



# REGIONAL FORUM ON SUSTAINABLE DEVELOPMENT: ADAPTATION TO CLIMATE CHANGE

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**EU AFFAIRS**  
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REGIONE LIGURIA

# Towards integrated and community-based disaster risk management: A participatory APPROACH for floods preparedness

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# INTRODUCTION: FLOOD DISASTERS



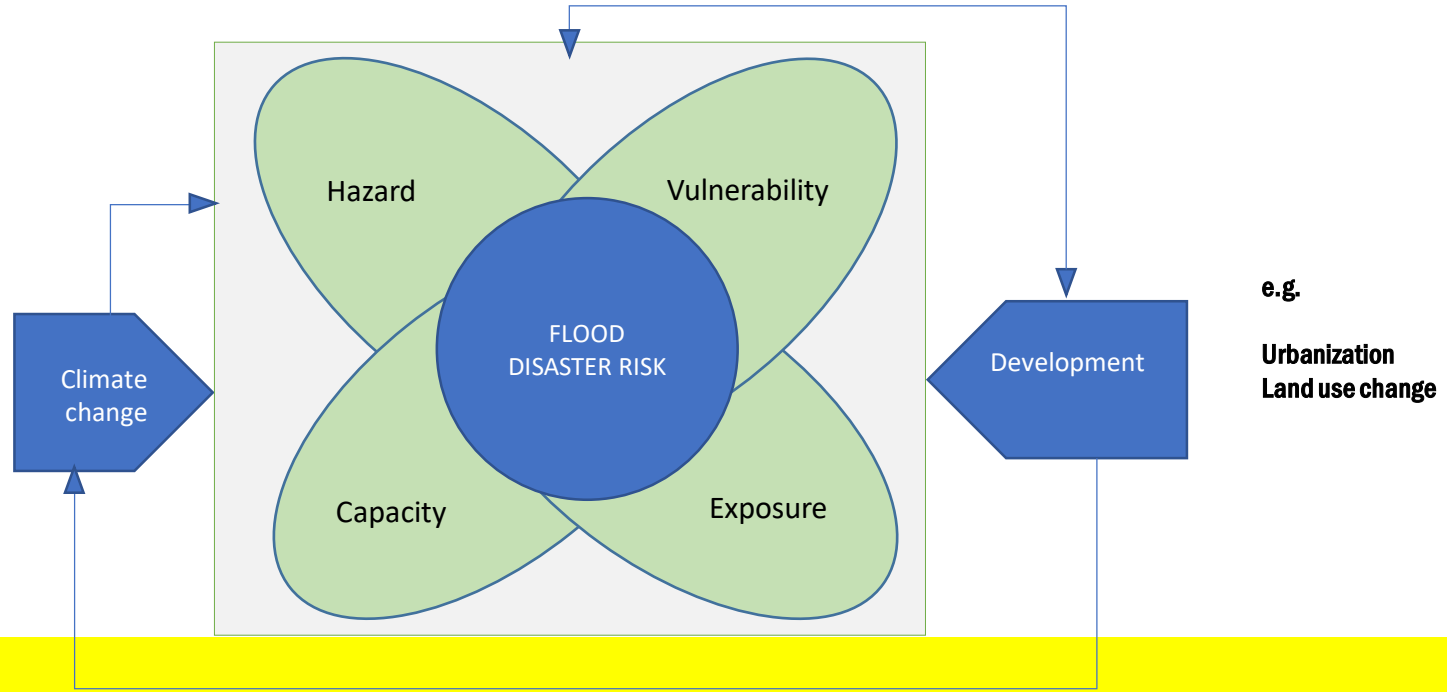
In Europe flood events over the period 1980–2017 have resulted in

- over 4300 fatalities
- direct economic losses of more than EUR 170 billion (based on 2017 values).
- these losses are almost one-third of the damage caused by all natural hazards

(EEA, 2019)

# INTRODUCTION: CLIMATE CHANGE IMPACTS ON FLOOD RISK

- **Increase in the occurrence and frequency of once-in-a-century river floods in most regions of Europe**, with the exception of parts of northern Europe, southern Spain and Turkey.
- **Pluvial floods and flash floods are likely to become more frequent** throughout Europe.

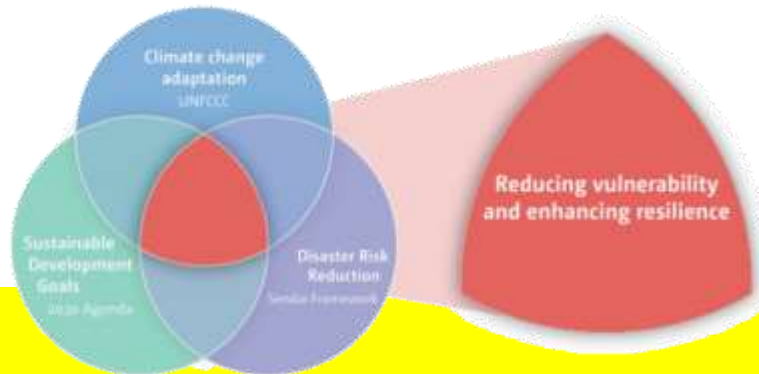


(EEA, 2019)

# THE ISSUE

It is becoming a high priority to implement **transdisciplinary integrated, multisectoral risk assessment and decision-making to improve efficiency, reduce duplication of effort and allow for connected, collective action.** (GAR, 2019)

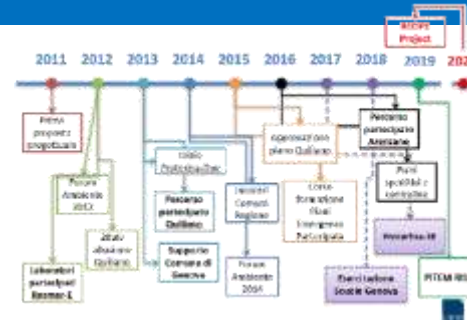
The **engagement and involvement of local communities** can be seen as a key strategy to foster developing a DRR framework able to take into account the future scenarios and to create a community able to cope with future risks



# PARTICIPATORY AND INTEGRATED PROCESS FOR FLOODS PREPAREDNESS



**Our starting point:**  
the civil protection /  
preparedness plan  
at local level



- The plan is at the **interface** between an event and all the other phases
- The plan describes, evaluates and manages the territory in its bound with the «**residual risk**» from the other DRM phases
- Is at the **local level** where governments and communities can best engage with each other and work together and where the basic environmental management and regulatory governance functions that are essential for effective DRR are concentrated (UN, 2019)



# CASE STUDY – IMPLEMENTATION & LESSONS LEARNT

The inter-municipal case study of Valpolcevera (GE) has been implemented in the framework of the project INTERREG-Maritime IT-FR Proterina-3Evolution



5 municipalities

Inhabitants: 29'000

Surface: 120 km<sup>2</sup>

Inhabitants in flood prone areas: 6%

Schools in flood prone areas: 14/33

Schools shared between Municipalities

Intermunicipal land-use plan



# CASE STUDY – IMPLEMENTATION & LESSONS LEARNT

## WHO COORDINATED THE PLANNING PROCESS?



## WHO TO INVOLVE PRIORITARILY IN THE PLANNING PROCESS?



**MAYORS,  
TECHNICIANS  
AND  
POLITICIANS**

- Technical office
- School office
- Civil protection office
- External technicians



Creation of an  
intermunicipal **working  
group responsible for  
the planning drafting**



**RELEVANT  
STAKEHOLDERS  
SUCH AS SCHOOLS  
AND FAMILIES**

- Schools
  - as a strategic building
  - as education
  - as community





# CASE STUDY – IMPLEMENTATION & LESSONS LEARNT

## WHO?



MAYORS,  
TECHNICIANS  
AND  
POLITICIANS



### 1. ACTIVATION

- Common objective
- Definition of the steps of the process
- Sharing experiences



### 2. TRAINING

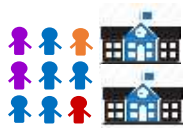
- Common language
- Increase and develop knowledge
- Create a working group

### 3. CO-DESIGN WITH STAKEHOLDERS & INTERINSTITUTIONAL TABLE



# CASE STUDY – IMPLEMENTATION & LESSONS LEARNT

WHO



**RELEVANT  
STAKEHOLDERS  
SUCH AS  
SCHOOLS AND  
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**MAYORS,  
TECHNICIANS  
AND  
POLITICIANS**

**CO-DESIGN WITH  
STAKEHOLDERS &  
INTERINSTITUTIONAL TABLE**



## **INFORMATION**

Building a common language and a shared base information between associations, schools, citizens and technicians on emergency behaviors and prevention measures



## **PARTICIPATORY RISK MAPPING**

Through a walk guided by technicians and volunteers and a participated workshop, citizens contribute to the participatory risk mapping.



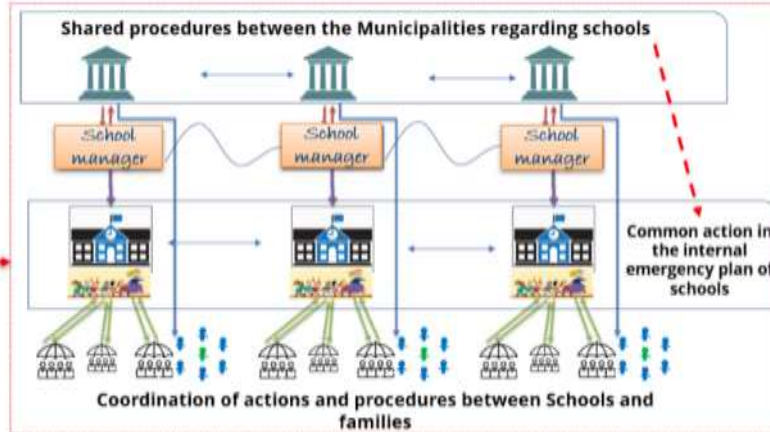
## **CO-DESIGN SHARED ACTIONS**

Focus group to elaborate and co-plan shared recommendations that encourage collective responsibility for civil protection actions



# CASE STUDY – IMPLEMENTATION & LESSONS LEARNT

«Disomogeneity in the municipalities choices and actions regarding open/closed schools»

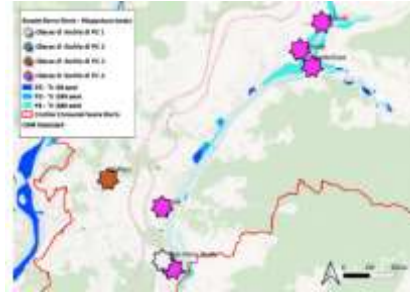


**WHAT EMERGED FROM THE CO-DESIGN PHASE with stakeholders?**

Need for:

- ✓ Pact schools-families
- ✓ Integration schools-municipalities

# CASE STUDY – IMPLEMENTATION & LESSONS LEARNT



Local Exposure, Vulnerability and Capacity mapping of schools,  
from the working group and schools managers

Risk evaluation mapping of schools  
from the working group and CIMA

Area di intervento	Intervento	Attività	Responsabile	Stato	Finanziamento
Area di intervento 1	Intervento 1.1	Attività 1.1.1	Responsabile 1.1.1	Stato 1.1.1	Finanziamento 1.1.1
Area di intervento 2	Intervento 2.1	Attività 2.1.1	Responsabile 2.1.1	Stato 2.1.1	Finanziamento 2.1.1
Area di intervento 3	Intervento 3.1	Attività 3.1.1	Responsabile 3.1.1	Stato 3.1.1	Finanziamento 3.1.1
Area di intervento 4	Intervento 4.1	Attività 4.1.1	Responsabile 4.1.1	Stato 4.1.1	Finanziamento 4.1.1
Area di intervento 5	Intervento 5.1	Attività 5.1.1	Responsabile 5.1.1	Stato 5.1.1	Finanziamento 5.1.1
Area di intervento 6	Intervento 6.1	Attività 6.1.1	Responsabile 6.1.1	Stato 6.1.1	Finanziamento 6.1.1
Area di intervento 7	Intervento 7.1	Attività 7.1.1	Responsabile 7.1.1	Stato 7.1.1	Finanziamento 7.1.1
Area di intervento 8	Intervento 8.1	Attività 8.1.1	Responsabile 8.1.1	Stato 8.1.1	Finanziamento 8.1.1
Area di intervento 9	Intervento 9.1	Attività 9.1.1	Responsabile 9.1.1	Stato 9.1.1	Finanziamento 9.1.1
Area di intervento 10	Intervento 10.1	Attività 10.1.1	Responsabile 10.1.1	Stato 10.1.1	Finanziamento 10.1.1

Shared procedures  
from the working group and CIMA

WHAT EMERGED FROM  
THE CO-DESIGN PHASE  
with interinstitutional  
table?

Intermunicipal urban plan  
informed by the risk  
mapped into the territory

# CASE STUDY - CONCLUSIONS

Starting from the fact that The CP plan is a commitment the community has taken to deal with the residual risk, the **participation in CP plan** can collaborate to include an integrated visions of the risk through

- **New Risk scenarios** able to include societal and territorial needs-reducing vulnerability to hazards and enhancing the local capacity
- **More integrated and shared actions** between public institutions and citizens –fostering coping capacity
- **Strengthened risk governance and better awareness of risk and responsibilities, supporting the interactions between CP plan and other plans** and enhancing the collective agency– improving adaptive capacity
- **Fostered also prevention measures**
- In other word the participation in CP plan contribute to the development of a more prepared society able to withstand future extreme events with a robust institutional capacity

