



EIB ADAPTATION DAYS



Welcome to EIB Headquarters
Luxembourg

24th and 25th April 2024



**EIB
ADAPTATION
DAYS**



European
Investment Bank



Antonella Broglia

Host



Isidoro Tapia

Co-Host

Agenda



Welcoming messages



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Nadia Calviño

EIB President

Welcoming messages

Agenda







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Vanessa Bruynooghe

DG CLIMA, European Commission

EC Mission Adaptation

Agenda





EUROPEAN UNION



EU MISSIONS

ADAPTATION TO CLIMATE CHANGE

Vanessa Bruynooghe – EIB Adaptation Days 24/04/2024
European Commission – DG Climate Action

#EUmissions #HorizonEU #MissionClimate





Mission Charter Signatories

- 311 regions, cities and local authorities
- Signatories in **29 countries**
- ~40% of European population
- **Diverse** range of types and population sizes

[Full list of signatories](#)



Large regions



Cities



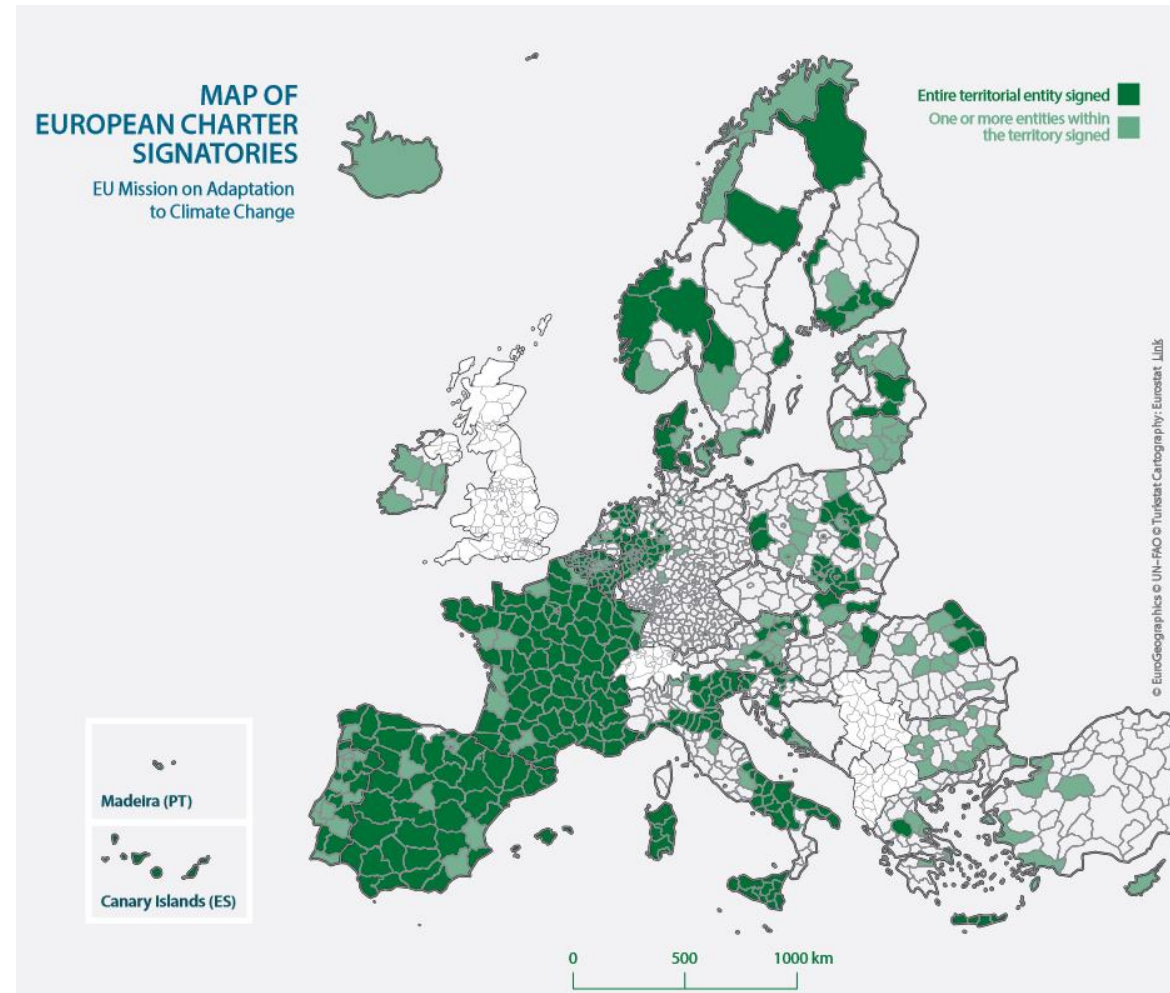
Provinces



Municipalities



Capitals





MIP4Adapt implementation platform

Mission Projects
EU-funded projects

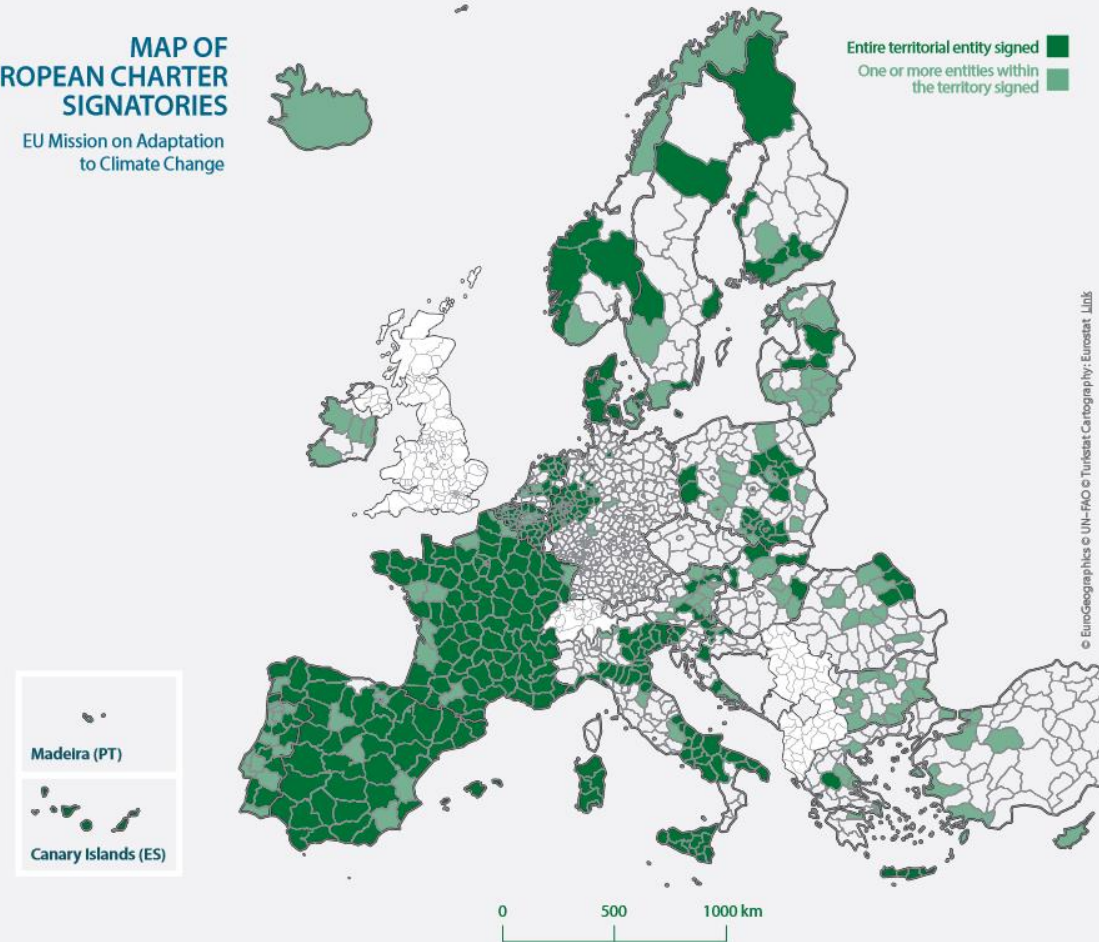
Mission Signatories: 311 Regions & local authorities
Committing with a Charter



Mission Implementation Platform: MIP4Adapt:

- Mission Portal
- General support
- Community of Practice
- Technical Assistance to Signatories

MAP OF EUROPEAN CHARTER SIGNATORIES
EU Mission on Adaptation to Climate Change

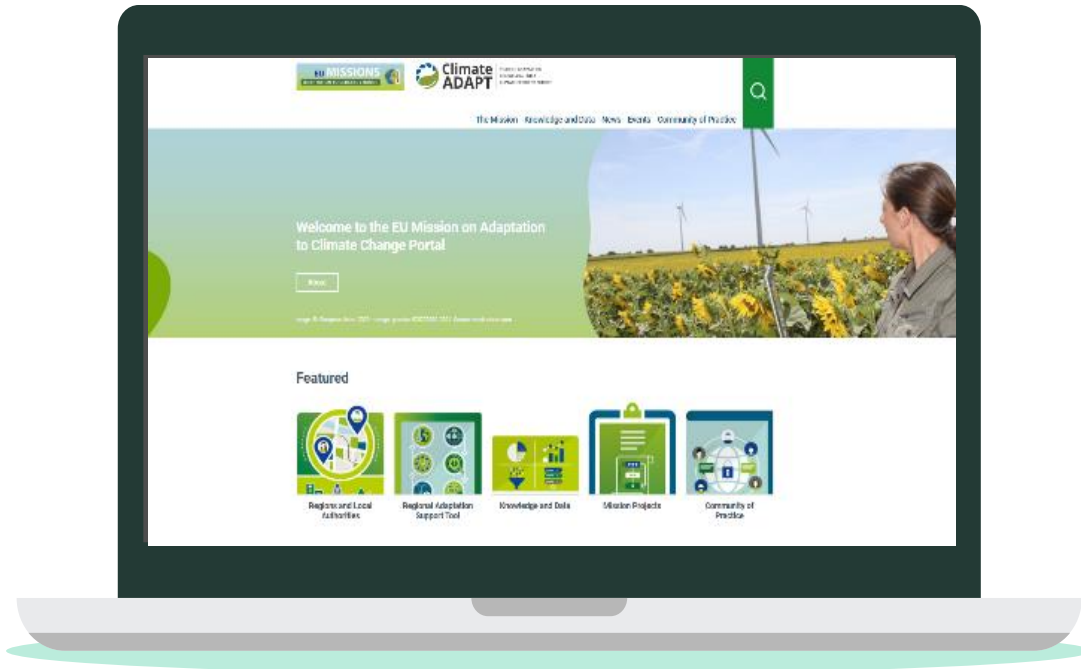




Mission Portal

<https://climate-adapt.eea.europa.eu/en/mission>

- List of Mission Signatories
- Overview of Mission Projects
- Access to the Mission Community of practice
- News; Events; [Sign up](#) to the [newsletter](#)





General support provided on adaptation (via Mission Portal)

Including:

- Shared adaptation experiences - Mission stories (short) & case studies (longer)
- Regional Adaptation Support tool
- Adaptation dashboard
- DIY manuals on citizen engagement & climate risk assessments
- Training events (Webinars), etc.



Community of Practice for Signatories & Mission Projects

[EU Mission Adaptation Community | Futurium \(europa.eu\)](https://europa.eu)

- Open space for collaboration
- Events and trainings
- Chat room



Welcome to the EU Mission Adaptation Community site – your hub for climate resilience in Europe! Connect with stakeholders from across the continent to share knowledge and collaborate on climate change adaptation.

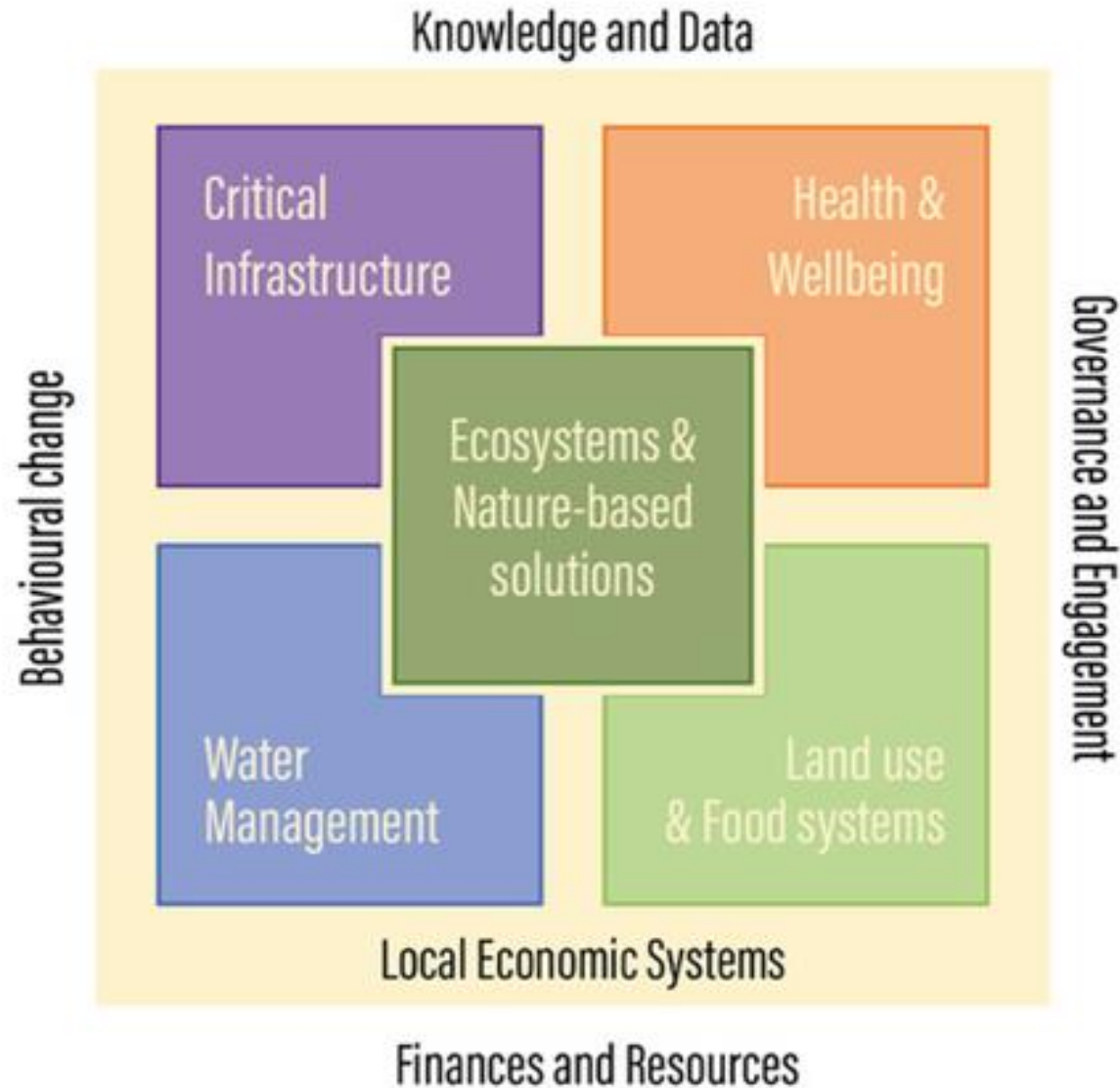


Technical Assistance available to Signatories: 3 types

- 1) Technical assistance on **adaptation planning: to move from risk and vulnerability assessment to climate adaptation pathways** (up to 5-15 days, depending on size and needs)
- 2) Technical assistance on **identifying appropriate climate adaptation demonstration projects and accessing relevant funding and financing** (up to 5-15 days, depending on size and needs)
- 3) Technical assistance on **stimulating citizens and stakeholders' engagement** (up to 2 days + 1 day support for community level events)



Mission funded projects





Project CLIMAAX: regional Climate Risk Assessments

Objective: improve regional climate and emergency risk management plans through a cascading fund

Financial support for regions to at least 60 regions & communities

1st call closed; 2nd call will open later this year

See [CLIMAAX Call \(fundingbox.com\)](https://fundingbox.com)

Framework for regional CRA

→ supporting civil protection and climate adaptation

Toolbox and pilots

→ testing data needs and diversity of requests

Cascading fund

→ Financial support for >60 regions

CLIMAAX

Climate ready regions



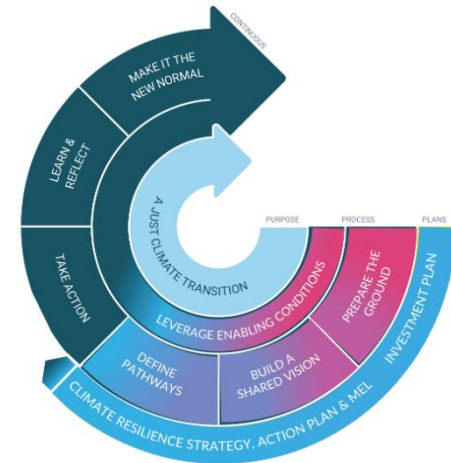
Project Pathways to Resilience (P2R)

Objective: empower at least 100 European regions and communities to design climate resilience pathways by 2030 through cascading grants (€21M in sub-grants via two open calls) to

- Co-design locally-led pathways towards a climate-resilient future
- Provide support services and capacity-building activities

Applications welcome until 6 May 2024

on <https://www.pathways2resilience.eu/first-open-call/>





Mission Call 2024

Opened on 17 April 2024

Closes on 18 September 2024

Work programme 24: [wp-12-missions_horizon-2023-2024_en.pdf \(europa.eu\)](#)

More info: see recording of the EU Mission Info Days 25 April 2024:

<https://research-innovation-community.ec.europa.eu/events/3WjiVunxm0t5j4zQIVax3Q/programme>

Funding & Tender Portal: <https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/programmes/horizon>



Mission Call 2024 summary

9 topics	123.97 M€
Coordination and support	6M €
Extending and complementing the Mission Implementation Platform	2 topics → 2 projects
Research	10.97M €
Boosting applied research in strategic areas, with local implementation of results	3 topics → 5 projects
Demonstration	99M€
Implementing innovative solutions	4 topics → 12 projects
<ul style="list-style-type: none"> • more systemic/integrated • inclusive 	
	19 projects



Overarching Principles for the demonstrations:

- Must take place in at **least 3** regions/ communities located in at least 3 MS / Associated countries (not exclusively Charter signatories)
- Must include at **least 3** replicating regions/ communities interested in reapplying the lessons learnt (totally, partially or with the required adjustments)

Topic	Action description	Type of action	Budget In million EUR
HORIZON-MISS-2024-CLIMA-01-01	Bringing available and actionable solutions for climate adaptation to the knowledge of the regions and local authorities	CSA	2
HORIZON-MISS-2024-CLIMA-01-02	Bringing together the national level with the engaged regional and local levels (multi-level governance)	CSA	4
HORIZON-MISS-2024-CLIMA-01-03	Develop and refine outcome indicators to measure progress on climate resilience at national, regional and local levels, including knowledge and feedback developed from the Mission	RIA	2.97
HORIZON-MISS-2024-CLIMA-01-04	Research the complex interplay between the climate and biodiversity crises towards more systemic approaches and solutions	RIA	8
HORIZON-MISS-2024-CLIMA-01-05	Improve design for transformative approaches and build local capacity for implementation of available solutions focused on climate adaptation	RIA	8
HORIZON-MISS-2024-CLIMA-01-06	Demonstration of approaches to improve bankability of solutions by design, addressing the co-benefits (mitigation and adaptation) to improve revenues streams	IA	27
HORIZON-MISS-2024-CLIMA-01-07	Demonstration of solutions specifically suited to rural areas and small/ medium size population local communities	IA	22.5
HORIZON-MISS-2024-CLIMA-01-08	Demonstration of approaches by regions and local authorities focused on increasing climate resilience of the most vulnerable social groups (just climate resilience)	IA	22.5
HORIZON-MISS-2024-CLIMA-01-09	Systemic and cross-sectoral solutions for climate resilience, tailored to the local needs of regions and local authorities	IA	27



Other funding sources for adaptation

Overview of funding opportunities for regional climate resilience made by project Regilience:

<https://regilience.eu/funding-opportunities/>



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EU Adaptation Mission Forum on 23 May 2024

Follow online:

https://research-and-innovation.ec.europa.eu/events/upcoming-events/third-forum-mission-adaptation-climate-change-2024-05-23_en



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Thank you!

Contact: EU-CLIMATE-ADAPTATION-MISSION@ec.europa.eu

[#EUmissions](#) [#HorizonEU](#) [#MissionClimateAdaptation](#)

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**EIB
ADAPTATION
DAYS**



European
Investment Bank



Alexander Linke

EIB Advisory



Massimo Marra

JASPERS Senior Advisor



Stephen Hart

Financial Advisor

Advisory support and Technical Assistance

EIB Advisory Products



Financial advice

linked to EIBG funding

- Improve bankability of companies and projects
- Advice on financing alternatives
- Structure PPP projects
- Develop scalable, effective and efficient financial products
- Design and implementation of EU financial instruments



Technical advice

linked to EU policy objectives

- Project structuring, planning and management
- Feasibility & technology assessment
- Sectorial studies and development
- Climate action and environmental sustainability advice
- Gender equality & social programs advice



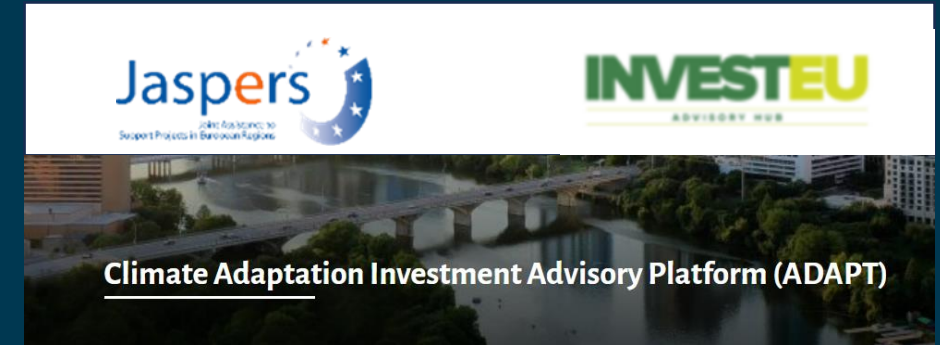
Capacity building

linked to clients' needs

- Capacity building on technical and financing issues
- Design of specific in-house training
- Knowledge sharing & dissemination of best practice
- Needs assessment for project advisory support
- Support in institutional development

ADAPT Advisory Platform

- Adaptation advisory services throughout **all stages of the project cycle**
- Building on **JASPERS** and **InvestEU Advisory Hub** mandates within the framework of respective governance arrangements
- Open to **both public and private** project promoters
- Three main **streams of activity**:
 - ✓ Upstream support (covering also development of strategies and identification of project pipelines)
 - ✓ Project preparation and implementation support
 - ✓ Capacity building and awareness raising



Website: <https://advisory.eib.org/about/adapt.htm>

Contact: ADAPT@eib.org

Potential Scope of Advisory Services

Upstream support

- Development of adaptation investment strategies and programmes;
- Identification of adaptation project pipelines;
- Support to mainstream adaptation in the design of projects for specific sectors and type of investment;
- Support for technology transfer schemes to enable adaptation technologies and solutions;
- Strategic dialogues and workshops at EU member state level on national, regional and local adaptation priorities.

Project preparation, development and implementation support

- Support in identification, preparation and implementation of adaptation investments, including enabling activities;
- Advice on climate risk and vulnerability assessments and on climate-proofing of infrastructure projects;
- Advice on climate risks in Public-Private-Partnership (PPPs);
- Support to analysis of climate risks in value and supply chains;
- Support in financial structuring to improve access to adaptation finance;
- Advice on nature-based solution (NbS);

Capacity building and awareness raising

- Training, workshops and knowledge-sharing events on mainstreaming climate adaptation in project planning and preparation;
- Development of methodological and technical guidance documents;
- Training on managing and reporting climate-related financial risks and opportunities.

Advisory Support to Island of Ischia

In November 2022, the island of Ischia was hit by extreme rainfall, leading to **landslides and flooding**. A state of emergency was declared, and the government nominated a Special Commissioner to coordinate the **reconstruction and recovery** efforts. EIB provides a **combined advisory package** (short and medium term), complementing a prospective EIB loan.



Short-term advisory support

Development of a Climate Risk and Vulnerability Assessment (CRVA) for the Island of Ischia, including analysis of climate risks, identification of possible adaptation measures and provision of design recommendations for reconstruction investment measures.

Medium-term advisory support

Building on the outcomes of the CRVA, dedicated follow-up advisory support is provided to the Special Commissioner structure on:

- ✓ Support in the update and finalization of the post-disaster recovery plan and related investment pipeline;
- ✓ Assistance to technical project preparation and implementation for priority reconstruction investment measures;
- ✓ Development of a monitoring system, capacity building and project management support.

CRVA for the Heraklion Port Authority

EIB supported the **Heraklion Port Authority** in conducting a **Climate Risk and Vulnerability Assessment (CRVA)**. The CRVA analyzed how the assets and operations may be affected by current and future physical climate risks and identified adaptation measures.



- The port of Heraklion is located on the north side of the island of Crete and is one of the main ports in the Greek maritime network.
- It is a multi-purpose port, including a ferry terminal, a cruise terminal and a general bulk cargo and container terminal.
- Using Copernicus data, the CRVA identified sea level rise, increasing wave heights and flooding from 2 nearby rivers as the most relevant physical climate risks for the port.
- The study proposed both structural and non-structural adaptation measures, such as heightening the seawalls, improving the port drainage system and installing early-warning equipment.

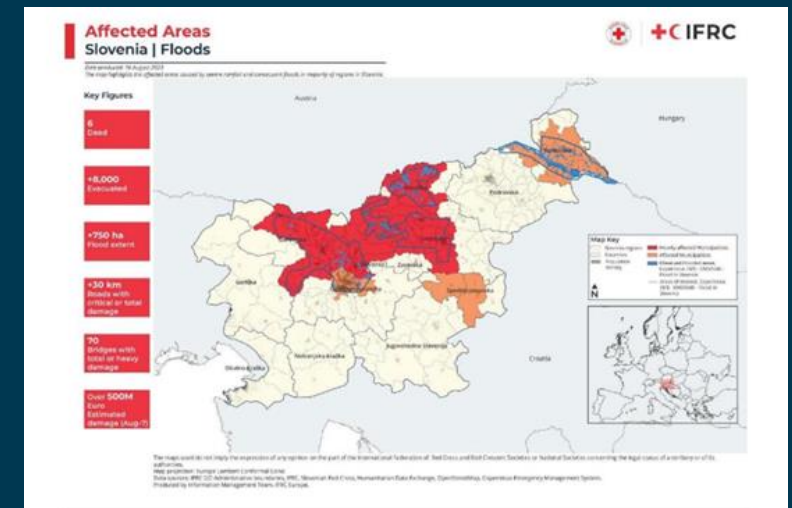
Climate proofing of investments co-financed by EU Funds

Under the [JASPERS Mandate](#), the EIB is providing methodological and practical support, as well as capacity building for the climate proofing of investments at national level in **Poland, Slovenia, Greece, Croatia, Italy (National and Regional level), Malta and Spain.**

This support includes:

- Development of detailed national guidelines in line with EC and EIB requirements and reflecting national priorities and specificities
- Sectoral guidance related to climate resilience proofing and carbon footprint assessment
- Country-specific case studies on climate neutrality and climate resilience assessment
- Support to the managing authorities in the appraisal of climate proofing assessments developed by project promoters
- Dissemination/information sessions and capacity building for the MAs and relevant stakeholders.

A number of methodological document and case studies for climate resilience assessment of typical infrastructure assets will be published by mid 2024.



Assessment of Climate Adaptation Plans for major Polish cities



SCOPE & OBJECTIVES:

- Screening and identification of priority investments to improve adaptation to climate change in a group of major Polish cities (+100,000 inhabitants)
- A sample of 12 (out of 44) climate adaptation plans developed with EU funding have been identified for further assessment
- Focus on water management and green/blue infrastructure investments

ADDED VALUE:

- Verified and tested screening and prioritisation methodology
- International perspective on good practices and benchmarking
- Comprehensive and objective assessment of project types (climate change adaptation measures) proposed for funding under 2021-27 ERDF Programmes

OPPORTUNITIES:

- Upstream involvement with project promoters
- Identification of a future project pipeline in the climate adaptation domain
- PLN +32 billion (app. EUR 8billion) investment potential, including ESIF funding
- The approach could be replicated in other cities/regions/countries

Climate Change Adaptation action plan for the Region of Sicily

Under the [JASPERS Mandate](#), the EIB is assisting the Regional Government of Sicily in:

- the development of its regional strategy for adaptation to climate change and of a related action plan, including possible investment priorities and their linkages with other sectoral and regional planning documents
- the identification of a project pipeline of priority investments coherent with the strategy/action plan for possible co-financing through the Regional ERDF programme and other financing sources
- technical trainings, capacity building and knowledge-sharing actions, including on climate proofing of investments in line with EC and EIB requirements.



Climate Change Resilience Plan for Infraestruturas de Portugal

Objective

- Integrating climate change resilience in management and development of IP road and rail networks (and associated telematics)

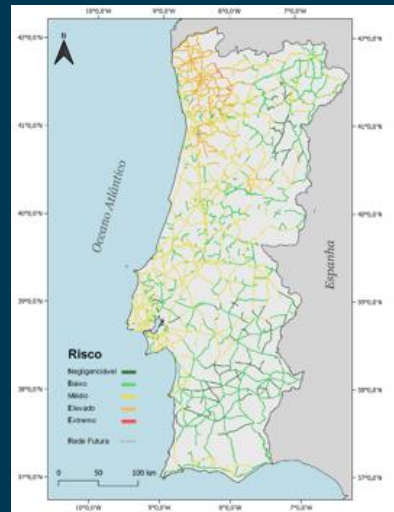
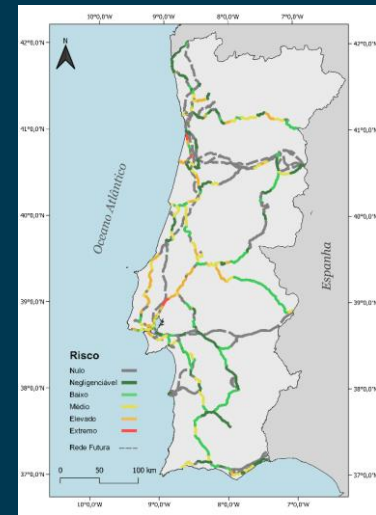
Stage I: Analysis of climate change vulnerabilities and risks of IP networks (completed)

- Based on **climate incidents** for road/rail networks (incl. damages and traffic disruptions) – identifying **main climate hazards** (wildfires, extreme temperature, flooding, strong winds...)
- Climate change risk assessment **considering climate scenarios**
- Build upon robust IP GIS tool

Stage II: Climate Adaptation Action Plan (starting)

- 3 Pillars: existing network, future investments, institutional
- Identifying **climate adaptation investments** on existing networks
- Informing CRVA** for new investments & recommendations for early project studies and design
- Internal and external **knowledge sharing and capacity building**

JASPERS Advisory support
close & hands-on technical advise





Stephen Hart

Financial Advisor

SUPPORTING CLIMATE ADAPTATION WITH NATURE



Investing in nature-based solutions

State-of-play and way forward for public and private financial measures in Europe

150 +
Reviewed
Reports

110
Survey
Responses

58
Interviews

Database of
1,364 projects

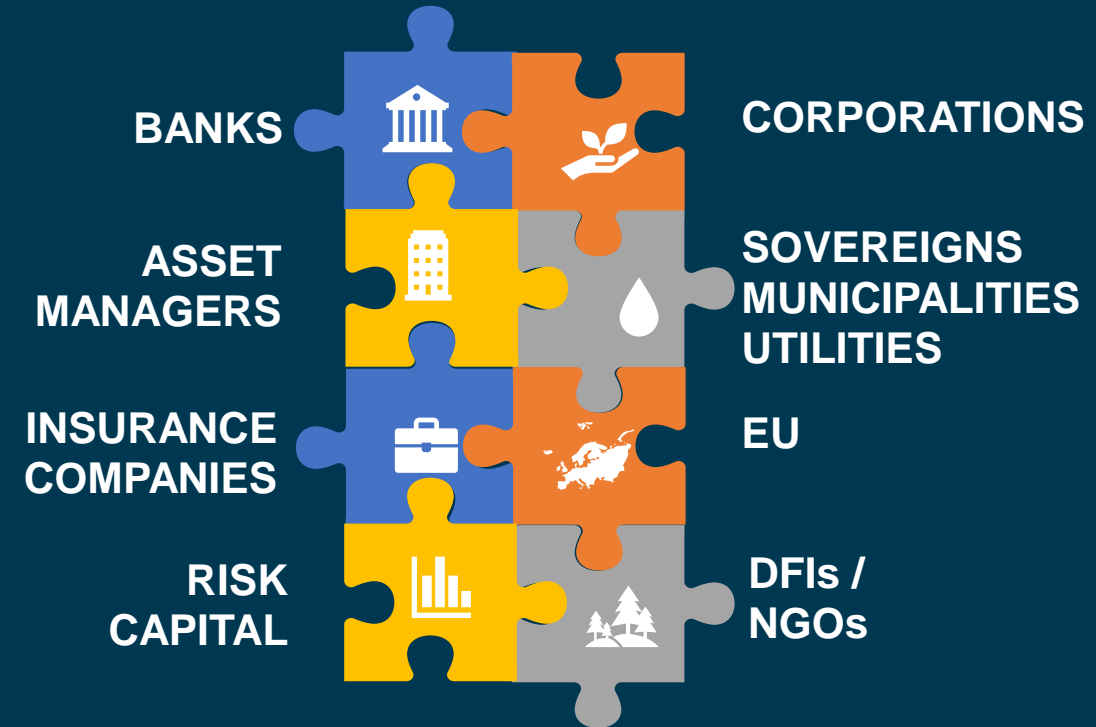
Lessons of the
**Natural
Capital
Financing
Facility**

June 2023



Building on the current financial landscape

- **6 landscape/ecosystem types:** agri, forestry, urban etc.
data gaps / restoration potential as a proxy for NBS potential
- **EU and national funds predominant**
private funding/finance negligible
- **Agriculture has major dedicated NBS funding**
but effectiveness questioned
- **Private investors curious, but not willing to commit significantly**
FIs still coming to terms with climate, focus on risk/reporting
Handful of front-runners in the financial sector looking to invest
- **Inefficient for mainstream investors**
Average project size < € 2m, 44% below € 1m
- **No one-size-fits-all approach to financial instruments for NBS**
Need to tailor to need/legal environment; often illiquid
- **FUNDING is the MAIN ISSUE. Language!**
Funding vs. financing / donor vs. repayable finance vs. investor



Some sectors have **physical footprint** and **time horizon** to capture benefits from ecosystem restoration, e.g. water and forestry... or are **more exposed to natural hazards**

NCFF: biodiversity + climate, diversity of financing and advisory

Rewilding Europe Capital - EU

1.4m loan to SPV

Rural pro nature SMEs



Athens Resilient City NBS

EUR 5m loan for municipality

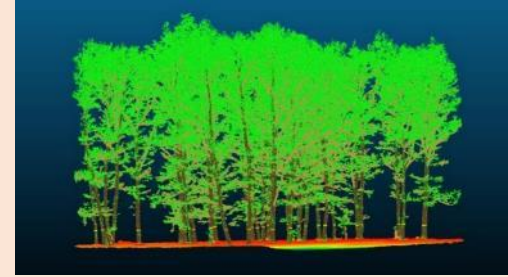
Urban Green Infrastructure



SLB Forestry - Romania

9.5m secured loan for corporate

Close-to-nature forestry



Alzette River Renaturing - Lux

9m loan for State Water Fund

River restoration



CDC Biodiversite - France

EUR 5m loan, part contingent

Habitat banking/biodiv. credits



Ginkgo Fund III - EU

EUR 15m loan to equity fund

Brownfield development w. NBS



SLM Silva Fund - Ireland

EUR 7.4m for equity fund

CFF forestry portfolio



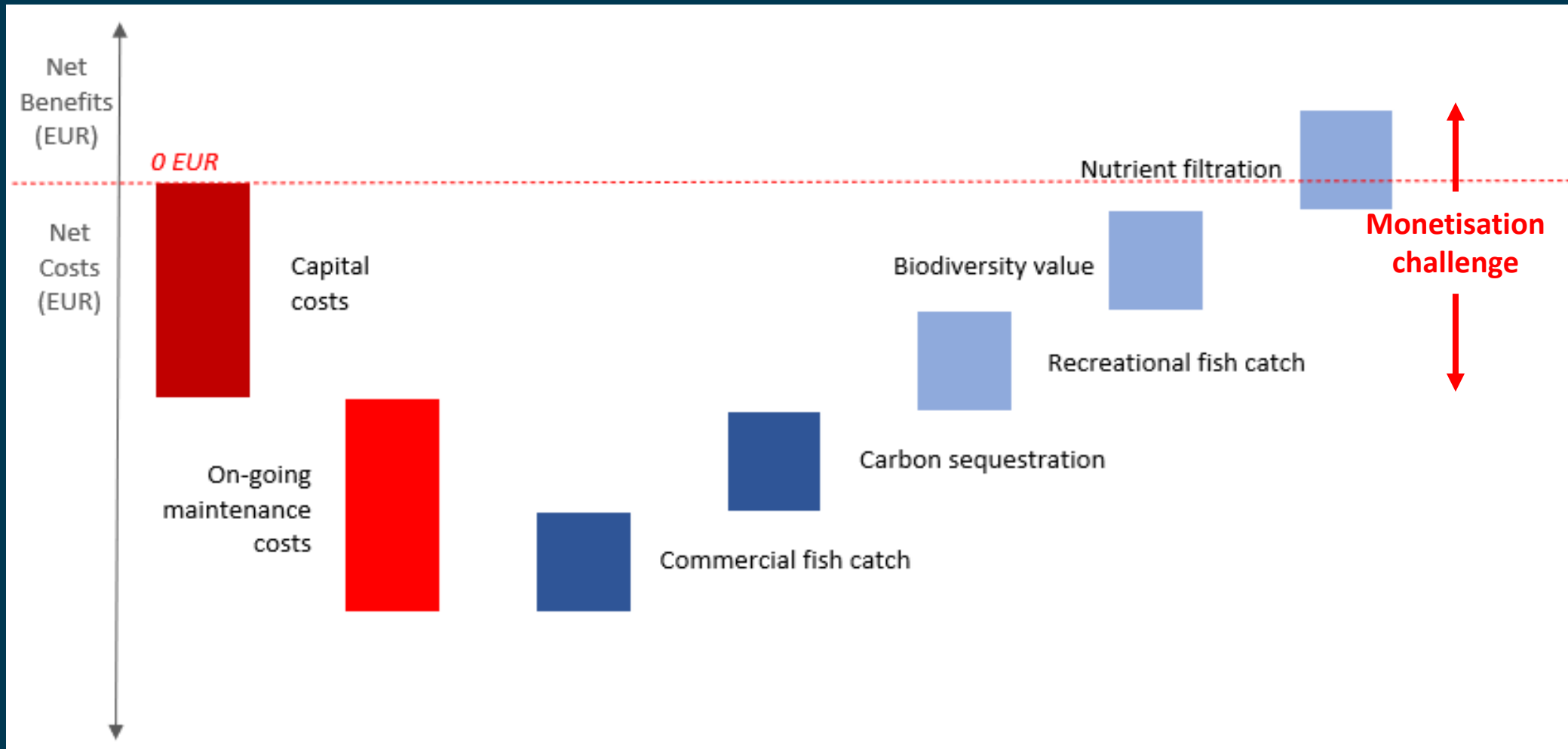
SPGE Wastewater - Belgium

EUR 4.5m loan to a utility

Beyond compliance....



The central challenge of public goods



Type (marine) NBS project

Advisory cooperation EC-EIB

Mainstreaming nature

- Net positivity – going the extra mile
- Nature Based Solutions - responding to societal challenges

Some key themes:

- Climate adaptation – adaptive solutions/resilient landscapes
- Biodiversity and carbon rich landscapes providing ecosystem services
- Nature Restoration
- Engagement with corporates and the financial sector
- Infrastructure



Mainstreaming nature in decision-making

Early consideration of opportunities, increased upstream engagement

Framing: bigger opportunities require a bigger picture, a vision for the future

Converting strategies and plans into reality

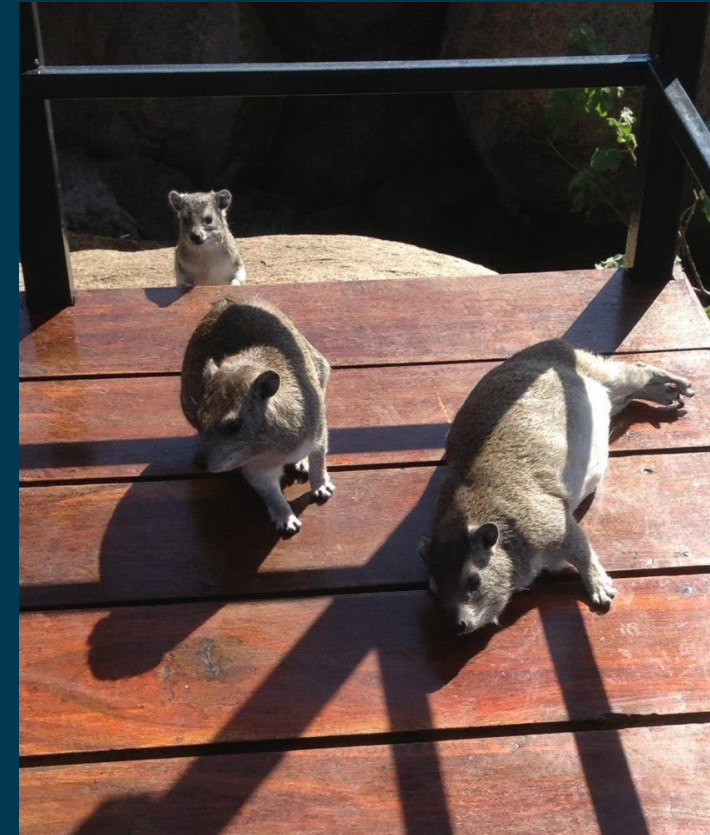
Capacity building of promoters and experts, also assistance for implementation

Improved tools for comparison of NBS options/economic analysis

Strong and early stakeholder engagement; land issues, willingness-to-pay

Leveraging:

- planning and implementation capacity
- revenue models, opportunities for greater impact for incremental funding
- financing arrangements



Funding and Financing



Exploration of new funding streams

- Ecosystem services – partnerships/institutions
- Crowding in
- Land value capture
- Credits

Optimisation of funding streams

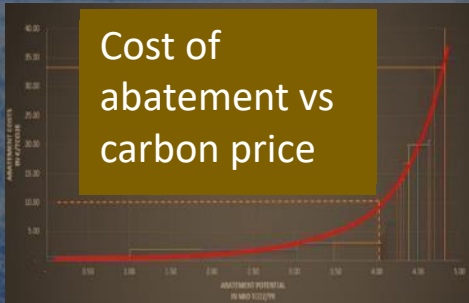
- Compliance with ambition - beyond compliance
- Grants access
- Targeted use of grants – affordability
- Integrated narrative to support willingness to pay

Project/financial structuring

- Multiple actions, funding streams, financing sources

Phase 1 Initial Vision

- 20% of territory
- 5% of national emissions
- **68% of water supply**
- Nature & (Agri) Culture
- Corporate Interest
- Seeking long term value



Phase 2 Methods, Pilots, Structuring



**New Entity: PFI CLG
Governance/MoUs
Funding/In-kind**

Advisory Groups with public/private representation

- Standards & Monitoring
- Communities
- Pilots & Pathways
- Finance

Aligning carbon, water and biodiversity with opportunities for communities & regional development

Key deliverable: Irish Peatland Standard (lessons from UK)

Phase 3 – Scaling

- Community-led national and water catchment-scale planning and financing system for peatland restoration
- Implementation capabilities to meet national climate and biodiversity commitments timetable (Nature Restoration Law)

Future Funding Streams
Financial Instruments
Layering of climate, water, biodiversity, community objectives

Italy: Lombardy Region “**BIOCLIMA**”.

- Lombardy exploring alternative funding for **Natura 2000 Priority Action Framework**
- Built management capacity for protected areas/forests under EU Life Programme
- Opportunity: providing a **local opportunity to the large number of corporates** interested in sponsoring conservation/decarbonisation
- A local university spin-off ETIFOR, developed a concept of regional subsidies for matching co-funding by companies to restore forests on public land within the context of the regional protected area network. TA sponsored by CARIPLO (bank) Foundation
- Using the **FSC Ecosystem Service standard** to certify projects, NOT a carbon offsetting arrangement, sponsorship give right to make claim
- **THE BIG IDEA: Attracting and structuring regional corporate sponsorships with public co-funding incentive, within a landscape context to direct it at policy goals**

Call for proposals “Biodiversity and Climate”: looking for companies to save 16 ecosystems and 22 species in Lombardy - Etifor

Spain: Castilla la Mancha region “Alliance for Ecosystem Services”.

- The Region’s **publicly owned forests provide a range of ecosystem services**, including water provision, but the **achievable revenues and budget for management are not sufficient** to safeguard future ecosystem services.
- **Urban-rural partnership to create voluntary funding stream** to cover gap in required funding, also attracting corporate sponsors
- FSC certification of forests under various forms of public ownership
- **THE BIG IDEA: payment for ecosystem services is applied on a “cost of management for provision of ES” basis, not complicated economic valuations of economic services themselves**

ALIANZA POR LOS SERVICIOS DE LOS ECOSISTEMAS DE CASTILLA-LA MANCHA | Gobierno de Castilla-La Mancha (castillalamancha.es)



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Claude Schortgen

Research Manager. Fluvial flood risk management, hydraulic and hydrological modelling. Hydrology Department of the Government of Luxembourg.

Luxembourg National Flood Risk Management Plan



Administration
de la gestion de l'eau
Grand-Duché de Luxembourg

Flood Risk Management in Luxembourg

EIB Adaptation Days

Claude Schortgen
Service Hydrologie et hydrométrie
Unité Cours d'eau

Luxembourg, 25. April 2024



Administration
de la gestion de l'eau
Grand-Duché de Luxembourg

Flood Risk



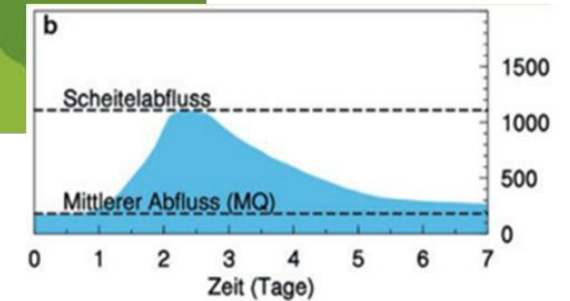
Different types of flooding



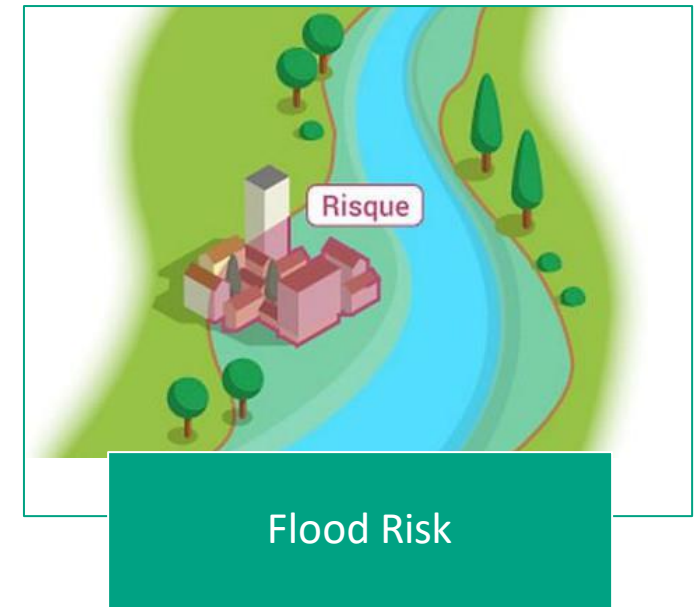
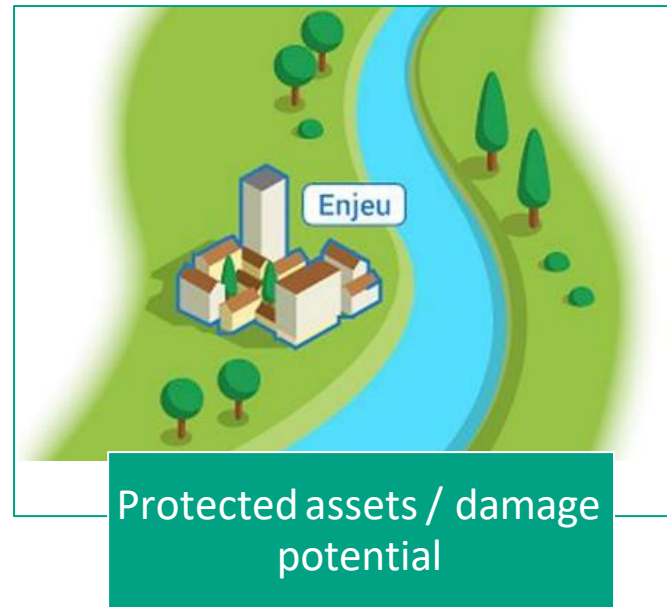
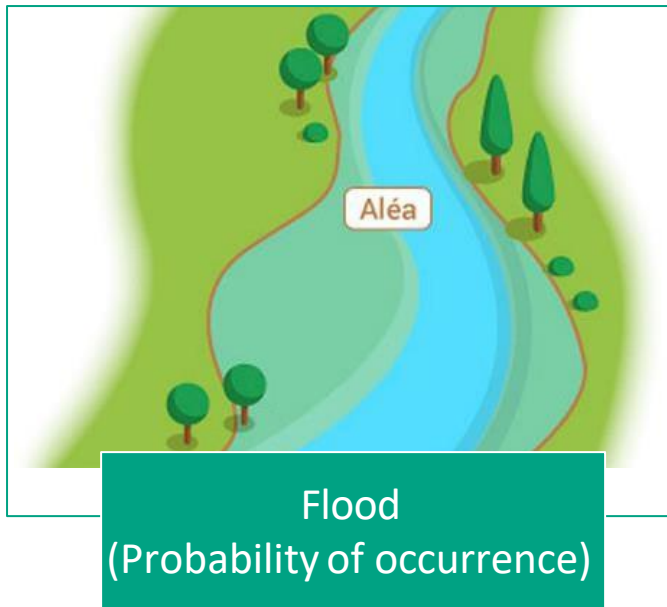
Administration
de la gestion de l'eau
Grand-Duché de Luxembourg



Quelle: <https://www.hochwasser.baden-wuerttemberg.de/starkregen>
Quelle: LUBW, Baden-Württemberg, Bayerischer Rundfunk



Flood Risk



If a flood with a high probability (regular, small flood) causes high potential damage

=

High flood risk



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de la gestion de l'eau
Grand-Duché de Luxembourg

Floods Directive (2007/60/EC)

Floods directive (2007/60/EC)

Flooding is a natural phenomenon that cannot be prevented

Reaction to past flood events that have caused major damage and high costs

The aim is to reduce the risk of flood related negative consequences for:

- People
- the environment
- Economy
- Culture

Coordination within a catchment area (i.e. beyond municipal or national borders)

The focus is on prevention, protection and precaution.

Floods directive (2007/60/EC)



Administration
de la gestion de l'eau
Grand-Duché de Luxembourg

Implementation takes place in cycles of 6 years

3 major steps:

- Preliminary Flood Risk Assessment
- Flood Hazard and Flood Risk Maps
- Flood Risk Management Plan

In Luxemburg: Flood Risk Assessment just for fluvial floods, but pluvial floods are considerate in our work for climate change adaptation

Preliminary Flood Risk Assessment



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de la gestion de l'eau
Grand-Duché de Luxembourg

- Historical Flood events
 - E.g. Floodings of July 2021
- Quantitative Evaluation
 - How many potential impacted assets are located within flood zones?
- Qualitative Evaluation
 - Determination of monetary damage potential

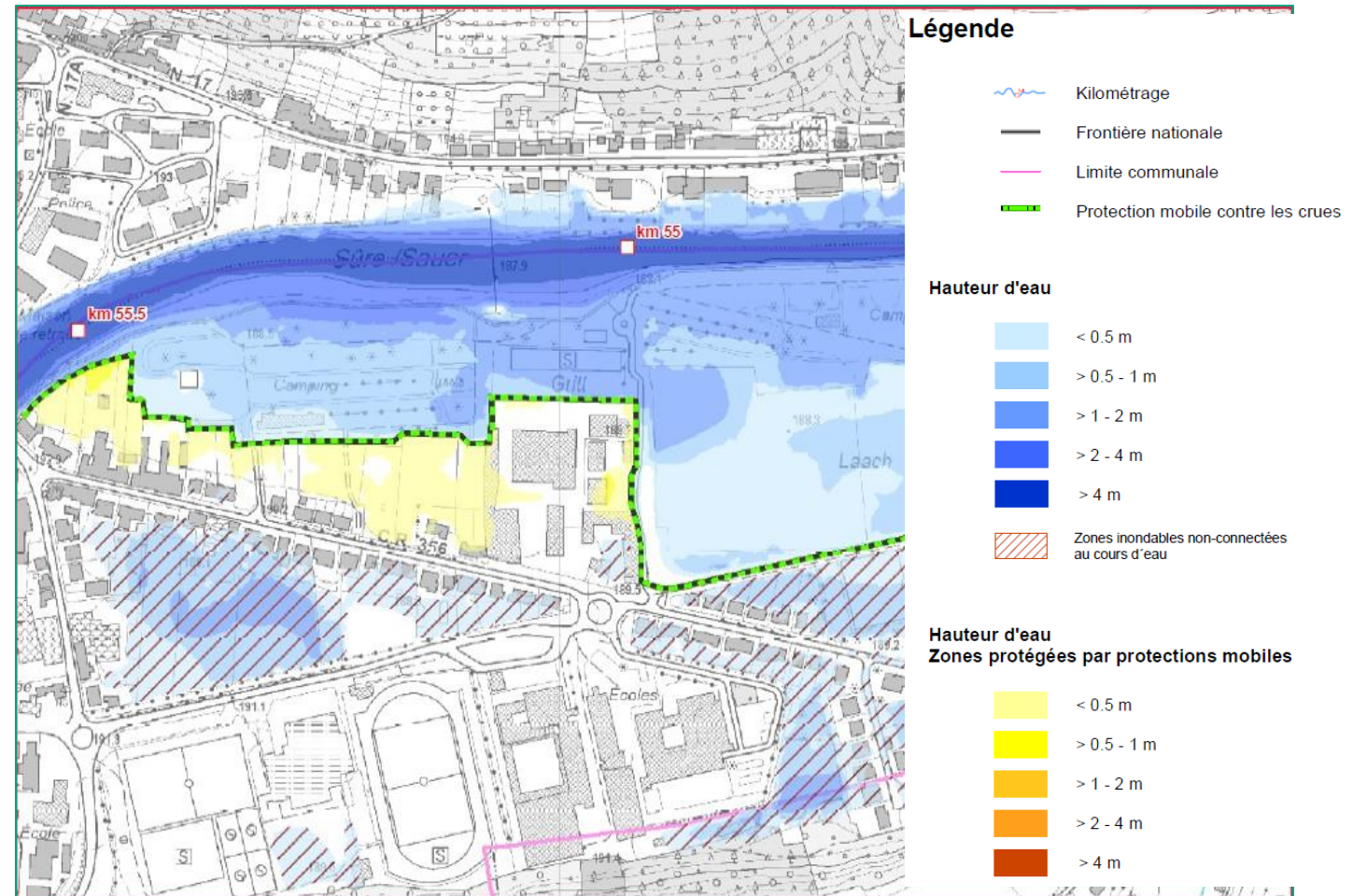
At the end of this process, all the regions or water courses with a significant flood risk are determined. Only for these, flood hazard and flood risk maps are produced.

Flood Hazard Maps



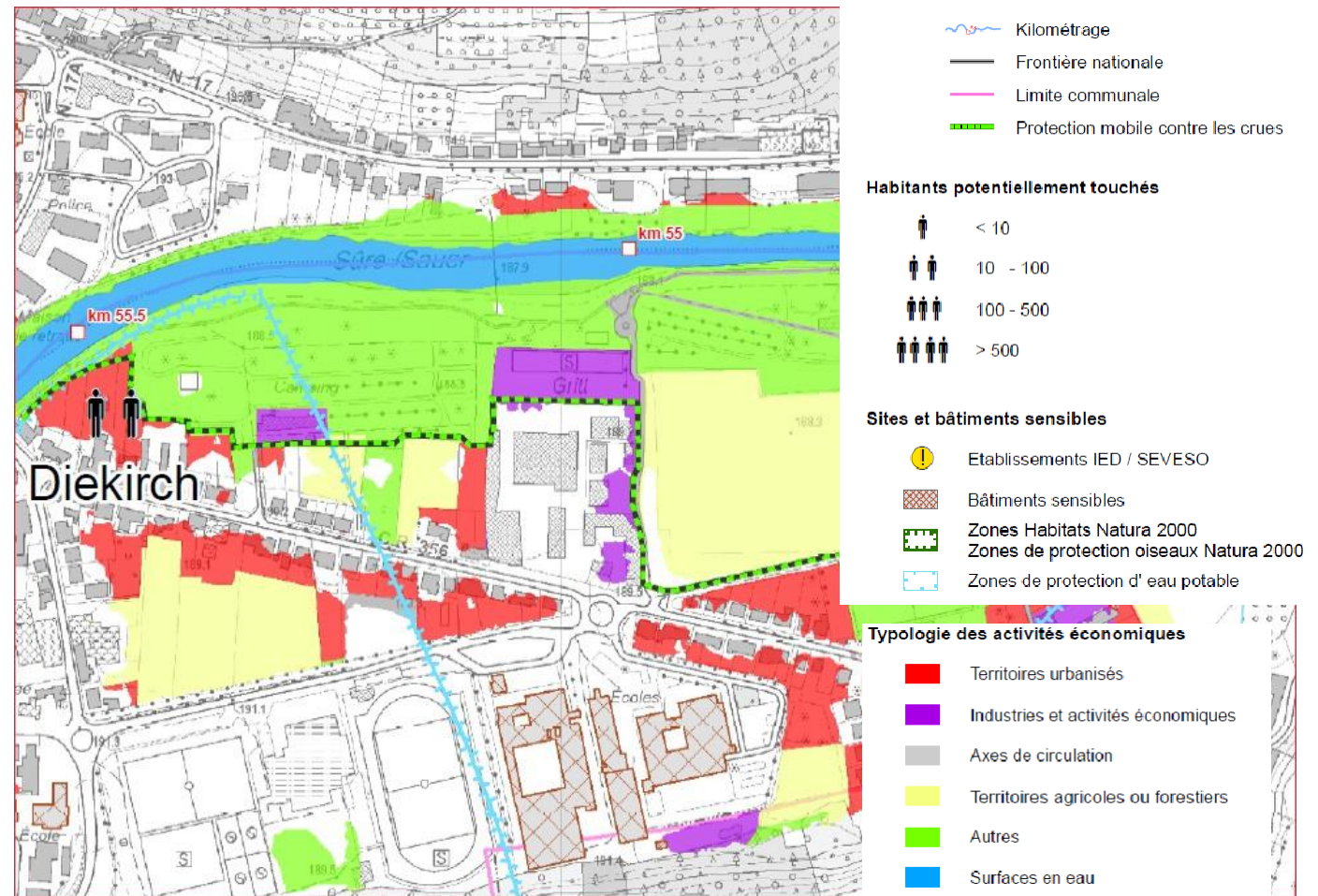
Administration
de la gestion de l'eau
Grand-Duché de Luxembourg

- Calculated by hydraulic modelling
- Inundation area & water depth
- Non-connected, pressurized, water areas
- Flooded areas caused by failure of mobile Flood Protection



Flood Risk Maps

- Intersection of flood zones and landuse
- Landuse affected by flooding
- Facilities or buildings with high damage potential
- Number of people affected



Flood Hazard and Flood Risk Maps

Suche Adressen, Parzellen, Layer ...

Search by adress

LAYER [X]

MEINE LAYER (1) | **KATALOG**

THEMA: WASSER [WECHSELN]

- BASISDATEN
- MESSSTATIONEN
- OBERFLÄCHENGEWÄSSER
- GRUNDWASSER
- TRINKWASSER
- TRINKWASSER SCHUTZZONEN (ZPS)
- SCHUTZGEBIETE
- GEWÄSSERSCHUTZ
- HOCHWASSERRISIKOMANAGEMENT-RICHTLINIE [HWRM-RL]

Gewässer mit einem signifikanten Hochwasserrisiko 2019 +

Projekt "RGD" Hochwassergefahrenkarten 2021 -

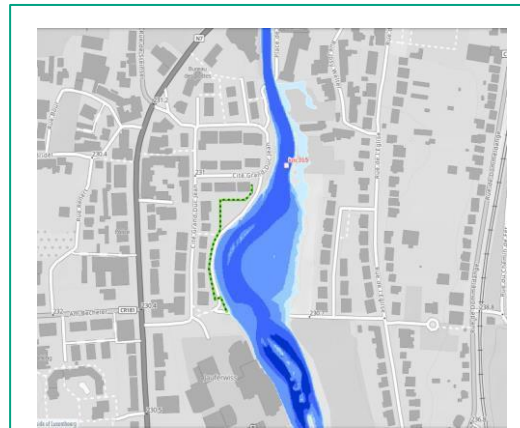
- HQ10 [hohe Wahrscheinlichkeit]
- HQ100 [mittlere Wahrscheinlichkeit]
- HQextrem [niedrige Wahrscheinlichkeit]

Projekt "RGD" Hochwasserrisikokarten 2021 +

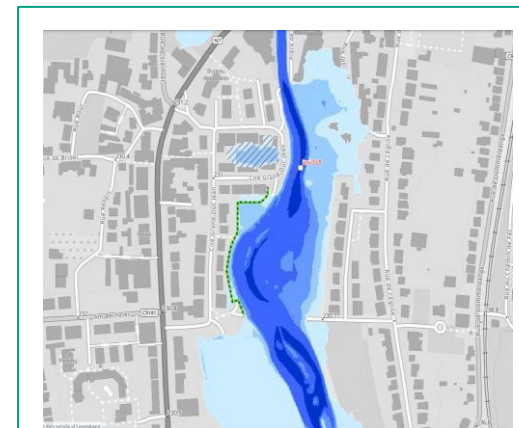
Starkregen +

Hochwassergefahrenkarten 2013 +

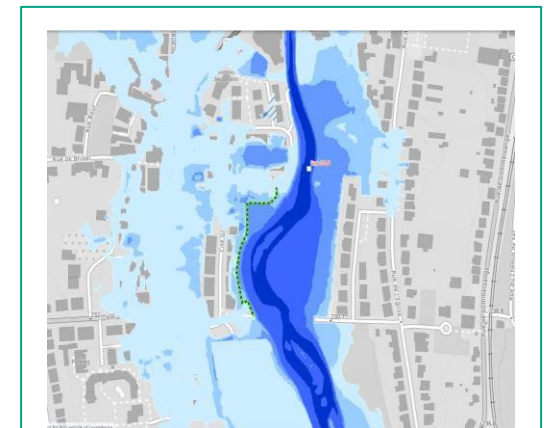
LAYER MY MAPS INFOS LEGENDEN ROUTING



HQ10 – high probability



HQ100 – medium probability



HQext – low probability

The aim of the FRMP is to create a coordinated overall approach to reduce flood risks and flood damage based on :

- An inventory of historical flood events, measures already implemented and the flood forecasting system;
- an identification of the flood hazard and flood risk;
- the definition of appropriate objectives;
- the establishment of a catalog of measures.

The FRM plan does not contain any directly binding specifications for individual measures, but provides a basis for projects, funding and political decisions.

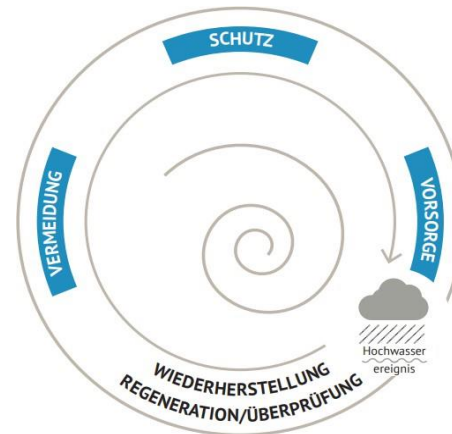
Appropriate Objectives

1. Avoiding of
new risks

2. Reduction of
existing risks
by protection

3. Reduction of
existing risks
by precaution

4. Recovery
and
verification



Examples



Administration
de la gestion de l'eau
Grand-Duché de Luxembourg

Avoiding of new risks

Keep areas free from urbanization or Flood-adapted construction

Maintain water-retention areas



Reduction of existing risks by protection

Flood protection wall with mobile elements, pumping system against drainage water, enlargement of drainage cross-section

Loss of water-retention of 80,000 m³, so compensatory measures necessary



Examples

Reduction of existing risks by protection

Private flood protection

Funding by “Fonds pour la Gestion de l'eau” (up to 75 %, max. 20.000 EUR)



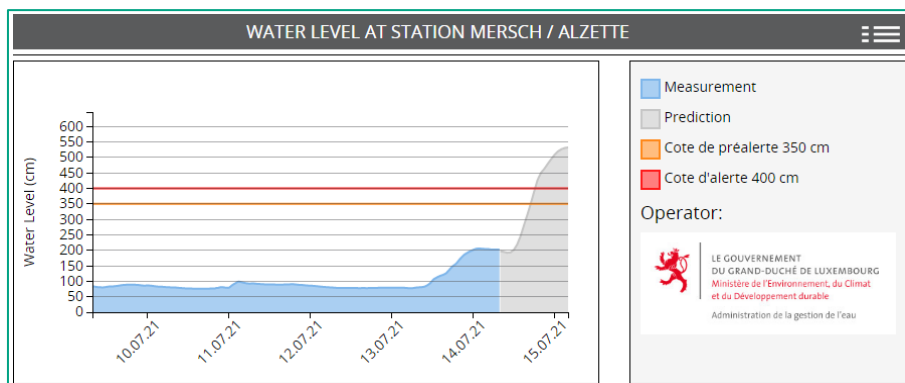
Quelle: Hochwasserschutz.de



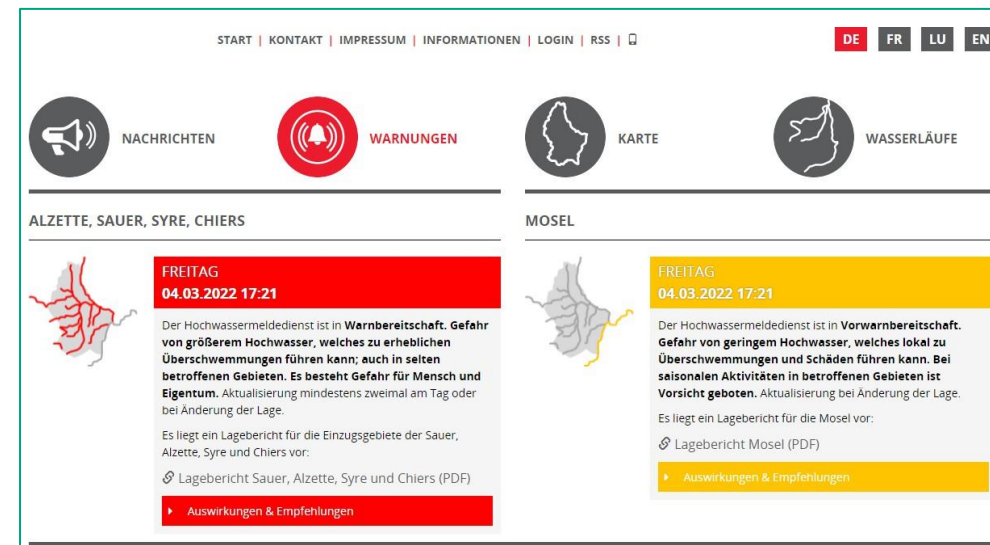
Centre Culturel, Mersch


Flood forecasting

- Flood forecasts and reports for the Sauer and Moselle catchment areas (Moselle since 2018)
- Publication of measured water levels at 38 gauges with forecasts at 12 gauges
- Gauge-related messages (reporting gauges) and flood situation reports on inondations.lu



www.inondations.lu
14.07.2021 08:00 Uhr



START | KONTAKT | IMPRESSUM | INFORMATIONEN | LOGIN | RSS | 

DE FR LU EN

NACHRICHTEN WARNUNGEN KARTE WASSERLÄUFE

ALZETTE, SAUER, SYRE, CHIERS MOSEL

FREITAG
04.03.2022 17:21

Der Hochwassermeldedienst ist in **Warnbereitschaft**. Gefahr von **größerem Hochwasser**, welches zu erheblichen Überschwemmungen führen kann; auch in selten betroffenen Gebieten. Es besteht Gefahr für Mensch und Eigentum. Aktualisierung mindestens zweimal am Tag oder bei Änderung der Lage.

Es liegt ein Lagebericht für die Einzugsgebiete der Sauer, Alzette, Syre und Chiërs vor:

Lagebericht Sauer, Alzette, Syre und Chiërs (PDF)

Auswirkungen & Empfehlungen

FREITAG
04.03.2022 17:21

Der Hochwassermeldedienst ist in **Vorwarnbereitschaft**. Gefahr von **geringem Hochwasser**, welches lokal zu Überschwemmungen und Schäden führen kann. Bei saisonalen Aktivitäten in betroffenen Gebieten ist **Vorsicht geboten**. Aktualisierung bei Änderung der Lage.

Es liegt ein Lagebericht für die Mosel vor:

Lagebericht Mosel (PDF)

Auswirkungen & Empfehlungen

The screenshot shows the website interface for flood forecasting. It features a navigation bar with links for 'START', 'KONTAKT', 'IMPRESSUM', 'INFORMATIONEN', 'LOGIN', 'RSS', and a QR code. Language options 'DE', 'FR', 'LU', and 'EN' are available. The main content area is divided into sections for 'ALZETTE, SAUER, SYRE, CHIERS' and 'MOSEL'. Each section displays a date and time (Friday, 04.03.2022 17:21) and a status: 'Warnbereitschaft' (Warning) for the Sauer area and 'Vorwarnbereitschaft' (Pre-warning) for the Mosel. Detailed descriptions of the flood risk are provided for each area, along with links to PDF reports and recommendations.



**Administration
de la gestion de l'eau**
Grand-Duché de Luxembourg

MERCI



EIB ADAPTATION DAYS



European
Investment Bank

Alzette River renaturalisation site visit



EUROPEAN UNION

Extra information



R&I community : Horizon Europe - summary

2020 (H2020) – 4 running projects ([LINK](#))

- (obj II) climate-resilient innovation packages (45 M€)

2021 call – 9 running projects ([LINK](#))

- (obj I) A climate risk assessment framework (20 M€)
- (obj II) Local climate resilience pathways (30 M€)
- (obj III) Large-scale demonstrator (50 M€)
- 2 Enabling conditions: engagement, asset-level modelling

2022 call – 16 projects ([LINK](#)),

- 3 enabling conditions: finance, insurance, user-driven tools,
- 1 key system: local economic system
- (obj III) Test and **demonstrate** – NBS (+90 M€)

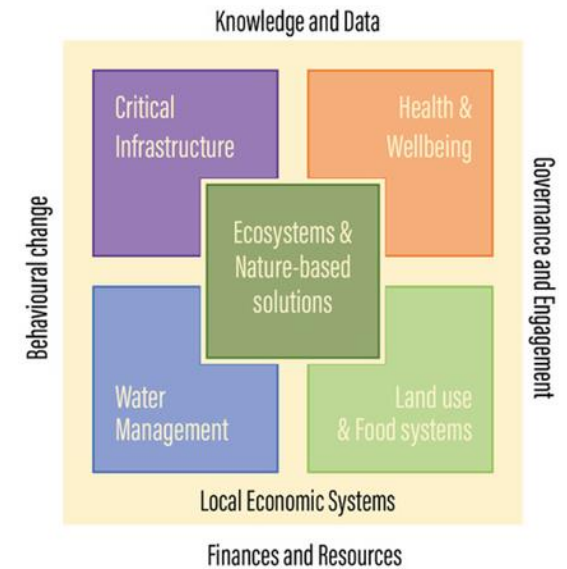
2023 call – 3 running projects ([LINK](#)), 11 projects under grant agreement

- (obj III) Test and **demonstrate** transformative solutions -- 5 key systems (138 M€)

objectives



Enabling conditions & key systems



Mission projects – demonstrators

- 12 ongoing projects
- 30 countries
- 126 regions (73 leaders & 53 replicators)

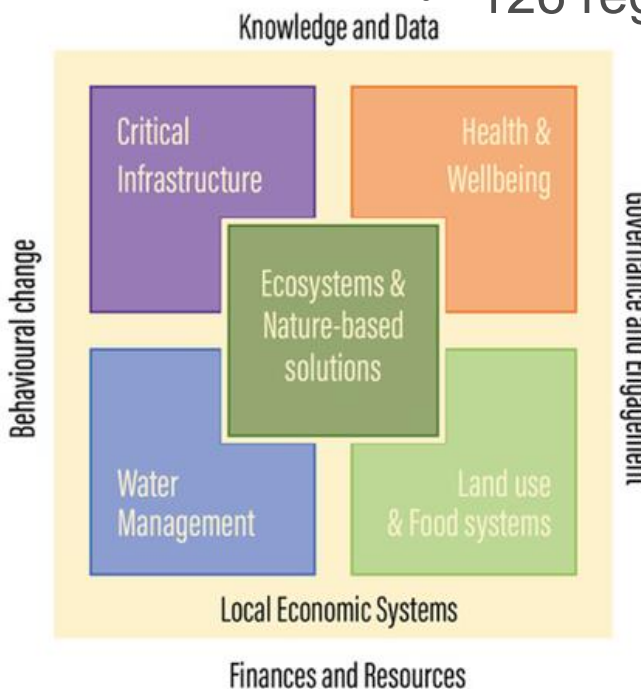
Nature-based solutions (7)



CARDIMED
CLIMATE ADAPTATION AND RESILIENCE
DEMONSTRATED IN THE MEDITERRANEAN REGION



Arcadia



Urban greening (3)



GreenInCities
URBREATH
ReGreenation

JOINT mission calls



+1 project

Large scale demos (2)



Regions 4Climate

health +4 projects

Agriculture / forestry +3 projects

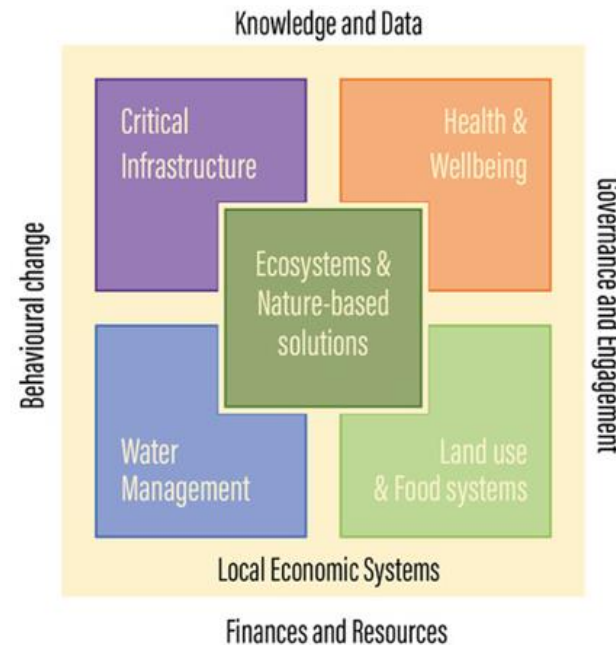
Critical infrastructure +3 projects

Mission Projects – Researching key systems [6 projects]



Asset level modelling

Critical Infrastructure (3)



Water management (2)

Sponge function



Economic systems (1)



Mission projects – Researching enabling conditions [8 projects]

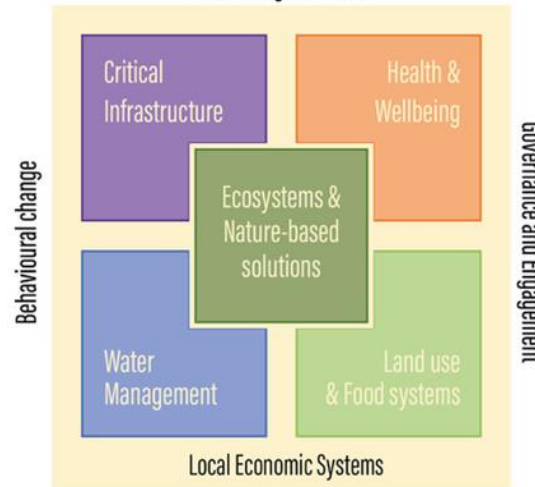


Knowledge & data (2)

tools

Knowledge and Data

Behavioural change
CL5-2023-D1-01-07

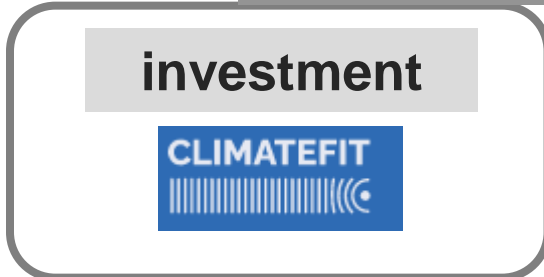


Finances and Resources

citizen Engagement (2)



Finance & resource (3)





HORIZON-MISS-2024-CLIMA-01-01: Bringing available and actionable solutions for climate adaptation to the knowledge of the regions and local authorities

Budget: total 2 million EUR – 1 project

Type: Coordination and Support Actions

Expected Outcomes:

- **Easy access** to information on the latest available solutions on adaptation to climate change for regions and local authorities (**incl. solutions addressed by different funding programmes** and at various levels of governance) via multilingual communications products, services, activities
- **Solutions tested and deployed in the context of the Mission** (incl. Community of Practice) are **harvested** and analysed to support the implementation of the Mission
- Knowledge and understanding of the **policy implications of adaptation solutions** is increasingly used in the policy cycles at EU, national, and regional and local levels



HORIZON-MISS-2024-CLIMA-01-01: Bringing available and actionable solutions for climate adaptation to the knowledge of the regions and local authorities

Scope:

- Support and closely cooperate with the **Mission Implementation Platform** by structurally analysing and summarising good practices shared through the Mission
- Cooperation with relevant existing platforms and initiatives (in particular the Mission's Portal)
- **Identify and analyse available solutions** in regions & LAs not directly involved with the Mission's CoP – and in turn feed those to the Mission's discussions (incl. cooperation with CLIMA 01-02 and its “National Adaptation Hubs”)
- Develop operational information products and **inventory of solutions**, aiming at facilitating regions' and local authorities' understanding of the said solutions
- Identify good practices that merit particular attention by EU policy makers in view of **strengthening policy innovation in coming cycles**



HORIZON-MISS-2024-CLIMA-01-02: Bringing together the national level with the engaged regional and local levels (multi-level governance)

Budget: total 4 million EUR – 1 project

Type: Coordination and Support Actions

Expected Outcomes:

- National level is further **engaged and mobilised** to contribute to the objectives of the Mission, and benefit from it
- Bringing **EU Mission's knowledge** to the regions who are not directly participating to EU Mission's activities
- A set of '**National Adaptation Hubs**' bridge the gap between the EU and regional/local levels
- A robust **twinning scheme** grouping of regions and local actors facing similar challenges ensures peer-learning and cross-fertilisation of experiences



HORIZON-MISS-2024-CLIMA-01-02: Bringing together the national level with the engaged regional and local levels (multi-level governance)

Scope:

- The project could provide **direct financial support in the form of grants** to maximum one entity in each of the MS in facilitating the creation and animation of the “**National Adaptation Hub**”
- Task force or working group composed of the relevant contact points from each level of governance relevant in the individual countries. **Light, agile, and flexible** structures to be **tailored to the national context**.
- Foster knowledge and solutions sharing and implement dedicated horizontal supporting actions (incl. cooperation with HORIZON-MISS-2024-CLIMA-01-01)
- National adaptation hubs should also feed and contribute to countries and regional and local authorities’ efforts related to the adaptation objectives in the Climate Law
- Structural grouping scheme as organic component of the multi-level governance (incl. disseminating Mission’s knowledge beyond Mission’s regions)



HORIZON-MISS-2024-CLIMA-01-03: Develop and refine outcome indicators to measure progress on climate resilience at national, regional and local levels, including knowledge and feedback developed from the Mission

Budget: total 2.9 million EUR – 1 project

Type: Research & Innovation Action

Expected Outcomes:

- Better capture the state and progress of adaptation efforts
- Better measure effectiveness of adaptation measures and solutions
- Accelerate the implementation of adaptation efforts



HORIZON-MISS-2024-CLIMA-01-03: Develop and refine outcome indicators to measure progress on climate resilience at national, regional and local levels, including knowledge and feedback developed from the Mission

Scope:

- Develop an **integrated framework for monitoring, evaluating and drawing lessons from implemented adaptation measures**. Based on outcome indicators
- Develop/refine **earth observation indicators for adaptation**, together with a set of **visualisation tools**.
- Complement the data collection with **citizen science**
- Develop strategy to **visualize and communicate** benefits of adaptation efforts – various stakeholders

HORIZON-MISS-2024-CLIMA-01-04: Research the complex interplay between the climate and biodiversity crises towards more systemic approaches and solutions

Budget: total 8 million EUR – 2 projects – around 4 million EUR/project

Type: Research & Innovation Action

Expected Outcomes:

- improved capability in assessing and modelling, in **systemic** way, the **impacts of the climate and biodiversity** crises
- Evidence-based information to **prioritise actions** increasing **climate resilience & preserving/restoring biodiversity**
- Better prioritisation of **investments** and selection of effective options for risk reduction/risk management;
- improved **regional** and risk **assessments** that capture more effectively **interdependencies** between both crises and **cascading, compound risks**

HORIZON-MISS-2024-CLIMA-01-04: Research the complex interplay between the climate and biodiversity crises towards more systemic approaches and solutions

Scope:

- Investigate **case studies** on cascading, compound climate risks and the link between biodiversity loss and climate change
- identify co-benefits of the implementation of **nature-based solution** for adaptation & biodiversity
- Identify and evaluate **negative impacts** of climate adaptation options on other aspects or sectors, particularly on biodiversity and how biodiversity restoration actions might negatively impact climate adaptation.
- **Look into how the combination** of climate adaptation and biodiversity actions **reinforce or weaken each other** and how the combined effect of adaptation actions differs from the sum of individual actions.
- provide concrete **policy recommendations** that address the biodiversity and climate crises in a more systemic way and that minimise trade-offs between different risks

HORIZON-MISS-2024-CLIMA-01-05: Improve design for transformative approaches and build local capacity for implementation of available solutions focused on climate adaptation

Budget: total 8 million EUR – 2 projects -- around 4 million EUR/project

Type: Research & Innovation Action

Expected Outcomes:

- Fostering **societal transformation** towards a just climate resilient society
- Improved capability of local and regional authorities in **assessing and modelling** the joint impacts of adaptation measures with regional transformative approaches.
- Improved **knowledge** on how to integrate adaptation measures with regional transformative approaches, in a systemic way on a macro-scale so to avoid maladaptation.
- A better understanding of the **mechanisms** that drive transformation of the social and economic systems towards climate resilience through social and user-driven innovation.

HORIZON-MISS-2024-CLIMA-01-05: Improve design for transformative approaches and build local capacity for implementation of available solutions focused on climate adaptation

Scope:

- Develop **knowledge** on how to integrate adaptation measures with regional transformative approaches.
- Understand triggers for and barriers to **behavioural changes** from citizens and economic sectors in relation with just transformation and adaptation to climate change
- Develop methods and tools promoting **win-win solutions** for adaptation and the socio-economic activities such as residential areas, tourism, transport, and energy, are made available to regional and local authorities.
- The findings should be presented and tested **in at least 3 regions/localities/communities** with their neighbours, which include a mix of at least urban and industrial areas.
- Assess the impacts on ecosystems and the cascading effects on **neighbouring regions**⁸⁰

HORIZON-MISS-2024-CLIMA-01-06: Demonstration of approaches to improve bankability of solutions by design, addressing the co-benefits (mitigation and adaptation) to improve revenues streams

Budget: total 27 million EUR – 3 projects – around 9 million EUR/project

Type: Innovation Action

Expected Outcome:

- Improvements in the way bankability of solutions is looked at and assessed by the private and public investors;
- Private investors direct participation in the Mission is significantly increased, stimulating increased private (co-)financing of climate adaptation;
- Regions and local authorities have been involved in the development and testing and assured to maintain the solutions in place for the future, beyond the implementation duration of the project.

HORIZON-MISS-2024-CLIMA-01-06: Demonstration of approaches to improve bankability of solutions by design, addressing the co-benefits (mitigation and adaptation) to improve revenues streams

Scope:

- Identify financially valuable cases of climate projects including climate adaptation dimension on top of other benefits, safeguarding the do-not significant harm principle.
- Develop and test solutions that deliver at once an increase of the resilience and adaptation capacity to climate change in the involved regions, cities, local authorities, while also contributing to reduce or neutralise carbon emissions, improve water efficiency and/or safeguard biodiversity.
- Include business and/ or investor partners and private sector actors interested to invest the project and that will assure to maintain the solutions in place beyond the duration of the project.



HORIZON-MISS-2024-CLIMA-01-07: Demonstration of solutions specifically suited to rural areas and small/ medium size population local communities

Budget: total 22.5 million EUR – 3 projects – around 7.5 million EUR/project

Type: Innovation Action

Expected Outcome:

- Rural areas are examples of better prepared to the anticipated effects of climate change as they have experimented interventions that increase resilience;
- Small and medium size local communities have been directly involved in development and testing of a transformative solutions, which improve their capacity to identify and implement solutions that improve climate resilience of their territories.



HORIZON-MISS-2024-CLIMA-01-07: Demonstration of solutions specifically suited to rural areas and small/ medium size population local communities

Scope:

- Identify approaches and innovative solutions leading to an increase of the resilience and adaptation capacity to climate change which are particularly suitable for implementation by small and medium local authorities and the rural context. Nature-based solutions should be explored as priority
- Support small and medium local authorities to close skills gaps and strengthen in-house capabilities for adaptation
- Include specific considerations on how to facilitate engagement of small and medium-sized local authorities or at least how their needs are reflected.



HORIZON-MISS-2024-CLIMA-01-08: Demonstration of approaches by regions and local authorities focused on increasing climate resilience of the most vulnerable social groups (just climate resilience)

Budget: total 22.5 million EUR – 3 projects – around 7.5 million EUR/project

Type: Innovation Action

Expected Outcome:

- Examples of equitable adaptation measures fostering just resilience transformation are made available for replication;
- Appropriate guidance for decision-makers is produced on equitable adaptation options design and implementation, shared and made available for wide reapplication;
- Regional and local public administrations increase their capacity to involve, understand and cater for the needs of vulnerable and marginalised groups.



HORIZON-MISS-2024-CLIMA-01-08: Demonstration of approaches by regions and local authorities focused on increasing climate resilience of the most vulnerable social groups (just climate resilience)

Scope:

- Identify, develop, test and demonstrate equitable adaptation actions and solutions, addressing specific climate vulnerabilities identified as relevant at regional and local scale, taking into account place-based data, socio-economic, and local governance.
- Address how the most vulnerable groups in relation to their age, health or socio-economic status would be catered for.
- Regional and/or local authorities should be directly involved in the development of equity-oriented policies and measures - specific considerations should be included on how to ensure that insights from the target group are reflected; how solutions can be co-designed with them; and on how the outcomes and results can be used on the ground.



HORIZON-MISS-2024-CLIMA-01-09: Systemic and cross-sectoral solutions for climate resilience, tailored to the local needs of regions and local authorities

Budget: total 27 million EUR – 3 projects – around 9 million EUR/project

Type: Innovation Action

Expected Outcome:

- Foresight capacity within public administrations is increased, disruptions linked to climate change are better anticipated and prepared for;
- Cross-sectorial climate resilience solutions, that can systematically transform our society and support its preparedness to climate change, have been developed, tested and brought closer to the market.

HORIZON-MISS-2024-CLIMA-01-09: Systemic and cross-sectoral solutions for climate resilience, tailored to the local needs of regions and local authorities

Scope:

- Integrate multi-faceted technological, digital, business, governance and environmental aspects with social innovation into the development of solutions contributing to increase preparedness to changing climate.
- Go far beyond addressing a specific sector, addressing wide-ranging impacts, take a systemic approach, looking at the interconnections and interdependencies between them.
- Look how to minimize trade-offs and maximise co-benefits and opportunities of a systemic approach. Go beyond theoretical research and understanding; turn into operational and practical insights and tangible solutions experimented on the regional and local grounds. Consider how to turn into new standards so to allow faster uptake at scale.
- Mobilise and include all value chain actors, matching innovators and solutions providers with end-users/regions; foster the development of business models that can support the sustainability of the proposed solutions.