

EU Research project:

Preparing for Extreme And Rare events in coastal regions

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OUR RATIONALE

Out of all natural disasters, floods in coastal regions are regarded as one of the most dangerous and harmful. Such floods have shown the fastest rate of increase in relation to other types of disasters.

Most of these events are to an ever increasing extent directly attributable to various social, economic, historical, political and even cultural issues. This interconnection between human activities and natural processes make it important to approach coastal flooding in a holistic way in order to help us understand their complexity.

Despite the fact that the issues of disaster risk and root causes have been discussed for at least two decades, common frameworks and systematic assessments are still missing.

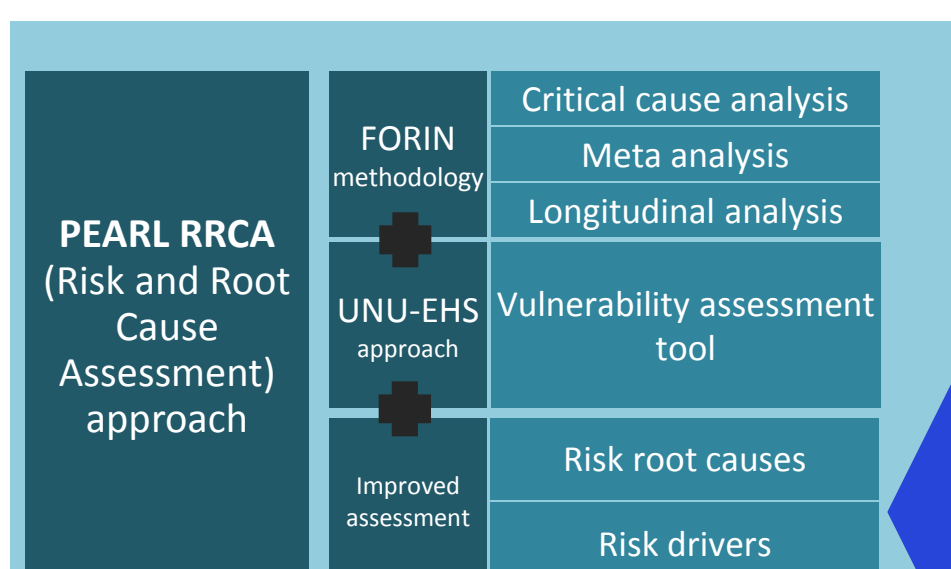
OUR GOAL

«Develop adaptive risk management strategies for coastal communities against extreme hydro-meteorological events, minimizing social, economic, and environmental impacts and increasing the resilience of coastal regions in Europe»

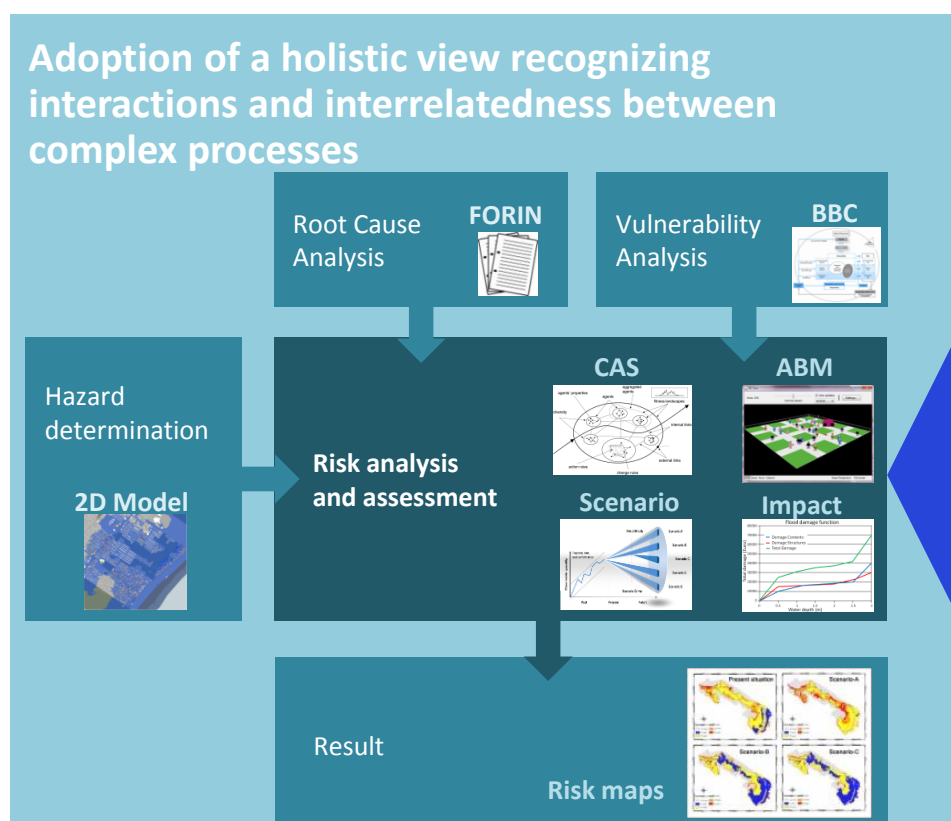
EXPECTED OUTCOMES

- Risk and Root Cause Assessment (RRCA) approach: enhancing FORIN methodology with inclusion of drivers such as response and reconstruction
- Holistic and multiple risk assessment framework: identification of risk cascading effects, analysis of factors that shape risk perception
- Stakeholder involvement: collaborative modeling and Learning & Actions Alliances (LAA) to develop action-oriented solutions
- Innovative flood modeling methodology: emphasis on multiple-source flooding
- Early warning systems and technologies: improvement of Common Alerting Protocol (CAP) and early warning dissemination
- Resilience strategies: including engineering, environmental, and operational strategies, as well as governance arrangements
- Science-policy interface and outreach: enhance communities involvement and collaboration

Our Methodology



Development of PEARL Risk and Root Cause Assessment (RRCA)
Analysis of underlying factors of risk and vulnerability in coastal regions, particularly for smaller (more common) events



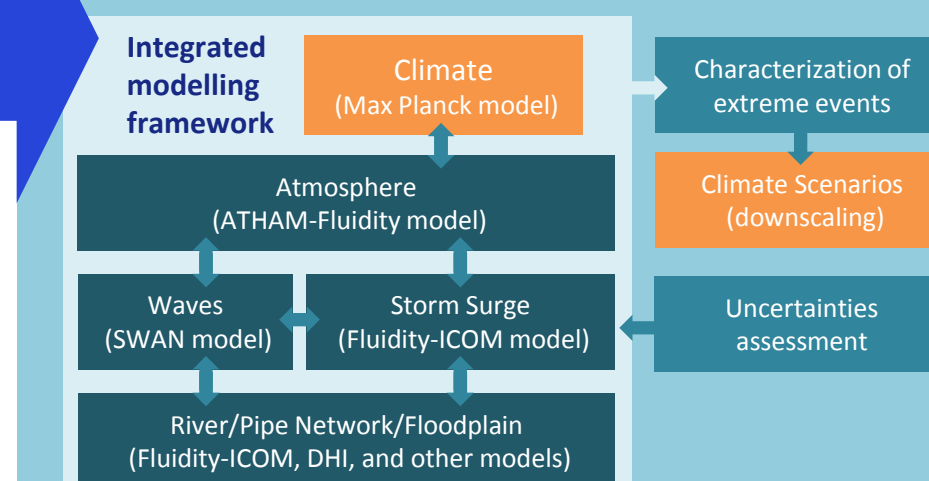
Incorporation of social aspects and the understanding of vulnerabilities from various community groups

WP 1
UNDERSTANDING
FORMATION OF
VULNERABILITIES AND
RISKS

WP 2
UNDERSTANDING
FORMATION OF
HAZARDS UNDER
EXTREME EVENTS

Creation of a new methodology to analyse and model floods occurring from multiple sources

Support of risk assessment for both long-term decisions and operational emergency/early-warning planning

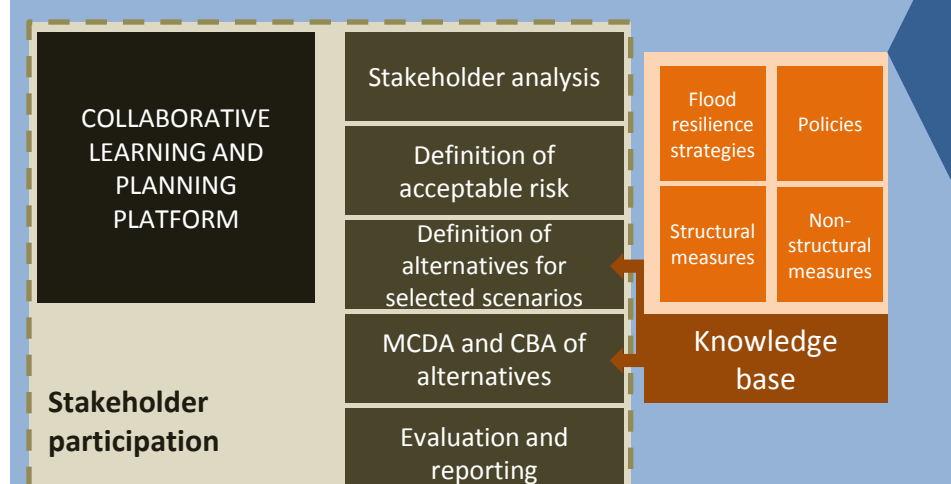


Customization and establishment of new methods for: flood forecast, real-time data assimilation for early warning, uncertainty propagation and its impacts on decision making
Improvement of both formal and informal dissemination of early warnings

WP 3
HOLISTIC AND
MULTIPLE RISK
ASSESSMENT

WP 4
FLOOD EARLY
WARNING SYSTEMS

Build a knowledge base of existing and new coastal flood management strategies and evaluation tools
Use knowledge base to support policy-making and science-policy interfacing
Interactive web-based learning and planning platform



WP 5
DECISION SUPPORT
AND POLICY
DEVELOPMENT

WP 6
CASE STUDIES



WP 7
DISSEMINATION OF
PROJECT OUTPUTS

WP 8
PROJECT MANAGEMENT
AND COORDINATION

International symposium: Flood risk management in coastal regions
Policy Briefs

Target decision makers, practitioners, and public & private stakeholders
Provision of easy-to-access platform for capacity building and support to coastal management

PEARL's approach in a nutshell

UNDERSTANDING
COASTAL
COMMUNITIES

SOCIAL
TECHNICAL
INSTITUTIONAL
ECONOMIC
ORGANIZATIONAL

NEW
TECHNOLOGIES
FOR

MONITORING
MODELING
FORECASTING
WARNING

RISK REDUCTION
WITH

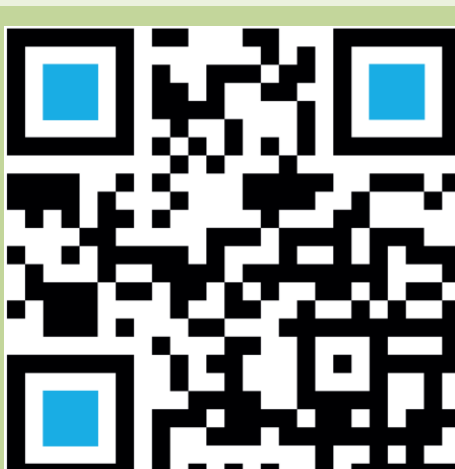
STRENGTHENED
RISK GOVERNANCE
EMPOWERED
STAKEHOLDERS
SUPPORTED
CAPACITY DEVELOPMENT

WHO WE ARE

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NETWORKS
f PEARLfp7
t @PEARLfp7

in PEARL-Preparing for Extreme
And Rare events in coastal regions



CONTACT

