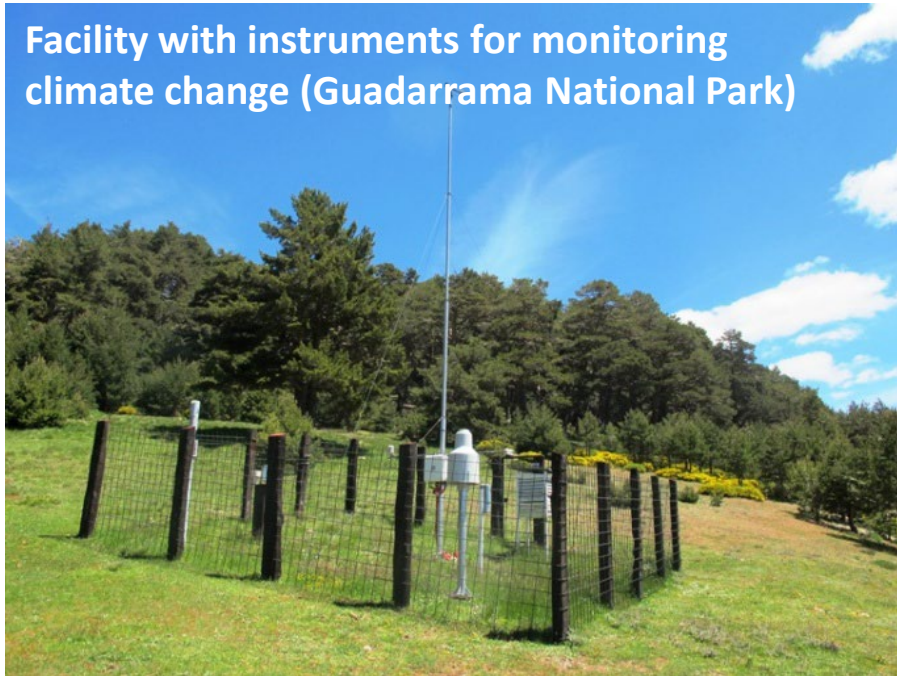
Reduce the **vulnerability** of ecological and social systems to the impact of climate change, increasing their resilience (or capacity to recover after a disturbance).



Ecosystem-based adaptation (EbA) is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change.

Convention on Biological Diversity (2009)

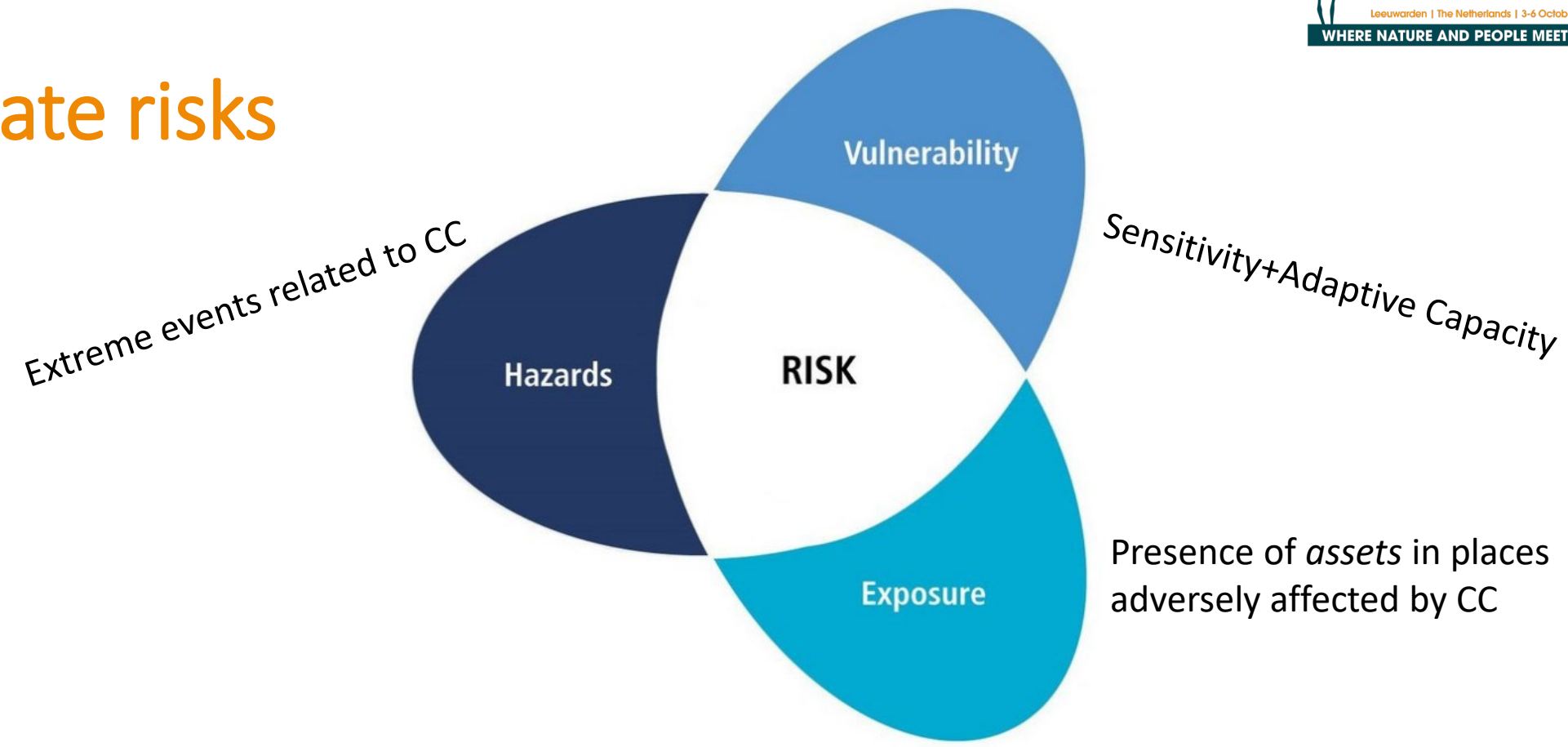
Facility with instruments for monitoring climate change (Guadarrama National Park)



Restoration of ponds for amphibians (Montes de Valsaín)



Climate risks

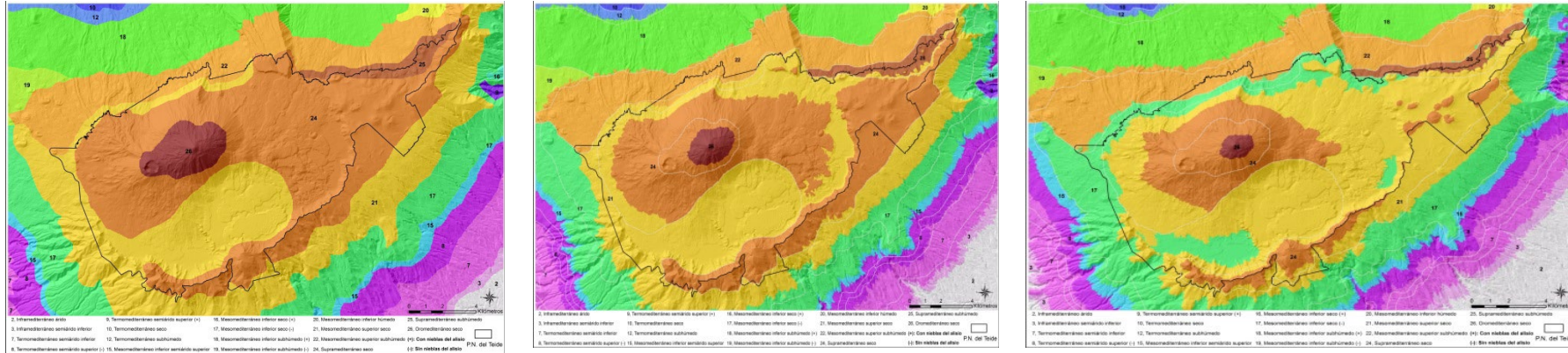


Source: Derived from IPCC, 2018.

Asset/Conservation object	Climate-related hazards	Vulnerability (Sensitivity + Adaptive Capacity)	Level of risk

Climate scenarios, vulnerability, actions, social involvement

example



Climate risk assessment

example

Endemic *Juniperus* spp. forests in Teide National Park (Tenerife Canary island, Spain)



Climate related HAZARDS	VULNERABILITY (SENSITIVITY AND	ADAPTIVE CAPACITY	LEVEL OF RISK
Average temperature increase	Decrease of the population	Low ecological requirements, high tolerance to environmental conditions	MEDIUM
Reduction of annual precipitation	Changes in the area occupied by the population	Dependence of bird or lizard species for seed dispersal	
Alteration in precipitation pattern	Reduction of the population's health status (vigor, recruitment rates, regeneration, etc.)	Low growth rate	
	Increased fire risk		

Possible adaptation measures	Limitations for implementation	Stakeholders needed
<p><i>Exercise in subgroups</i></p>		

Adaptation measures

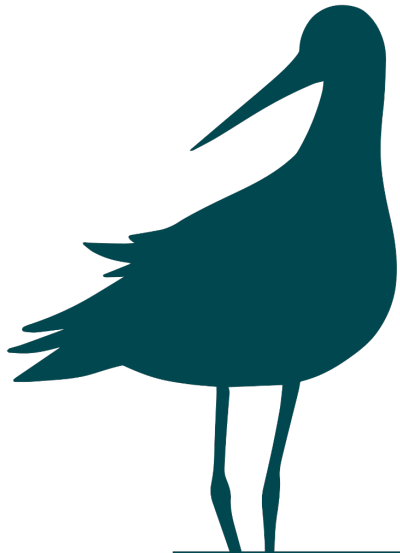
example

Measures	Conservation object
Conserve duplicates of seed accessions in germoplasm banks of all populations of endangered endemic and protected flora species, Development of germination and cultivation protocols and obtaining of plants in nursery	Species of endemic endangered flora





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