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# net risk work

## NET RISK WORK project outcomes: Risk Interaction Scheme

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Forest Research Institute  
Baden-Württemberg



PROTEZIONE CIVILE  
Regione Autonoma della Sardegna



## Risk Dimensions

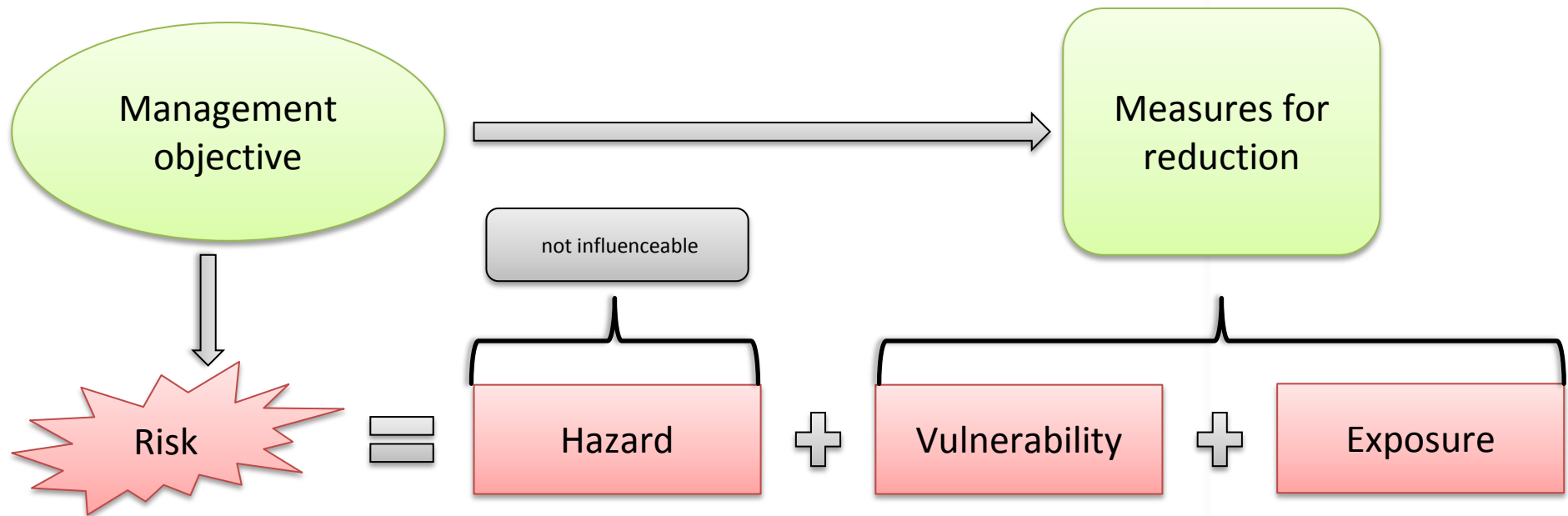
### Background:

The **Sendai Framework for Disaster Risk Reduction** highlights that: *“Policies and practices for disaster risk management should be based on an understanding of disaster risk in all its dimensions of vulnerability, capacity, exposure of persons and assets, hazard characteristics and the environment.*



# Risk Interaction Scheme

## Relations between risk, its elements and management objectives



# Risk Interaction Scheme

## Project Integration: Single Risk Assessment

**Management objective:**

Hazard	Storm	Fire	Flood	Avalanche
Impact on Vulnerability	Natural influence	Natural influence	Natural influence	Natural influence
	Human influence	Human influence	Human influence	Human influence
Impact on Exposure	Natural influence	Natural influence	Natural influence	Natural influence
	Human influence	Human influence	Human influence	Human influence

*Single risk assessment overview*


### General Information

### Impact on Vulnerability

### Impact on Exposure

*Single risk assessment in detail*

Natural Influence	Description	Effect on Exposure
None found	-	choose...

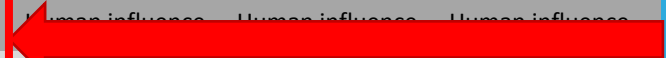
Human Influence	Description	Effect on Exposure	 2
Early harvesting	Early harvesting of vulnerable stands can save values before damage.	Decrease	<input type="checkbox"/>
Storm damage insurance	Risk transfer to insurer	Decrease	<input type="checkbox"/>

# Risk Interaction Scheme

## Next step: risk interaction assessment

*Risk interaction assessment, overview from single risk to risk interaction*

Management objective:					
Hazard	Storm	Fire	Flood	Avalanche	
Impact on Vulnerability	Natural influence	Natural influence	Natural influence	Natural influence	Previous storm
	Human influence	Human influence	Human influence	Human influence	
Impact on Exposure	Natural influence	Natural influence	Natural influence	Natural influence	
	Human influence	Human influence	Human influence	Human influence	
Hazard	Storm	Fire	Flood	Avalanche	
Impact on Vulnerability	Natural influence	Natural influence	Natural influence	Natural influence	Previous Fire
	Human influence	Human influence	Human influence	Human influence	
Impact on Exposure	Natural influence	Natural influence	Natural influence	Natural influence	
	Human influence	Human influence	Human influence	Human influence	
Hazard	Storm	Fire	Flood	Avalanche	
Impact on Vulnerability	Natural influence	Natural influence	Natural influence	Natural influence	Previous Flood
	Human influence	Human influence	Human influence	Human influence	
Impact on Exposure	Natural influence	Natural influence	Natural influence	Natural influence	
	Human influence	Human influence	Human influence	Human influence	
Hazard	Storm	Fire	Flood	Avalanche	
Impact on Vulnerability	Natural influence	Natural influence	Natural influence	Natural influence	Previous Avalanche
	Human influence	Human influence	Human influence	Human influence	
Impact on Exposure	Natural influence	Natural influence	Natural influence	Natural influence	
	Human influence	Human influence	Human influence	Human influence	





# Risk Interaction Scheme



## Next step: Risk Interaction Assessment

### Example:

Management objective:  
"Income"


Hazard:  
"Storm" after  
"Avalanche"

**Question:**  
What does the  
previous  
hazard  
change?

### General Information


#### Impact on Vulnerability

Natural Influence	Description	Effect on vulnerability
Water logged soil	Trees are not able to build deep roots	Increase
Pre-damage	Destabilization of stands through avalanche	Increase

Human Influence	Description	Effect on vulnerability	 3
Thinning activities / salvage logging	Selective thinning or salvage logging can lead to an increased or decreased stability caused by the need to remove damaged trees.	Unknown	<input type="checkbox"/>
Tree species composition	Adaption of the tree species composition according to the <i>tree species suitability maps</i>	Decrease	<input checked="" type="checkbox"/>

#### Impact on Exposure

Natural Influence	Description	Effect on Exposure
None found	-	choose...

Human Influence	Description	Effect on Exposure	 4
Early harvesting	Early harvesting of vulnerable stands can save values before damage.	Decrease	<input type="checkbox"/>
Storm damage insurance	Risk transfer to insurer	Decrease	<input type="checkbox"/>



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Thank you



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