



UNITED NATIONS  
Bosnia and Herzegovina

# Risk – Proofing the Western Balkans

*Empowering People to Prevent Disasters*

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*SDC CC&E & DRR Networks, 12 September 2017*



# Natural Hazards in Western Balkans

## Disaster risks: area based and dynamic



- **Earthquake** (high intensity every 60 years)
- **Landslides** – triggered by meteorological hazards
- **Floods** - most challenging and recurring natural hazard in the WB
- **Wildfires** - 60 % of registered cases wildfires are triggered by human actions/negligence
- **Climate change factor: frequency and intensity of hydro-meteorological hazards**, temperature and precipitation change, reduction of availability of water, food, changes in livelihoods



# The understanding of and WB



**Risk = Hazard x Vulnerability x Exposure**  
**Capacity**

Weak spatial analysis and hazard monitoring, forecasting models and systemic records on disaster losses in BiH

Social dimensions of vulnerability not integrated in current BiH DRM frameworks

Efforts mostly concentrated to civil protection and security management sectors, weak coordination

Exposure of people and critical assets poorly analyzed and insufficient for planning

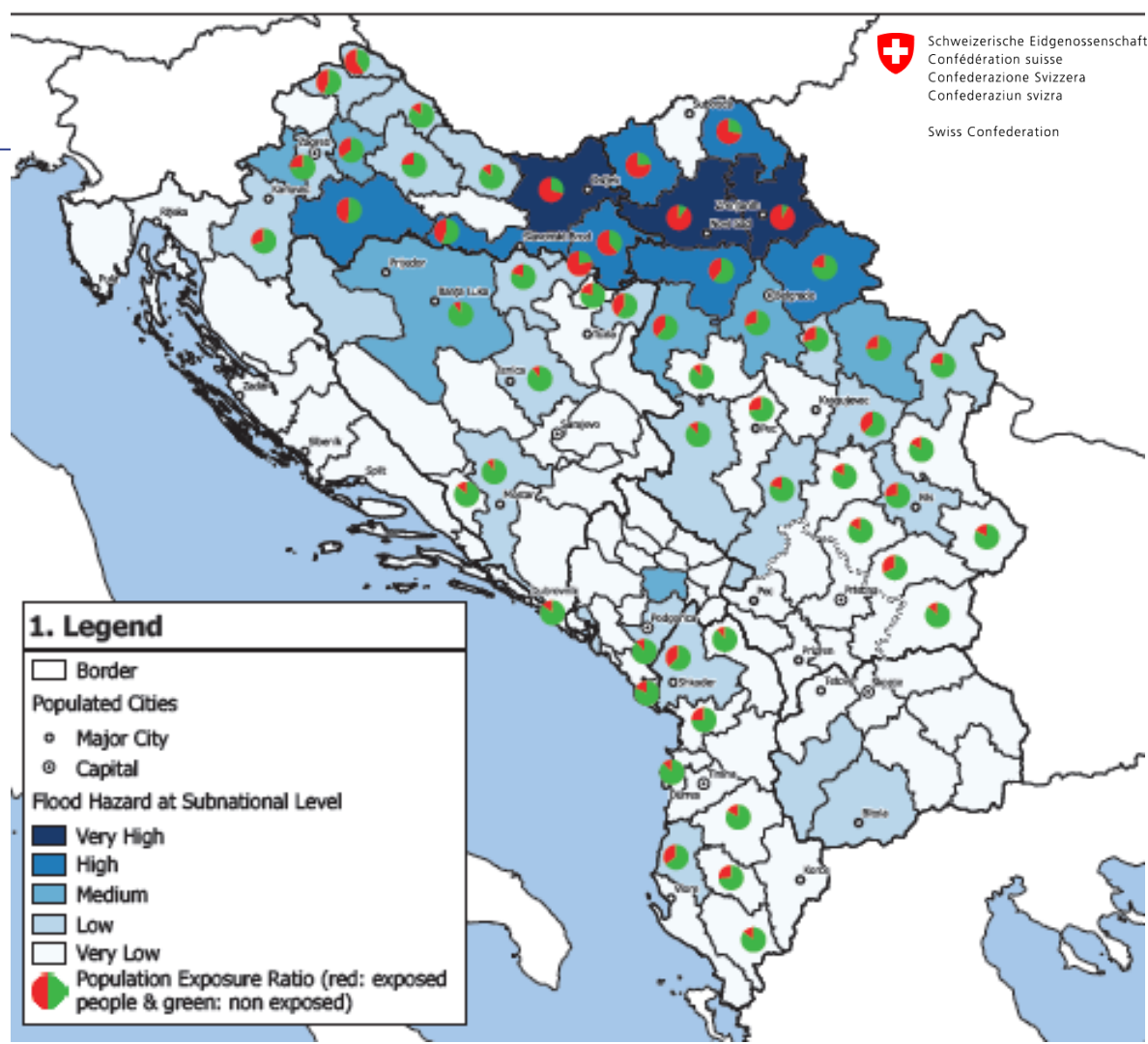
**NO natural disasters - only natural hazards** - the WB perception still anachronistic in this sense. **Hazards cannot (always) be avoided – disasters can!** – The level of institutional and community preparedness is still weak, despite lessons learnt from 2014

**Human Development through the lens of DRR in BiH and WB** – the risk informed planning requires knowledge, institutional commitment and proper tools/mechanisms in place. BiH still lacks enabling environments to operationalize this



# WB Population exposure to flood risks

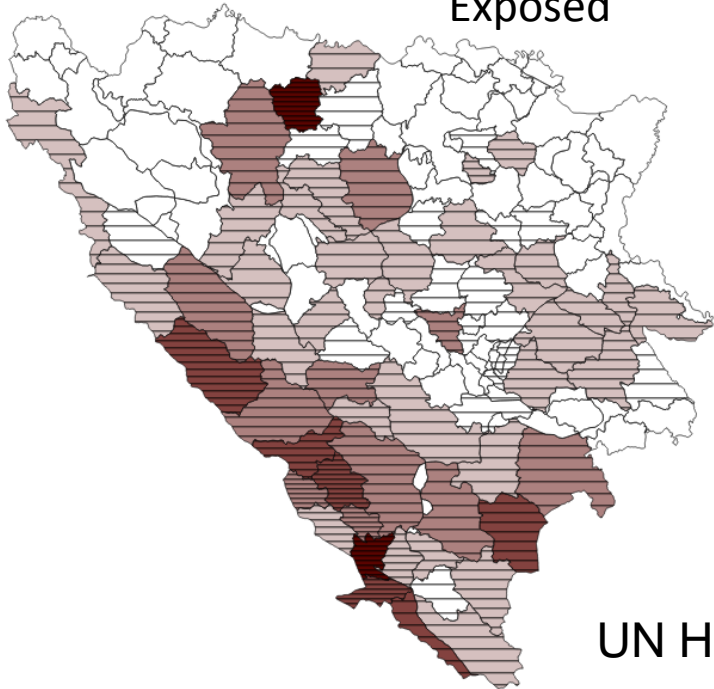
- The flood hazard data - Global Assessment Report (GAR) using a 100 year return period.
- The population data - Gridded Population of the World
- The statistics tools used on these two datasets.



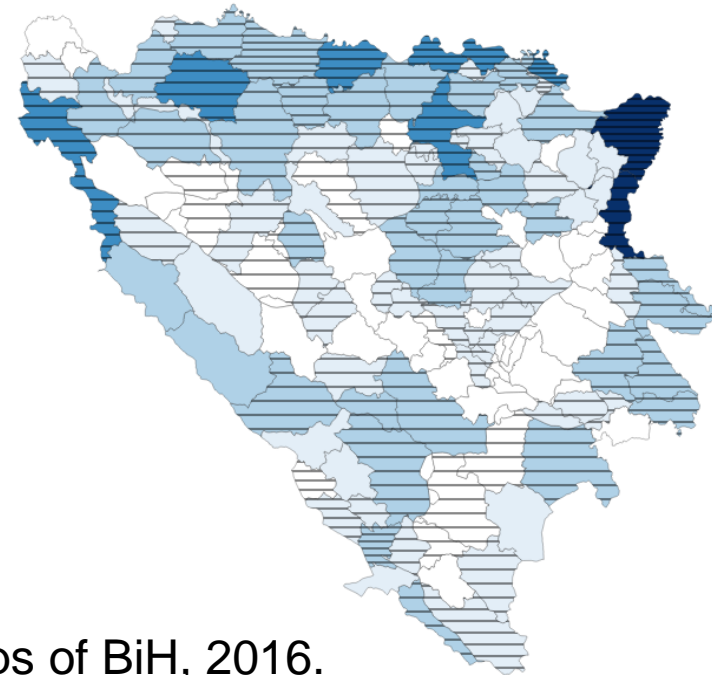


# BiH POPULATION EXPOSURE TO FLOODS AND EARTHQUAKES

Earthquake Hazard and  
Ratio of Population  
Exposed



Flood Hazard and  
Ratio of Population Exposed



UN Hazard and Risk Maps of BiH, 2016.



## Game-changer?

- The loss of **79 lives**
- **990,000 people** evacuated/displaced
- Huge damages of homes, livestock, hospitals, businesses...
- In BiH – **2.04 billion Euros** economic impact
- **15% of GDP**
- **HDI calculation -FIVE-YEAR SET BACK IN TERMS OF OVERALL DEVELOPMENT**



**2014 - Product of unresolved risk management issues and poor development choices?**

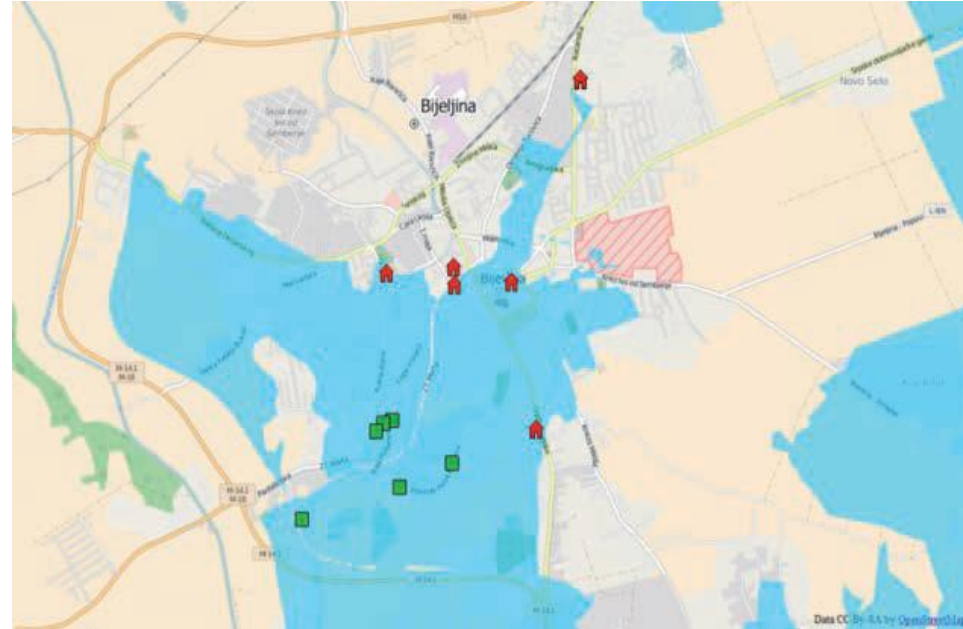






# Making use of data for better targeting and mainstreaming DRR

- 61% of the population lives in rural areas employing 20% of the total working population,
- 62% of the municipalities are underdeveloped, total minefield contamination amounts to 2.3 % of the total surface area (UNDP)
- Unemployment rate reached 27.5% and youth unemployment stands at 54.3%
- Only about 2% of children from the poorest families and Roma children attend pre-school. (UNICEF)
- Social inclusion policies are still institutionally unharmonized
- Availability and quality of datasets, modelling tools and information sharing platforms
- Institutional ability to process and understand such data- uninformed and one-sided development



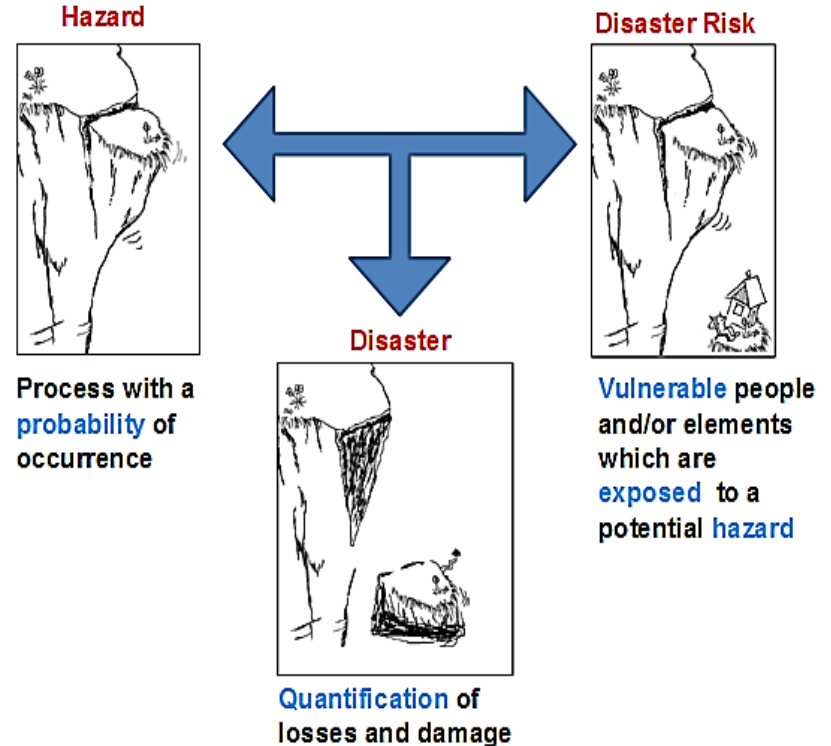
**Sources:** UNDP Bosnia and Herzegovina, 2014 Housing and Risk Assessment Project; EU Recovery Programme in BiH data, and a UNHCR Roma survey conducted in 2013.



# Exposure and Vulnerability

## Forgotten layers of risk

- May 2014 – 10 % PwD population affected, 60 000 children in BiH
- Non existence of early warning systems or
- Absence of **disaggregated data** – place of residence, type and level of vulnerability
- Aid delivery – not accessible to persons with disabilities
- Only reliable system during response – solidarity and human compassion
- **DEVELOPMENT ORIENTED DRR IS INCOMPLETE IF IT DOES NOT INCORPORATE VULNERABILITY AND RESILIENCE INTO ITS EQUATION**



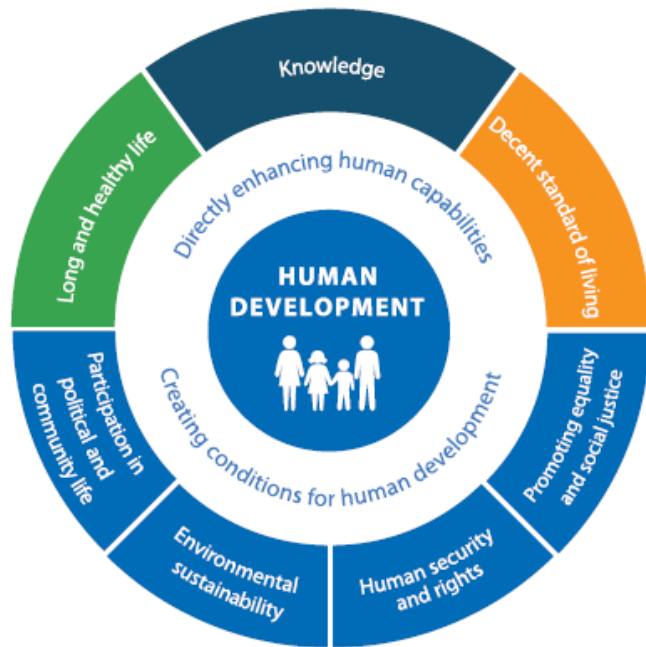




# Human development perspective



Factor	Vulnerability	Capacity
Social	<ul style="list-style-type: none"> <li>- Lack of education</li> <li>- Illiteracy</li> <li>- Occupation of unsafe areas</li> <li>- High-density occupation of sites and buildings</li> <li>- Lack of mobility</li> <li>- Low perception of risk</li> <li>- Marginalized groups and individuals (ethnic, religion, class, age, gender)</li> <li>- Corruption</li> <li>- Poverty</li> <li>- Poor management and leadership</li> <li>- Lack of disaster and preparedness planning</li> </ul>	<ul style="list-style-type: none"> <li>- Social capital</li> <li>- Coping mechanisms</li> <li>- Memory of past disaster</li> <li>- Good governance</li> <li>- Ethical standards</li> <li>- Social equality and equity</li> <li>- Good health</li> <li>- Social network</li> <li>- Local non-governmental organisations</li> <li>- Access to information</li> <li>- Well developed preparedness plans</li> </ul>
Physical	<ul style="list-style-type: none"> <li>- Buildings at risk</li> <li>- Unsafe infrastructure</li> <li>- Unsafe critical facilities/infrastructure</li> <li>- Rapid urbanization</li> <li>- Lack of land-use planning</li> </ul>	<ul style="list-style-type: none"> <li>- Resilient buildings and infrastructure</li> <li>- Physical capital</li> <li>- Good building codes, zoning and land-use planning</li> </ul>





# Who is Vulnerable in WB and Why?

- Demographic specifics in Balkans point at a huge dependency ratio

Population group	Driver of vulnerability
Poor people	Limited livelihood choices, inadequate coping mechanisms and exclusion drive vulnerability for this group.
Women	They are vulnerable because of caretaker responsibilities and their limited access to resources and decision-making processes.
Children and the elderly	Their vulnerability stems from their dependency on others and weakness that hampers their capabilities and mobility.
Persons with disabilities	They are vulnerable because of physical challenges and their dependency on others and on dwindling public assistance.
Minorities	Their vulnerability stems from discrimination, marginalisation and exclusion.
Migrants, returnees and IDP	These groups are vulnerable because of their unpredictable mobility, settlement in insecure and exposed areas, and exclusion.
Farmers	They are vulnerable because their livelihood depend on the cycles of nature.

**Example:** Children in poor and vulnerable Roma families were at greater risk of not enrolling in school in September 2014, due to worsened income and living conditions.

UNICEF Safety School Framework – solution for longer-term resilience?



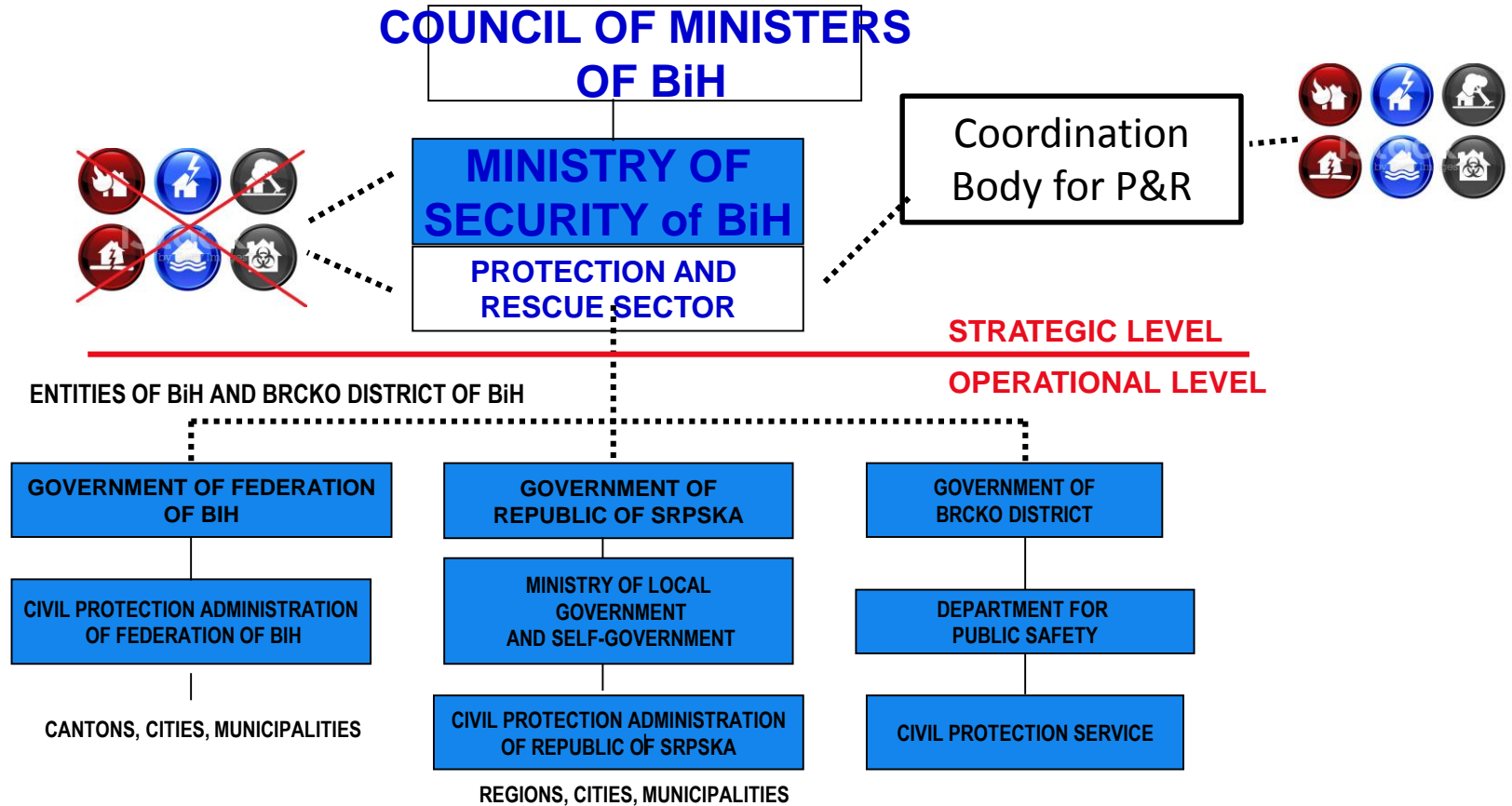
# Holistic Risk Analysis



		Community				
Hazards	x	Vulnerabilities	/	Capacities	=	Risks
Risk initiator		Risk Modifier		Risk Modifier		Indicators
Hazards: - Natural - Biological - Technological - Societal		People - Density and growth - Vulnerable groups / gender		Multi-sectoral collaboration Contingency planning All-hazard approach Emergency Preparedness		- Deaths - Injured - Displaced - Affected - Damage to infrastructure - Loss of lifelines - Loss of property - Secondary hazards - Security
Probability Scale: - magnitude - intensity - area - spread - duration		Property - Emergency and health infrastructure		Legislation Management structures Administrative procedures Technical guidelines Institutional arrangements Information systems Warning systems		
		Services - Fire stations, vehicles, equipment - Hospitals and ambulances - Schools and community centers		Resources Education and research Training and simulation		
		Livelihoods -Employment -Income sources		Participation Private sector collaboration		
		Environment and resources -Water, soil, air quality - Forestry, agriculture				



# Emergency Management = DRR in BiH?



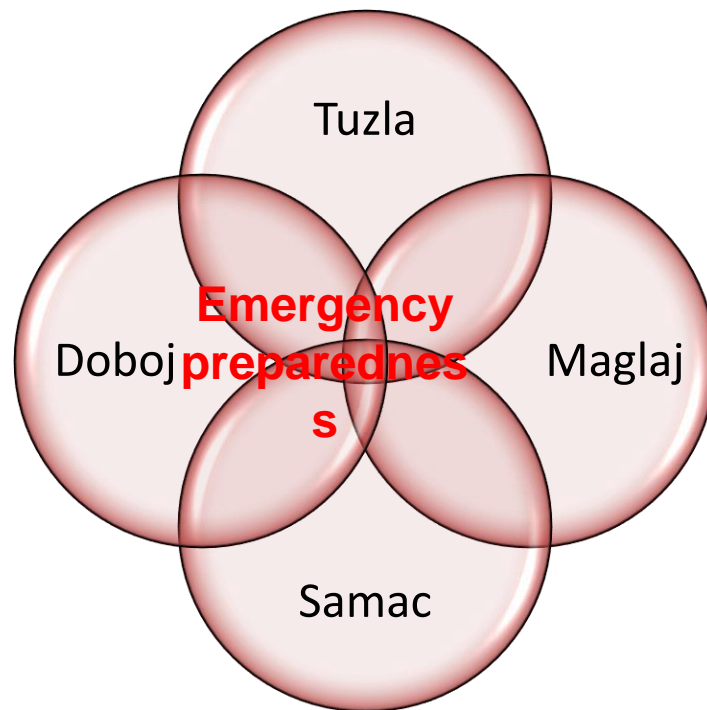
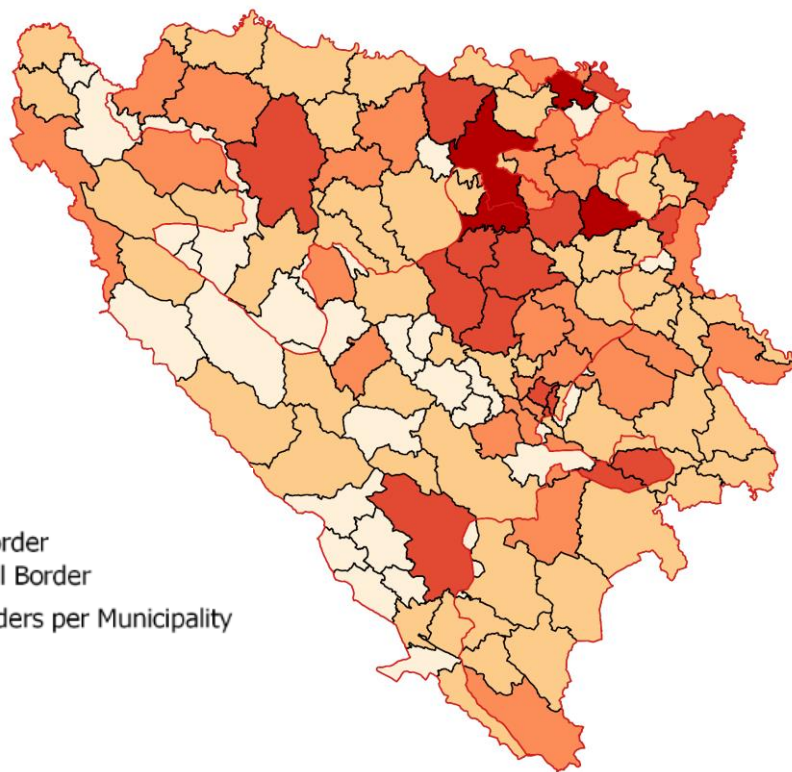


- DRR is not the responsibility only of Civil Protection authorities. Many different ministries have a key role to play!

Authorities	Role
Social Protection	Ensure delivery of essential social services in emergencies and improve protection against external shocks.
Education	Ensure the safety of children in school and minimal disruption to education services. Raise awareness of children on disaster risk and climate change
Health Sector	Ensure the resilience of health service delivery in emergencies



# Identifying DRR community actors







Encouraged by DRR and CCA, these factors need to be considered differently for mainstreaming purposes:

1

Geographical  
area

2

Timing

3

Target groups  
with high  
vulnerability  
ratio

4

Adjust  
Programme  
approach

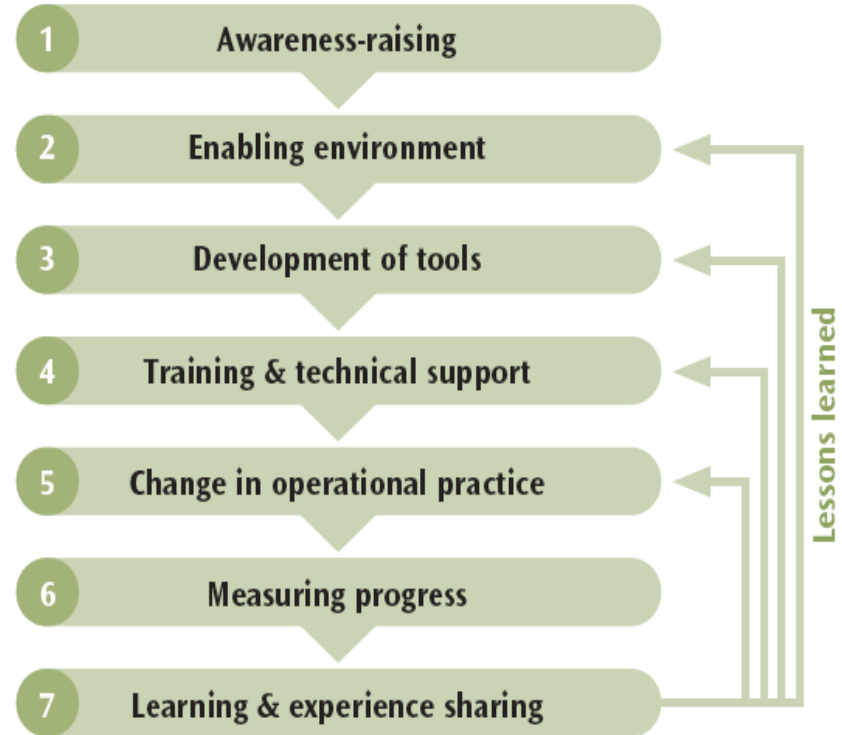
5

Adjust  
Programme  
outreach

# People-centered approach

Puts people at the centre when assessing risks and takes into account the vulnerabilities and capacities specific to each group.

1. Community level Initiatives
2. Local Governance Possibilities
3. Responsibilities at the National level
  - *I Strategic and Legislative Framework*
  - *II Institutional Framework*
  - *III Inter-Agency Coordination*
4. Multi-Stakeholder Coordination
5. Regional Coordination and Cooperation





# Vulnerable as agents of change

## Participatory DRR Action Planning

- Capacitated to propose DRR initiatives to community and local governance structures
- Engaged in the implementation of DRR initiatives and mobilise others to support the cause.
- Trained in his/her neighbourhood to apply green engineering as a preventive action.
- Empowered through access to reliable real-time early warning, information sharing and participation in regular emergency response drills on response in the event of a disaster.
- Access to affordable insurance solutions
- Participate in review and periodical update of disaster preparedness and contingency policies, plans and programmes
- Take advantage of new technology without discrimination.



## Benefits of risk- blind development practices are short-lived. (Zeljezno Polje example)

- **Emergency planning** should become less shock-driven and more vulnerability-driven
- **Development planning** should no longer be 'blind' to disaster risk and climate change

Risk-informed programming incorporating:

- disaster risk/impact screening
  - climate change
  - conflict risk
  - economic volatility
  - social protection
  - urbanization
- } Resilience



# UN DRR implementation across sectors

**UNDP** - cross-sectoral mainstreaming of DRR in selected municipal and cantonal development strategies through Municipal Training System project

**UNICEF – Education and Social Protection**, Initiating School Safety programme, school-level Disaster Management Plan, Manual for social protection in emergencies

**WHO, UNFPA - Health** - Initiating hospital safety initiatives, integrating Minimum Initial Service Package Into local DRR plans

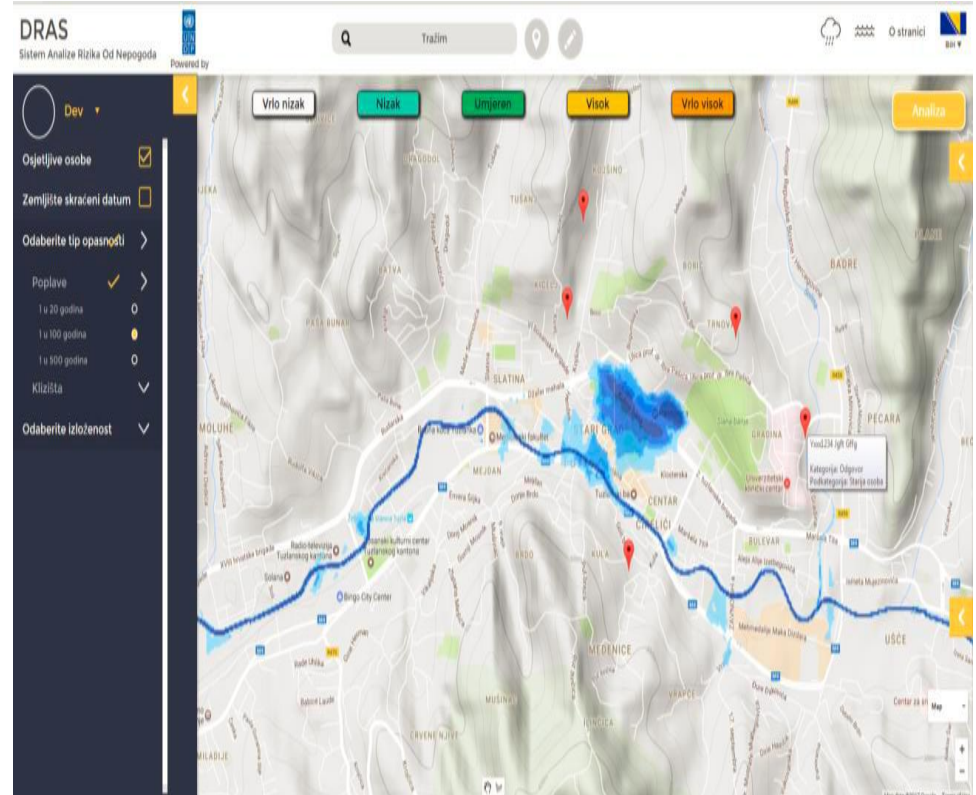
**FAO - Agriculture** Promoting programs of contingency crop planning; farmers involvement in DRR decision-making processes

**UN/SDC – DRR Small Action Fund** – innovative approach, different actors involved, cross-sectoral results



# Risk and vulnerability informed decision-making municipal level (UNDP)

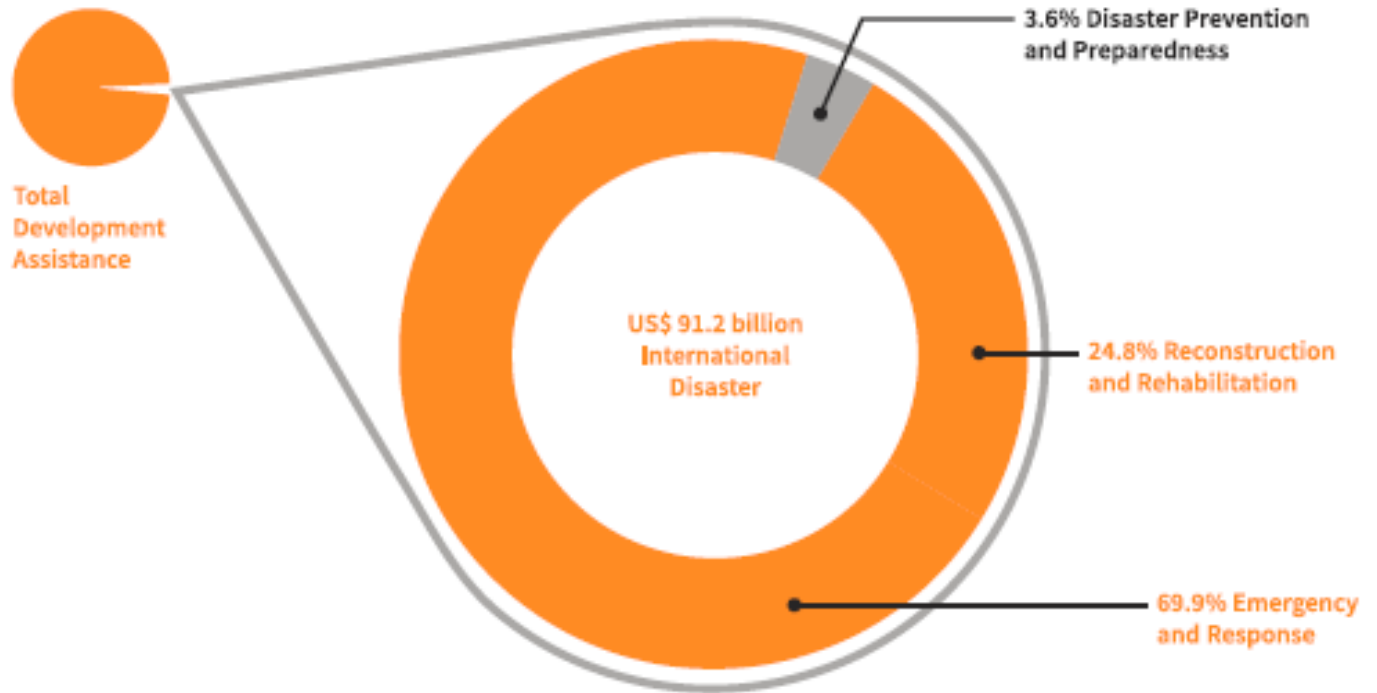
- Fast computer analysis and creation of spatial risk assessments for local governance authorities combining scientific hazard, detailed land use and vulnerability data.
- The tool helps local communities as it enables objective and precise calculations of risks, usage of scientific data existing at higher levels to support evidence-based decision making.







# Divorce/marriage between discourse and practice



Share of development aid allocated to disaster prevention and preparedness

# Disaster Prevention Pays, People must be involved

- DRR is cost-effective 1:4/1:7
- Private and public measures at all levels need to work together
- Public financing is essential for the reduction of disaster risk
- Risk reduction strategies and mechanisms need to be based on interoperable and well-coordinated systems at the national and local level.
- Budget resources allocated to development investment must take in account the long-term risks. Any investment that is not risk informed is wasted.





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# Questions to ask?

# Thank you!