

MYRIAD-EU

Multi-hazard and systemic framework for enhancing Risk-Informed
mAnagement and Decision-making in the EU

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MYRIAD-EU

The MYRIAD-EU project has received funding from the European Union's Horizon 2020 research and innovation programme call H2020-LC-CLA-2018-2019-2020 under grant agreement number 101003276



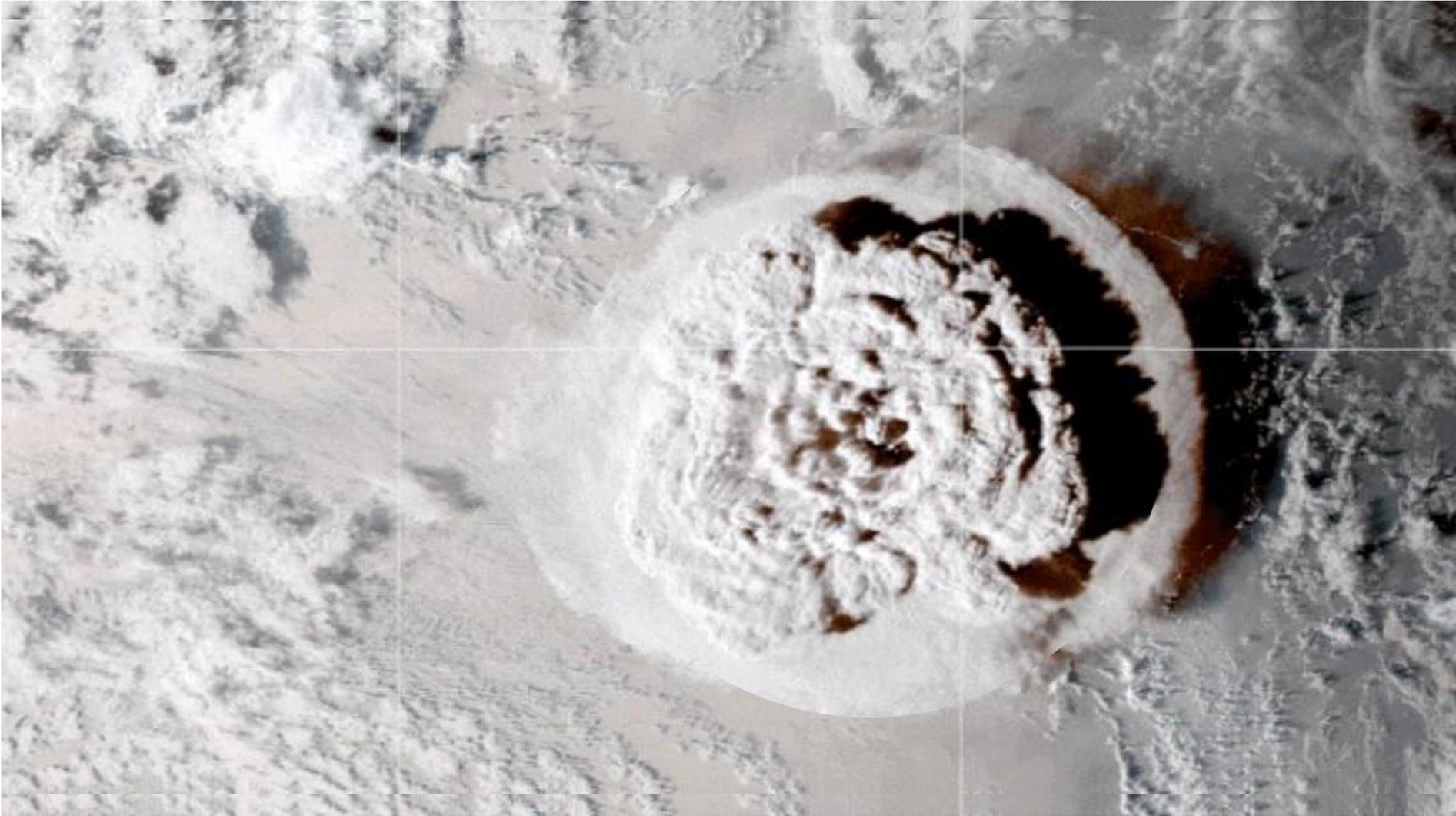
MYRIAD-EU

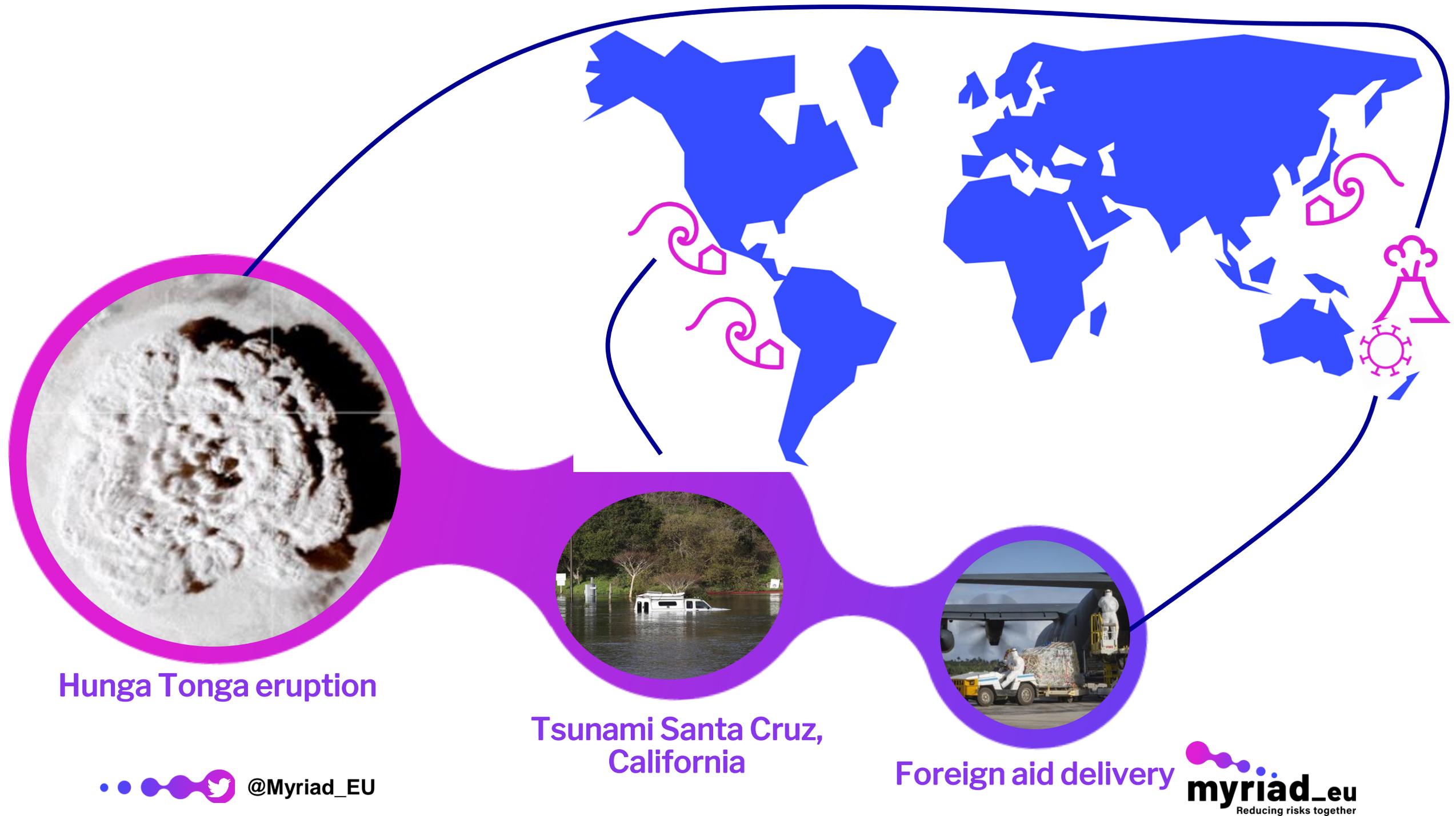
- Multi-hazard and sYstemic framework for enhancing Risk-Informed mAnagement and Decision-making in the EU
- 19 project partners across the EU led by the Institute for Environmental Studies at the Vrije Universiteit Amsterdam
- The project will run from 1 Sept 2021 – 31 Aug 2025, with a budget of +- 5 MEUR

MYRIAD-EU introduction video

Droughts can damage crops

Hunga Tonga–Hunga Ha‘apai eruption





Hunga Tonga eruption



Tsunami Santa Cruz, California



Foreign aid delivery

Storm Triplet



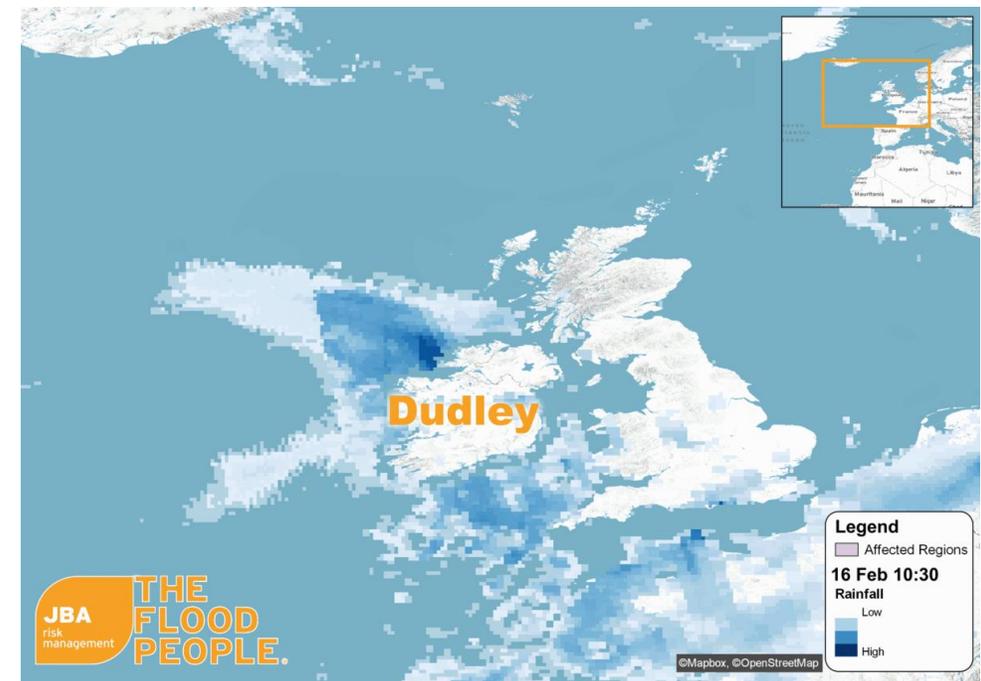
Dudley



Eunice



Franklin



Multiple hazards can have interrelated effects on risk

Triggering



Compound

How can risk be better managed by considering these interrelated effects?

Amplifying



Consecutive

DRM measures for one hazard may increase risk (asynnergies) from other hazards



How can we better account for these dynamic feedbacks between risk drivers?

*Photo credit: Fernando Martínez Torres
López et al., 2020. Temblor, <http://doi.org/10.32858/temblor.064>*

Interrelated effects have impacts across sectors



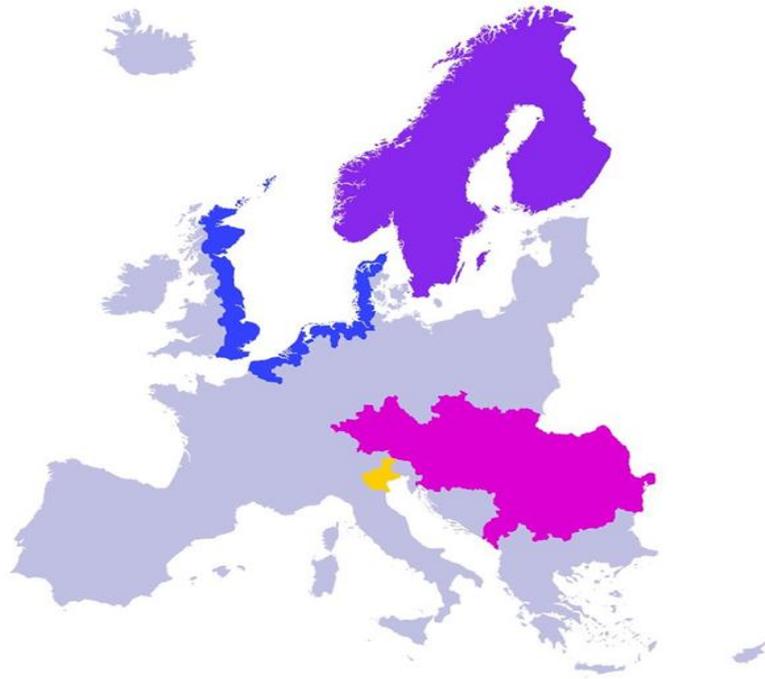
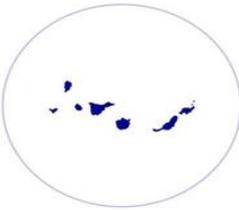
How can we account for these trade-offs and synergies across sectors, regions, and hazards?

Photo credit: Russell Neches. CC-BY-2.0

MYRIAD-EU: Vision and aim

- MYRIAD-EU's vision is to catalyse the paradigm shift required to move towards a multi-risk, multi-sector, systemic approach to risk assessment and management.
- The overall aim is that MYRIAD-EU policy-makers, decision-makers, and practitioners will be able to develop forward-looking disaster risk management pathways that assess trade-offs and synergies across sectors, hazards, and scales.
- The project will focus on five multi-scale Pilot regions, in which we aim to better understand indirect, interregional, and cross-sectoral risk within Europe.

SYSTEMIC RISK INTERDEPENDENCIES THROUGHOUT EUROPE



CANARY ISLANDS

CHALLENGE
How can island regions with a strong dependence on tourism become more resilient to multi-hazard risk?



VENETO

CHALLENGE
How can diverse natural landscapes from the mountains to the sea achieve a forward-looking perspective conducive to multi-risk planning?



NORTH SEA

CHALLENGE
How can spatial planning at the interface of the land and sea environments be optimised in the face of increasing and interrelated risk?



SCANDINAVIA

CHALLENGE
How can we maintain healthy ecosystems under climate-related risks while meeting increasing demands for energy, food, and other ecosystem services, and what is the role of nature-based solutions?



DANUBE

CHALLENGE
How can we increase resilience to multiple disasters that impact several interconnected countries with strong macro-economic relations?



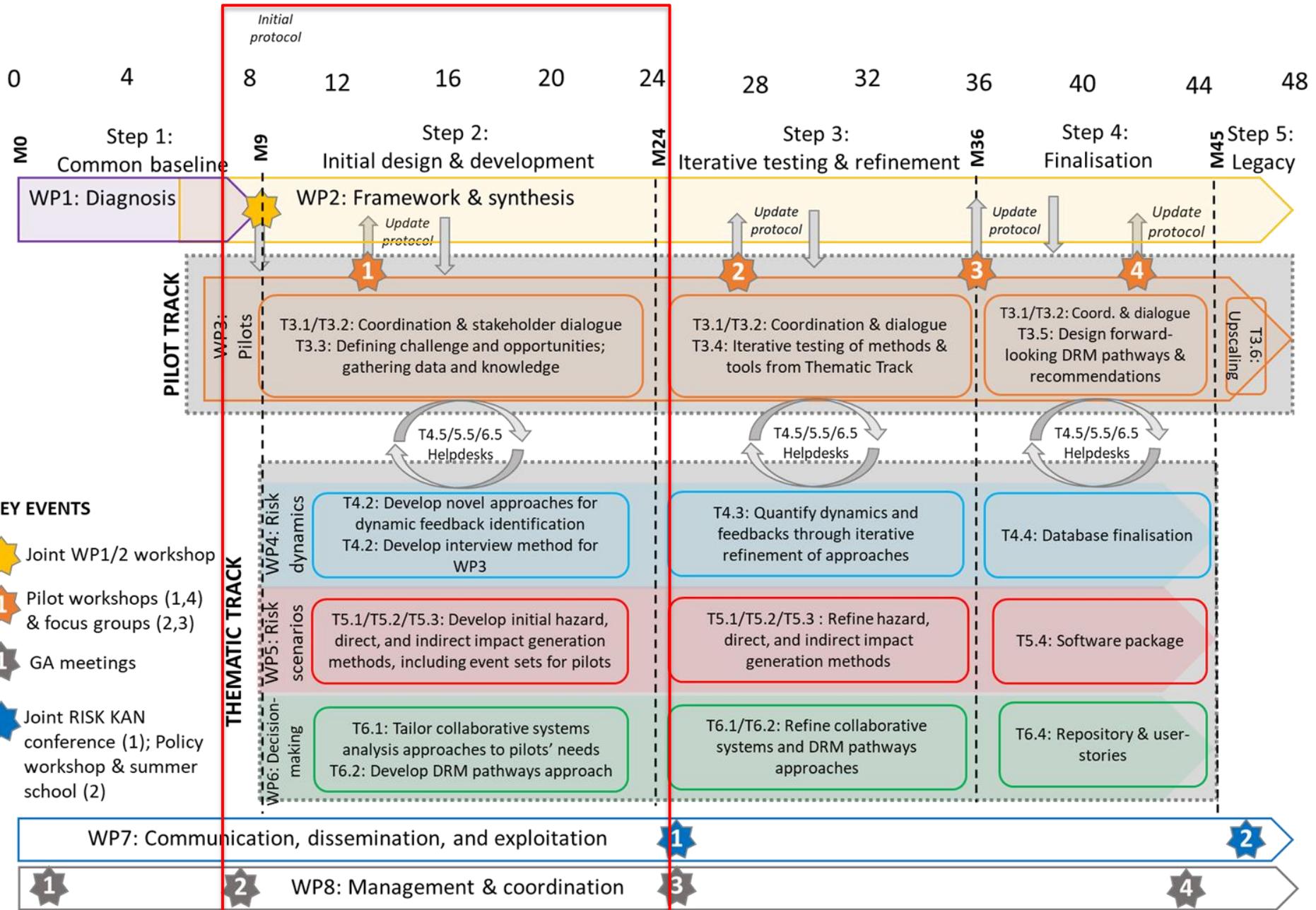


Faculty of Science



Deltares

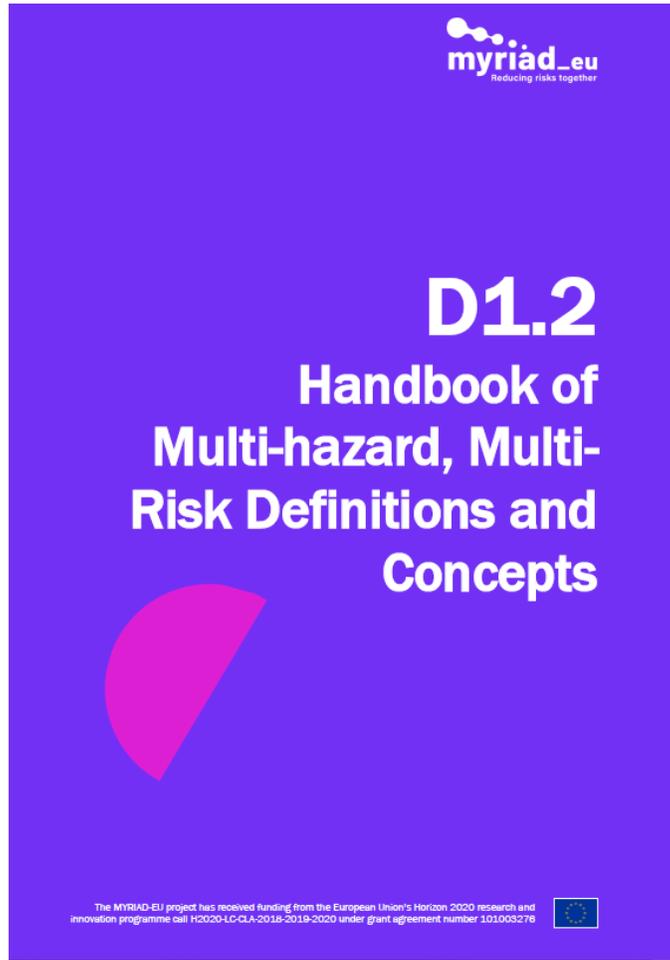




Major results

- Handbook of multi-hazard, multi-risk concepts, definitions, and indicators
- Report on policies and governance for multi-hazard, multi-risk management
- Wiki platform – online (www.disasterriskgateway.net)
- Initial framework and guidance protocol document
- Pilot Workshops completed
- Initial multi-hazard event-set available

2 key handbooks/reports



Disaster Risk Gateway - www.disasterriskgateway.net

- A toolbox for disaster risk
- The purpose of the wiki is to
 - ✓ serve as an information resource and starting point to encourage engagement between different actors,
 - ✓ to promote interdisciplinary research and
 - ✓ for research activities within MYRIAD-EU and other future projects.
- The platform will support the wider hazard and risk management community to increase their understanding of what is currently possible, and how this knowledge can be applied to different disaster risk (including multi-hazard, multi-risk) challenges.

Disaster Risk Gateway - www.disasterriskgateway.net

Home Page

Disaster Risk Gateway

Reducing Risks Together: a collaborative toolbox for multi-(hazard)risk assessment and management

Welcome to your toolbox for Disaster Risk. Here you can find and share existing approaches for understanding, analysing and managing **multi-hazard** and **multi-hazard risks**. This catalogue has been developed as part of the **MYRIAD-EU project**, which aims to change the way risks are currently assessed and managed through the development and promotion of tools and solutions as well as knowledge sharing.

The purpose of this wiki is to serve as an information resource and starting point to encourage engagement between different actors involved in disaster risk assessment and management, to promote interdisciplinary research and for research activities within MYRIAD-EU and other future projects. The platform aims to support the wider hazard and risk management community to increase their understanding of what is currently possible, and how this knowledge can be applied to different disaster risk (including multi-hazard, multi-risk) challenges.

The wiki is hosted by the **British Geological Survey**, and we welcome contributions from across the disaster risk community.

Browse by clicking on the icon text below, or search directly for specific keywords.



Multi-hazard Risk Assessment

Understanding Disaster Risk



Multi-hazard Risk Management

Governance and policy



Definitions



Contribute



Feedback

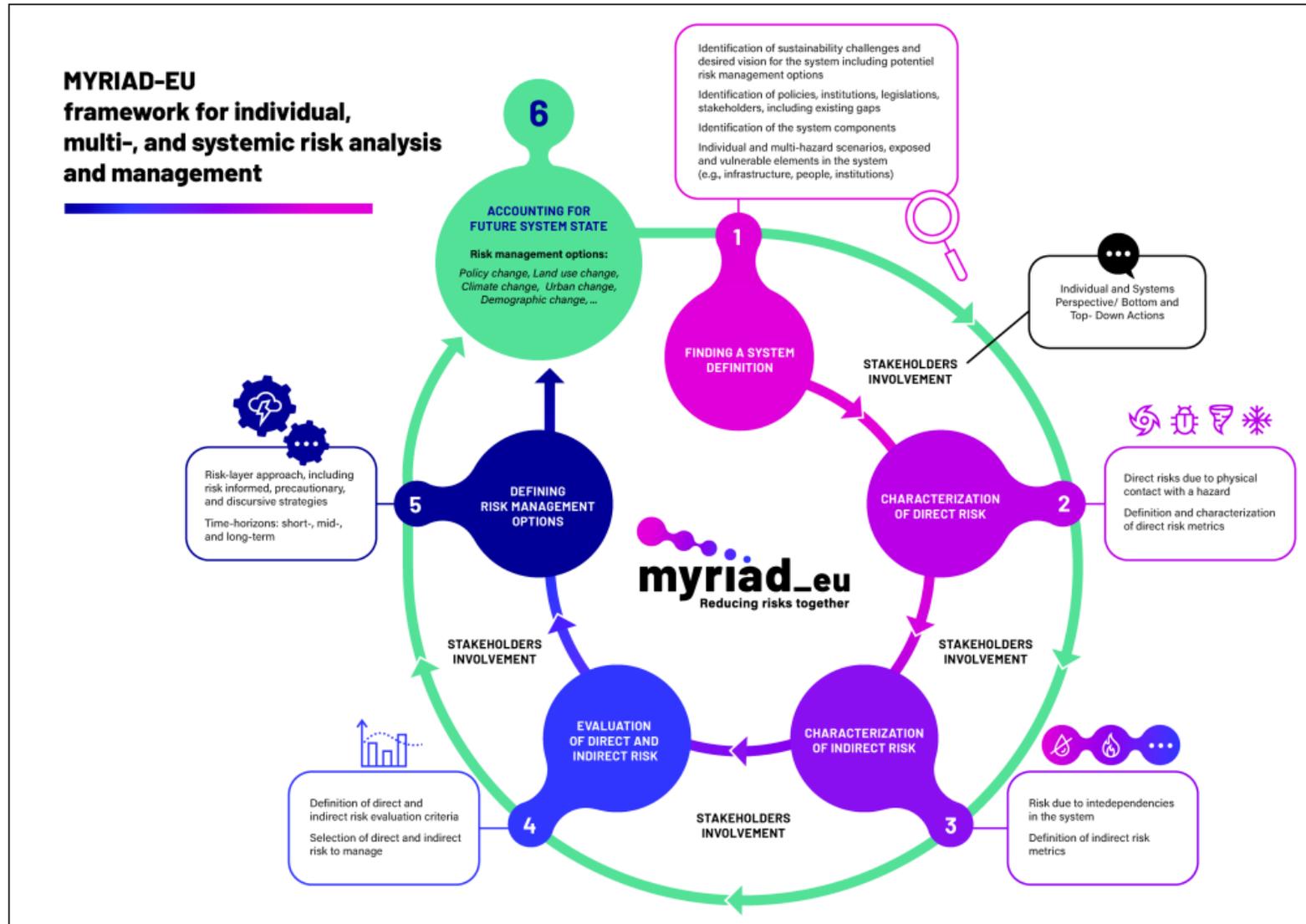
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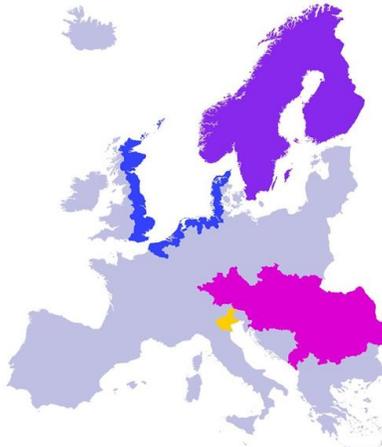
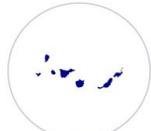
Framework for multi-hazard, multi-sector, systemic risk management



Pilot Workshops



SYSTEMIC RISK INTERDEPENDENCIES THROUGHOUT EUROPE



CANARY ISLANDS

CHALLENGE

How can island regions with a strong dependence on tourism become more resilient to multi-hazard risk?

SECTOR

- ENERGY
- FOOD & AGRICULTURE
- TOURISM

HAZARDS

- Earthquake
- Flood
- Landslide
- Storm
- Threats
- Volcano

VENETO

CHALLENGE

How can diverse natural landscapes from the mountains to the sea achieve a forward-looking perspective conducive to multi-risk planning?

SECTOR

- ECOSYSTEMS & FORESTRY
- FINANCE
- TOURISM

HAZARDS

- Biological hazard
- Drought
- Fire
- Flood
- Landslide
- Snow

NORTH SEA

CHALLENGE

How can spatial planning at the interface of the land and sea environments be optimised in the face of increasing and interrelated risk?

SECTOR

- ECOSYSTEMS & FORESTRY
- ENERGY
- INFRASTRUCTURE & TRANSPORT

HAZARDS

- Biological hazard
- Extreme wind
- Flood
- Heat
- Storm
- Thunder and lightning

SCANDINAVIA

CHALLENGE

How can we maintain healthy ecosystems under climate-related risks while meeting increasing demands for energy, food, and other ecosystem services, and what is the role of nature-based solutions?

SECTOR

- ECOSYSTEMS & FORESTRY
- ENERGY
- FOOD & AGRICULTURE

HAZARDS

- Biological hazard
- Drought
- Fire
- Flood
- Heat
- Snow

DANUBE

CHALLENGE

How can we increase resilience to multiple disasters that impact several interconnected countries with strong macro-economic relations?

SECTOR

- FINANCE
- FOOD & AGRICULTURE
- INFRASTRUCTURE & TRANSPORT

HAZARDS

- Drought
- Earthquake
- Flood
- Heat
- Landslide
- Thunder and lightning

MYRIAD-EU

Reducing Risks Together

Multi-hazard and systemic framework for enhancing risk informed management and decision-making in the EU
STAKEHOLDER ENGAGEMENT

Why we want you in our team

Are you a policy-maker, decision-maker, or practitioner working in a sector affected by systemic, interrelated natural hazard risks in Europe?

This is your opportunity to join us in co-developing knowledge products, services, and tools that will change the way you manage disaster risks in the future!

What will you get out of this?

- Enhanced knowledge on climate change, natural hazards and their interactions, sectoral interdependencies, risk management, policy, and governance
- Practical tools on how to manage multi-(hazard) risks
- Access to data and resources to evaluate risk so that you can plan investments better
- Access to advanced multi-hazard, multi-risk management research
- Access to networks and contacts
- Opportunity to shape and influence research and its application in practice

How is this relevant for you?

Are you involved in spatial planning, offshore renewable energy production, shipping & safety at sea, fishing or any other operation or development in the North Sea that is increasingly affected by climate change (e.g. storms, extreme wind, flooding)? Then join us in advancing tools and understanding of multi-hazard, multi-risk management and decision-making.



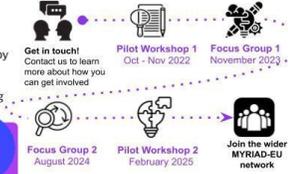
Drie jaar na milieuramp MSC Zoe: bijna 30.000 kilo troep uit Waddenzee gehaald

The knowledge co-development journey

Become a member of the MYRIAD-EU network by joining one of our stakeholder groups in your region (Pilot) and participating in dedicated events, each delivering a clear path to developing solutions for you!

Get in touch

First name, Last name (Organisation)
email address - send for data to EU
First name, Last name (Organisation)
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MYRIAD-EU

Reducing Risks Together

Multi-hazard and systemic framework for enhancing risk informed management and decision-making in the EU
STAKEHOLDER ENGAGEMENT

Which Pilot stakeholder group is relevant for you?

Pilot core users
Will be deeply engaged with the technical team in the Pilot

Join this group if you have the interest and capacity to work with our team during two stakeholder events, at the beginning and the end of the project, in order to share experiences, discuss our results, and reflect upon the current and future state of multi-(hazard) risk and Disaster Risk Management (DRM) in your region and EU.

Pilot stakeholders
Will be moderately engaged with the technical team in the Pilot

Join this group if you have the interest and capacity to work with our team during two stakeholder events, at the beginning and the end of the project, in order to share experiences, discuss our results, and reflect upon the current and future state of multi-(hazard) risk and Disaster Risk Management (DRM) in your region and EU.

Upcoming stakeholder events

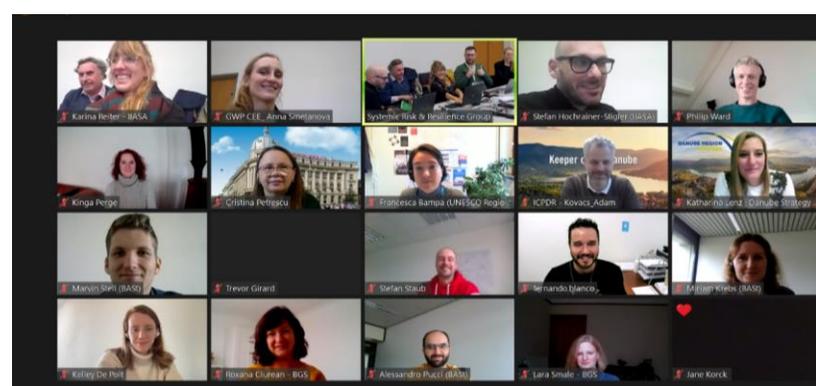
2022	2023	2024	2025
Oct - November 1st Pilot Workshop	November 1st Focus Group	August 2nd Focus Group	February 2nd Pilot Workshop
Attendees: • Pilot core user group • Pilot stakeholder group	Attendees: • Pilot core user group	Attendees: • Pilot core user group	Attendees: • Pilot core user group • Pilot stakeholder group
• Defining current DRM opportunities, constraints, and challenges • Discussing the usability of a prototype multi-hazard, multi-sector, systemic risk assessment framework	• Discussing testing results and refinement of selected models, methods and tools • Feedback on how to improve interim results	• Discussing finalisation of selected models, methods and tools • Discussing selection and implementation of DRM pathways • Feedback on how to improve final results	• Presentation of Pilot-specific results to stakeholders and decision makers • Reflections on further improvements, strengths and weaknesses of the project and its outcomes

Get in touch

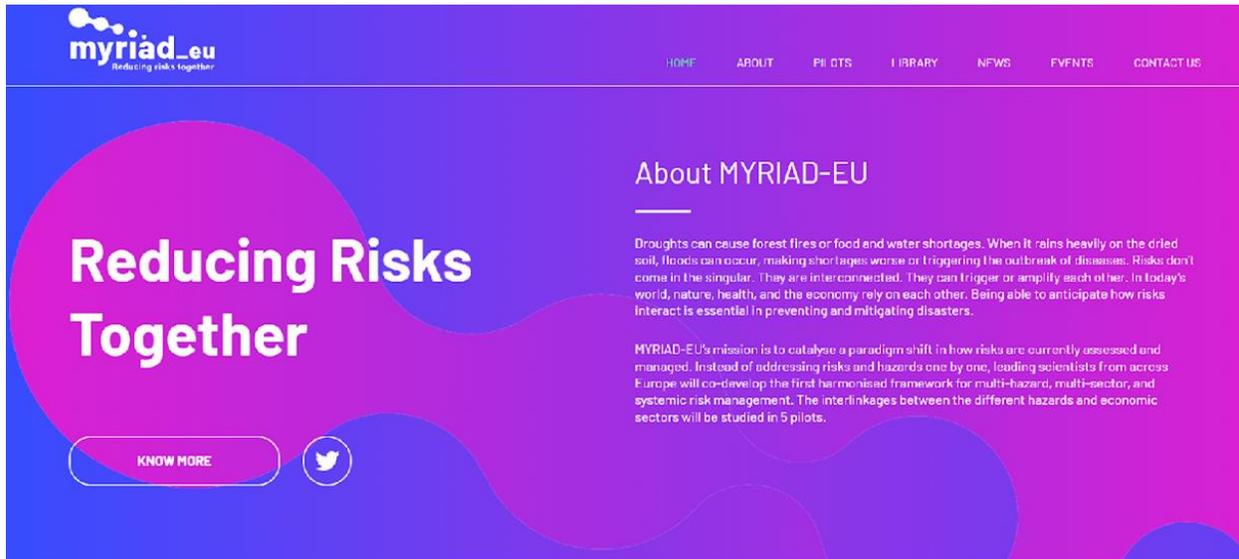
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We look forward to hearing from you!
MYRIAD-EU Consortium

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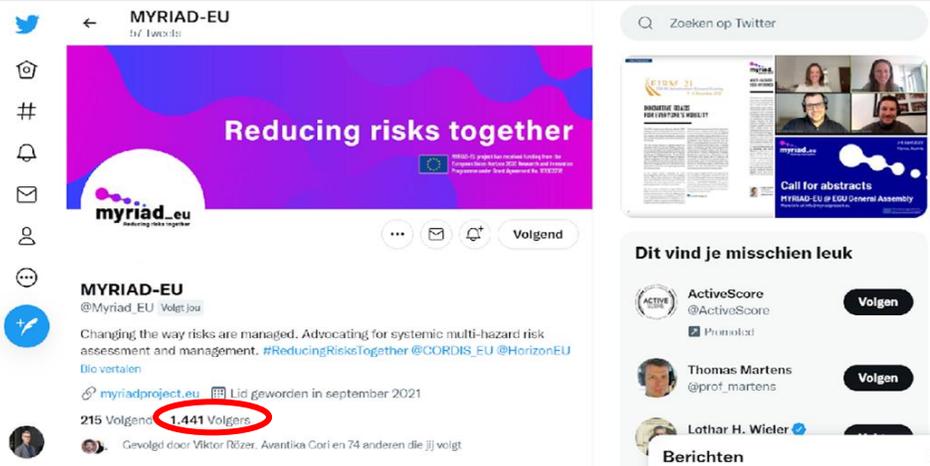


Staying informed



- www.myriadproject.eu
 - You can register for updates

- Active Twitter account
 - Follow @Myriad_EU





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