



# Emilia-Romagna Region Real World Lab

## Enabling disaster resilient societies

### BACKGROUND OF DIRECTED

The Emilia-Romagna Region has become part of an exciting Horizon Europe Project, 'Disaster resilience for extreme climate events, providing interoperable data, models, communications and governance (DIRECTED) Project, funded under the Disaster-Resilient Societies Programme of the EU.

The Project seeks to tackle major climate change risks in the Emilia Romagna region; flooding and wildfires, through improving governance, communication and access to disaster risk reduction (DRR) and climate change adaptation (CCA) data and tools and enabling the dissemination of this information to first responders, disaster risk managers and resilience planners.

Physical, social and data scientists are coming together from across Europe with local/regional authorities and first responders to design a new interoperable system (a 'Data Fabric') that will bring together multiple climate/disaster risk assessment tools, forecasting and warning systems and disaster communications, organising them into one manageable system for use by relevant stakeholders. An innovative risk governance framework Risk-Tandem, will be used to facilitate transdisciplinary, multi-risk and inclusive knowledge co-production processes, capacity strengthening, evaluation and learning with stakeholders in the Real World Labs.

### WHAT IS A REAL WORLD LAB

Real World Labs (RWL) create collaborative environments for learning and innovation through co-production workshops, demonstrations and training, as well as promoting multi-level collaborative risk governance among actors managing disaster risk and climate adaptation. RWLs seek to work with a range of stakeholders from all levels of governance, including representatives from government, academia, industry and civil society to understand the information needs and co-produce solutions, capturing synergies across DRR and CCA, and strengthening resilience against climate change, extreme weather and multi-risk events.

### The RISK-TANDEM FRAMEWORK

The Risk-Tandem framework facilitates risk governance analysis and multi-stakeholder knowledge co-production processes, using a complex systems approach. Stakeholder engagement plays a central role in Risk-Tandem, where Real World Labs collaboratively understand the context, identify problems, bridge scientific models/tools and co-create solutions enabling DRR/CCA systems interoperability (Data Fabric) and adaptive and inclusive governance through new coordination, communication, resource and capacity strengthening mechanisms.

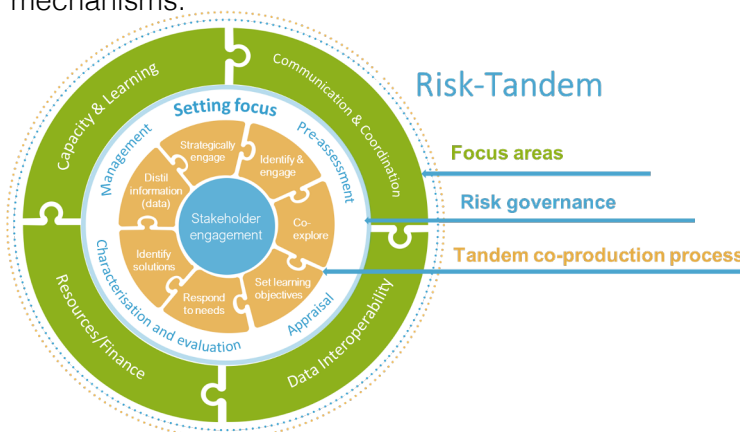


Figure 1. Risk-Tandem Framework

### WHO IS LEADING THE REAL WORLD LAB?

The Real World Lab in Emilia-Romagna is led by the Civil Protection of the Emilia-Romagna Region (ARSTPC-ER) together with the ARPAE Hydrometeo Service Civil Protection Functional Centre who are responsible for Disaster Risk Reduction (DRR) related to climate risks. This includes early warning, Disaster Risk Management (DRM) systems and Climate Change Adaption (CCA) planning.

**If you would like to become involved in the Emilia-Romagna Real World Lab or would like more information we would love to hear from you. Please get in touch on: email: [Valeria.Pancioli@regione.emilia-romagna.it](mailto:Valeria.Pancioli@regione.emilia-romagna.it)**

# The Real World Labs at Emilia Romagna

## Climate Change Challenges

### MARINE INGRESSION, WINDSTORM RISK - RWL RIMINI COAST

The Real World Lab area of Rimini coast covers the coastal strip of the province of Rimini, including the municipalities of Bellaria-Igea marina, Rimini, Riccione, Misano adriatico and Cattolica.

Severe weather events have caused serious impacts on the coastal sector with significant damage caused by marine ingression and destruction of beaches due to erosion and windstorms. The territory is also subject to other types of hazards particularly heavy rains (water bombs) which can undermine urban drainage causing widespread flooding. Impacts can be increased with high sea levels and storm surge events.



### WILDFIRE RISK: RWL COMACCHIO E MESOLA

The study area includes two municipalities of the Ferrara Province, Comacchio and Mesola, located on the coast of Ferrara province.

The municipal territory of Comacchio is known for its seven beaches, distributed in large beaches along the coast. There are also large areas of mixed forests, such as the Po di Volano Nature Reserve, located along the northern part of the coast between Volano and Lido di Volano, of coniferous woods such as the one immediately north of the Lido delle Nazioni and of deciduous woods such the one present west of the town of San Giuseppe.

The Municipality of Mesola has an area of 84.31 square kilometers; is a town in the Po Delta, in the southern branch called Po di Goro, that spans the municipal and regional border between Veneto and Emilia-Romagna. Wooded areas are mostly located in the coastal zone, problems are accentuated in the summer during which the low rainfall and high attendance of these areas increases the likelihood of fire. Statistical data shows that:

- ✓ There are a greater number of fires in August, month of maximum tourist affluence in the coast.
- ✓ The time of the day when most fires are triggered is the first afternoon, which corresponds to the time of the day when people often have lunch making bonfires, which sometimes are not extinguished.
- ✓ The most common cause of fire is unknown or accidental.
- ✓ Frequently the fires affect both wooded and non-wooded areas.

### Parco regionale Delta del Po

Legenda	
	Centro abitato
	Autostrada
	Strada statale
	Strada provinciale o comunale
	Ferrovia
	Centro parco
	Museo
	Edificio religioso di rilievo
	Edificio storico di rilievo
	Prati e coltivi
	Boschi e arbusteti
	Spagge



### Goals of the Emilia Romagna Region Lab

- Capacity building in DRR and CCA tools and models for supporting both early warning and long-term CCA strategies
- Increase awareness of the importance of interoperability-deployed dataset, tools and workflows for a more effective implementation of integrated DRR and CCA strategies
- Improved knowledge on the physical multi-hazards and multiple risks under different climate change scenarios will particularly support capacity-building in structural and non-structural measures for resilience

Directed Partners

