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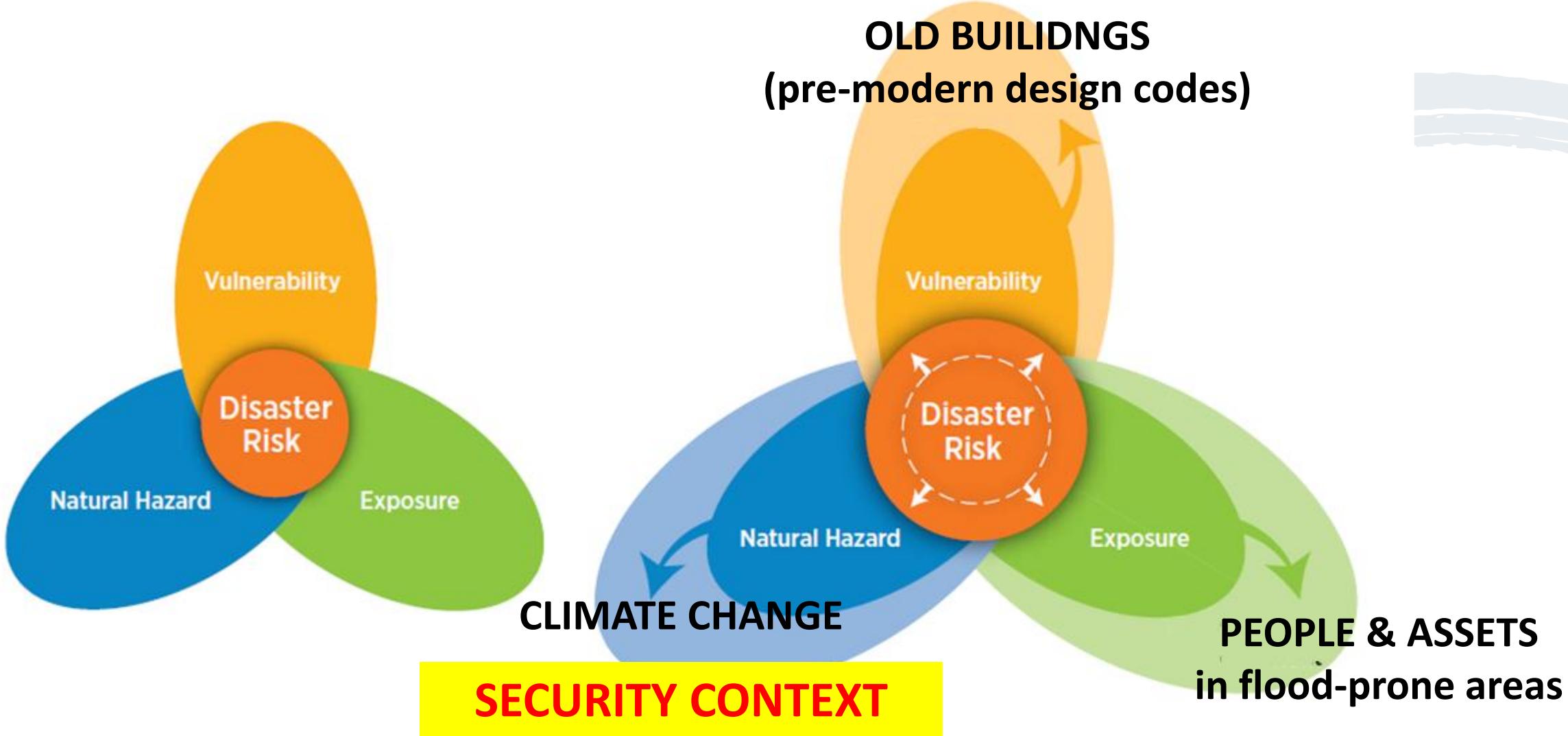
FROM KNOWLEDGE TO INVESTMENTS: SCALING UP PREVENTION AND PREPAREDNESS

What does evidence tell us?

No-regret investments in prevention and preparedness



WHY SCALING UP PREVENTION AND PREPAREDNESS?



Source: Adopted from Building Resilience: Integrating climate and disaster risk into development (World Bank 2013).

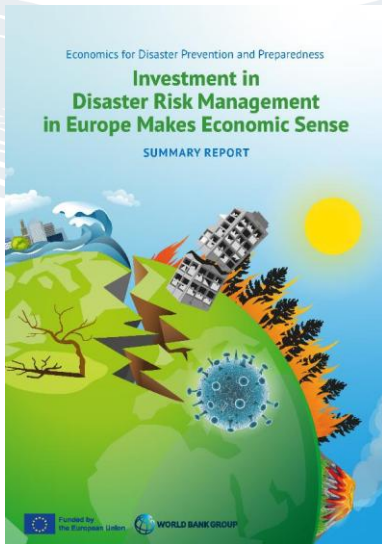
HOW TO WE SCALE UP PREVENTION AND PREPAREDNESS?



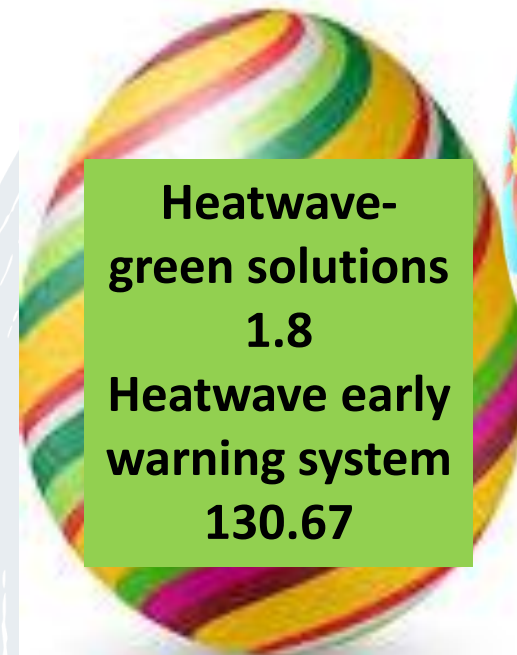
**A range of stakeholders at
different levels, sectors,
spheres**

WHAT DOES EVIDENCE TELL US ?

- Investing in disaster resilience is **SMART**
- DRM investments can bring **positive economic outcomes** as well as social, environmental and other **co-benefits**.
- **Co-benefits materialize even if a disaster does not happen!**

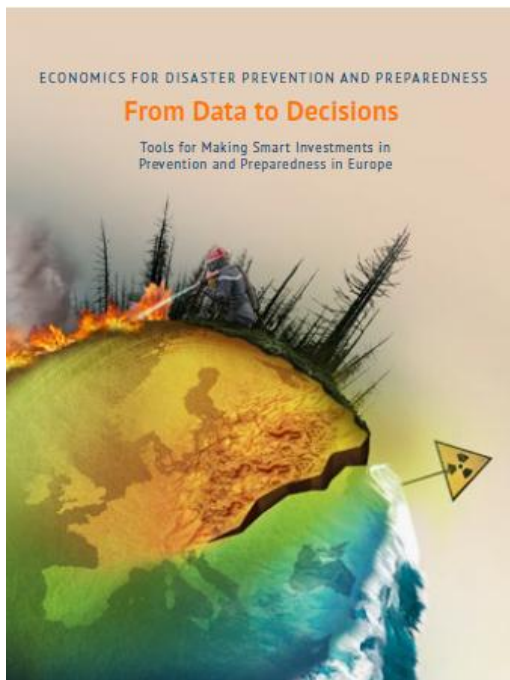


**On average
for each 1
EUR invested
2-10 EUR
benefits!**



INVESTING IN RESILIENCE CAN BE EFFICIENT

- ✓ Countries can be **selective** and **maximize impact** by **prioritizing reforms/actions/investments with the highest benefits**
- ✓ **Risk data, analytical tools, and examples** can support for smart decisions-making



Risk data can identify risk hotspots to focus attention on most pressing sectors or areas



Analytical tools can help you consider various criteria or dimensions, systematize data, engage various groups



Examples of use of data and tools can **demonstrate their usability** and inspire your actions!

WHAT ARE NO-REGRET INVESTMENTS?

No regrets investments deliver net benefits in all possible scenarios

- Economically viable (even if anticipated disaster event does not occur)
- Deliver immediate or early benefits (i.e., improved infrastructure, public health)
- Minimize lock-in (i.e., situation when you are committed to large spending)
- Enabling early action for longer term objectives (e.g., resilience to future risks)

Thinking of scaling up? What information can guide you to these investments?

- **Cost-benefit analysis / triple dividend of resilience** (or other types of analysis)
- **Climate change scenarios** – understanding risk dynamics
- **Priorities now and priorities long-term**
- **Community** risks (vulnerability & exposure) and needs

EARLY WARNING SYSTEMS



- ✓ Save lives, help to protect property
- ✓ Multi-hazard, make sense under various scenarios
- ✓ Are adaptive/scalable – you can improve various elements

EVIDENCE

- **WMO:** Disaster damage can be reduced by 30% if an early warning is issued within 24 hours.
- **WB global report** on hydro-met EWS found BCRs ranging 4 to 35, dependent on assumptions and quantified co-benefits (Hallegatte 2012).
- **WB report** – looked at **heatwave** EWS, **flood** EWS, **earthquake** EWS – all of them showing high BCRs

EXAMPLES

- **Moldova** - improving hydrometeorological services (US\$6.5 million) as part of a WB loan (modernization of monitoring systems and ICT, service delivery with better forecasting, institutional strengthening, and regional collaboration; TAFF
- Kosovo, Romania, Kyrgyzstan, Poland, Tajikistan, Türkiye

WHAT TYPE OF INFORMATION CAN HELP?

- Understanding gaps across the EWS chain
- Roadmap & investment plan

EMERGENCY PREPAREDNESS AND RESPONSE SYSTEMS

- ✓ Save lives, help to protect property
- ✓ Multi-hazard, make sense under various scenarios
- ✓ Are adaptive – you can improve various elements



EVIDENCE

- **Infrastructure: WB analysis of CBAs** of investing in emergency response infrastructure with **BCR between 1.3-1.73**
- **WB report:** value of strengthening capacity of personnel, with BCRs between 1.1-1.9 - **Soft investments can be also considered “no-regret” investments**
- **Gaps in understating full range of benefits**

EXAMPLES

- **Romania** – series of projects to improve structural safety and functional capacities of key RP&R infrastructure
- **28 fire stations will be renovated/build.** As of now 5 buildings were completed (Mizil, Tecuci, Carei, Obor, Calarasi)

WHAT TYPE OF INFORMATION CAN HELP?

- Understand the condition of your buildings/system
- Prioritize based on potential benefits & criteria

PUBLIC AWARENESS & SELF-PREPAREDNESS

- ✓ **Save lives, help to protect property**
- ✓ Multi-hazard, make sense under various scenarios
- ✓ **Are adaptive/scalable** – you can improve various elements, including accessibility of information, engaging communities in high-risk areas

EXAMPLES

- **Japan's** efforts in the education sector; the **Netherlands, Croatia, Austria**
- **Sweden & Finland** – home **(self) preparedness** information and campaigns



WHAT TYPE OF INFORMATION CAN HELP?

- Social risk index / vulnerability analysis – **hotspots**
- Diagnostic/overview what is available and what works
- Public surveys / focus groups / consultations with civil society groups and volunteers
- Plan with key activities, key target groups, engagement plan with other stakeholders to help disseminate message and empower people.

NATURE-BASED SOLUTIONS

- ✓ Save lives, help to protect property, **support ecosystem, recreational and other benefits**
- ✓ Multi-hazard, make sense under various scenarios
- ✓ Are adaptive/scalable / **combination with gray and other solutions (like EWS)**

EVIDENCE & EXAMPLES

- **WB report includes several examples including:** a landscape restoration project in Scotland with BCRs from **1.17 to 17**; study of the green, hybrid, and grey infrastructure solutions on the Elbe river, Germany; and others

RESOURCES & INFO NEEDS: <https://www.gfdrr.org/en/nbs>



PUBLICATION

The Nature-Based Solutions Opportunity Scan

Leveraging Earth observation data to identify nature-based solutions investment opportunities.



RESULTS IN RESILIENCE

Assessing the Benefits and Costs of Nature-Based Solutions

Practical guidance for valuing nature-based solutions for resilience.

CATALOGUE OF NATURE-BASED SOLUTIONS FOR URBAN RESILIENCE
Guidance for Municipalities and the Private Sector

PUBLICATION

Nature-Based Solutions: Guidance for Municipalities and the Private Sector

A primer on how municipalities and the private sector can mobilize nature for resilience.

RISK-INFORMED BUILDING CODES, LAND MANAGEMENT & RESILIENT INFRASTRUCTURE

- ✓ **Save lives, help to protect property – keeping people away from harm**
- ✓ **Multi-hazard, make sense under various scenarios**
- ✓ **Can contribute to **climate adaptation and mitigation****

EVIDENCE

- **Improving buildings codes and construction standards** has made critical contribution to safety and resilience
- **WB Global report shows that** building resilience into new infrastructure assets, such as roads and transport links, increases upfront costs **by only around 3%**, but each dollar invested can avert \$4 in losses on average.
- **Land use planning** – floods, avalanche

WHAT TYPE OF INFORMATION CAN HELP?

- Understand the condition of your buildings codes with respect to new and existing infrastructure; and the condition of your current building stock
- Risk information is critical. Modelling approaches can be used to adjust the vulnerability of building stock to represent the impact on the risk of improved building codes or retrofit programmes
- Prioritize based on potential benefits & criteria

FINANCIAL RESILIENCE

- ✓ **Save lives, help to protect property** – incentive to improve before/after disaster
- ✓ Can be multi-hazard, can make sense under various scenarios
- ✓ **Are adaptive/scalable** – depending on risk profile, available instruments etc.

EVIDENCE

- €10 - €50 bn potential funding gap in Europe due to major earthquakes and floods
- Insurance penetration is patchy across Europe
- Not all countries consider macro-fiscal risks in their budgets
- Not all countries have robust arrangements in place

EXAMPLES

- **Romania** – WB loan with a Catastrophe Drawdown Option (DDO) in the amount of US\$500 million. Half was used for floods in fall 2025. It has integrated macrofiscal considerations into its budget planning documents

WHAT TYPE OF INFORMATION CAN HELP?

- Macro-fiscal analysis of risks, depending on financial instrument different levels of modelling
- A disaster risk financing and insurance strategy



STEPS TOWARDS SCALING UP PREVENTION AND PREPAREDNESS

1. Think about your **'logical chain of resilience'** (reforms-funds-action)
2. Invest in **no-regret solutions** – which includes:
 - **Emergency response capacities** (buildings, equipment, professional staff and volunteers, training and coordination)
 - **Early warning and public awareness**
 - **Risk reduction and financial resilience**
3. **Think about what information you need?**
4. Use readily available **data & tools & knowledge** to identify **priorities** and **pursue investments/actions** that can bring highest benefits and align with your overall goals
5. Use available **sources of funds** – state budget / EU / partner funds, as well as **technical assistance** to help prepare investments
6. Learn from examples





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Thank you!
Questions?

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