climate-health cluster

Science for Policy (S4P) Strategy

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Short Description (3-5 lines)	
This deliverable describes the Cluster's strategy to translate the scientific results of the six research and innovation projects into policy and practice.	
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Based on the 6 projects' Grant Agreements, this common Science for Policy (S4P) strategy corresponds to the deliverables listed below.

Project name	Deliverable number
BlueAdapt	D9.14
CATALYSE	D6.5
CLIMOS	D6.9
HIGH Horizons	D6.11
IDAlert	D1.7
TRIGGER	D9.17

How to quote this document
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Executive summary

The six projects funded under the Horizon Europe topic HORIZON-HLTH-2021-ENVHLTH-02-03 "Health impacts of climate change, costs and benefits of action and inaction" have formed the Climate-Health Cluster. The six projects are BlueAdapt, CATALYSE, CLIMOS, HIGH Horizons, IDAlert and TRIGGER.

The Climate-Health Cluster was set up by the European Commission to allow the six projects to:

- Harmonise approaches
- Promote synergies
- Avoid overlaps
- Strengthen the Science for Policy link
- Streamline information flows
- Improve communication and dissemination
- Increase their impact.

OBJECTIVE

Translate results for 'engagement' to 'co-create' 'tools for action'
to 'monitor' and address climate change and health in Europe and across the globe

This Science for Policy (S4P) strategy aims to contribute to strengthening the science for policy link and increasing the Cluster's and projects' impact on advocacy, policy and practice.

The Climate-Health Cluster wants to go beyond these traditional deliverables. For the Climate-Health Cluster **the key words are 'implementation action'.** Therefore, we will take an implementation science approach. Implementation science focus for the consortium will be on **'how'** our research results can impact policy and practice in the area of climate and health. We expect our research will be **'translated'** to advocacy, policy and programmes at local, national, regional and global levels.

A Working Group (WG1) is set up and is responsible for ensuring that the scientific findings of the Cluster are translated into policies and is therefore involved in the development, implementation and evaluation of the Cluster's science for policy strategy:

1) **Policy Development:** Tasked with shaping the Science 4 Policy strategy and may revise existing strategies based on cross-cluster learnings. This involves comprehensive research, stakeholder consultation, and a thorough policy strategy.
2) **Policy Implementation:** Upon approval of a cluster policy brief or any related cluster engagement, advocacy or education document, WG1 will spearhead the S4P strategy's implementation, contributing to the policy briefs and supporting action plans through diligent oversight, timeline management, and resource allocation. Activities may include:
    a. **Stakeholder Engagement**
    b. **Advocacy**
    c. **Education**
3) **Policy Evaluation:** WG1 roles may extend to monitoring and evaluating S4P's strategies' effectiveness, identifying any gaps in policy goals, and recommending necessary changes.

This translation will therefore focus on **four key approaches:**

1. **Engagement**
2. **Co-creation**
3. **Indicators & monitoring**
4. **Tools for action**

These approaches can be translated to Climate-Health Cluster actions. It is also noted that these four key approaches can overlap during implementation, and that engagement underpins all of these.

Examples of cross-cutting strategies/activities used among the various members of the Climate-Health Cluster:

- Platforms for stakeholders
- Policy briefs
- Co-participation, engagement, citizen science
- Policy scenarios
- Cost-benefit assessments
- Frameworks for S4P/Change
- Equity/Gender/Vulnerability

Five main stakeholder groups have been identified:

1. Researchers and academia
2. Climate, environment professionals
3. Policy Makers, Policy Experts, Funding Agencies
4. Civil Society, NGOs, Citizens
5. Healthcare Providers, Patient Organisations, Healthcare Industry

Within the overall framework of our target audience of policy makers, policy experts and funding agencies, all projects expect to work across three levels of stakeholders:

- Global/Regional/EU
- National
- Sub-national/Local.

Within the context of the Cluster's 'Science for Policy' strategy we have identified the following means of communication and dissemination as the most relevant in our current Dissemination and Communication plan: **i) Joint policy briefs,**
ii) Thematic workshops,
iii) Event participation, and
iv) Final Climate-Health Cluster event.
For translation science into policy, we will also consider specific **outreach activities to policy makers/target audiences**, including communities from our research sites. More detail can also be found in the Climate-Health Cluster Scientific Strategy and in the Dissemination, Exploitation and Communication Strategy.

1 Introduction

1.1 Purpose and scope

The six projects funded under the Horizon Europe topic HORIZON-HLTH-2021-ENVHLTH-02-03 "Health impacts of climate change, costs and benefits of action and inaction" have formed the Climate-Health Cluster. The six projects are BlueAdapt, CATALYSE, CLIMOS, HIGH Horizons, IDAlert and TRIGGER. The Climate-Health Cluster was set up by the European Commission to allow the six projects to:

- Harmonise approaches
- Promote synergies
- Avoid overlaps
- Strengthen the Science4Policy link
- Streamline information flows
- Improve communication and dissemination
- Increase their impact.

This Science for Policy (S4P) strategy aims to contribute to strengthening the science for policy link and increasing the Cluster's and projects' impact on advocacy, policy and practice.

1.2 Audience

This document is drafted for all members of the Climate-Health Cluster, particularly those who are part of Working Group 1 (WG1), responsible for translating science into policy. This document is also intended to inform the project officers of the European Commission who are overseeing the Cluster and its progress.

1.3 Revisions and Updates

This should be considered a living document. It will be reviewed regularly by Climate-Health Cluster Working Group 1 and updated as needed.

2 About the Climate-Health Cluster

2.1 Cluster framework

The Climate-Health Cluster will be coordinated by the six project coordinators and their deputies ('Cluster Coordinating Team'), while the Cluster leadership will rotate every 9 months as follows:

- Period 1: October 2022 – June 2023 // led by IDAlert
- Period 2: July 2023 – March 2024 // led by CLIMOS
- Period 3: April 2024 – December 2024 // led by BlueAdapt
- Period 4: January 2025 – September 2025 // led by HIGH Horizons
- Period 5: October 2025 – June 2026 // led by CATALYSE
- Period 6: July 2026 - March 2027 // led by TRIGGER

The European Commission, via the Directorate General for Research and Innovation (DG RTD), will supervise the implementation of the Climate-Health Cluster.

The Climate-Health Cluster is structured into Working Groups (WGs) on topics of shared interest and research between the projects. As a result, the following five WGs have been implemented:

- WG1: Science translation to policy and practice, led by HIGH Horizons and IDAlert
- WG2: Data analysis, management, protection, and standardisation, led by TRIGGER, CLIMOS and CATALYSE
- WG3: Communication and Dissemination, led by BlueAdapt and IDAlert
- WG4: Early Warnings, led by CATALYSE, TRIGGER and CLIMOS
- WG5: Indicators, led by HIGH Horizons and IDAlert

This Science for Policy strategy was developed by Working Group 1.

2.2 Working Group 1's role and procedures

Regular meetings are planned to discuss the Working Group 1 tasks, planned activities, and assign responsible members. The HIGH Horizons and IDAlert project partners lead the meetings. The minutes of the meetings are reported back to the Cluster coordination team.

WG1 is responsible for ensuring that the scientific findings of the Cluster are translated into policies and is therefore involved in the development, implementation and evaluation of the Cluster's science for policy strategy:

1) **Policy Development:** Tasked with shaping the Science 4 Policy strategy and may revise existing strategies based on cross-cluster learnings. This involves comprehensive research, stakeholder consultation, and a thorough policy strategy.
2) **Policy Implementation:** Upon approval of a cluster policy brief or any related cluster engagement, advocacy or education document, WG1 will spearhead the S4P strategy's implementation, contributing to the policy briefs and supporting action plans through diligent oversight, timeline management, and resource allocation. Activities may include:
    a. **Stakeholder Engagement**: As a central point of contact, WG1 will contribute to the stakeholder list, especially with respect to policy makers and experts and will advise on stakeholder engagement activities.
    b. **Advocacy:** WG1 will champion policy advocacy internally and externally, promoting policy benefits, addressing concerns, and gathering support.
    c. **Education:** WG1 supports partners on the role of educating stakeholders about policy implications and their role in successful implementation.
3) **Policy Evaluation:** WG1 roles may extend to monitoring and evaluating S4P's strategy's effectiveness, identifying any gaps in policy goals, and recommending necessary changes.

The main tasks of each member in WG1 include:

- **Participation in Meetings**: Each member is expected to actively participate in WG1 meetings. This would involve preparing for meetings, revising protocols, contributing to discussions, and following up on action items.
- **Policy Development and Implementation:** Members should assist their project in the development and implementation of the S4P strategy. They might be tasked with conducting research, consulting with stakeholders, preparing policy proposals, or managing the implementation of approved policies.
- **Project Assistance:** Each member should guide their respective projects to utilise the S4P strategy effectively for advocacy and policy action. This would involve providing advice, resources, and support as necessary.
- **Policy Evaluation:** Members might be involved in monitoring and evaluating the effectiveness of the S4P strategy. This could involve collecting data, conducting assessments, and preparing evaluation reports.
- **Stakeholder Engagement:** Each member should play a role in engaging with stakeholders. They might contribute to stakeholder lists, communicate with policymakers and experts, or represent WG1 at stakeholder meetings or events.
- **Policy Advocacy:** Members should also contribute to policy advocacy efforts. This might involve preparing advocacy materials, speaking at advocacy events, or engaging with media or public officials.
- **Education:** Members might be tasked with educating stakeholders about the S4P strategy and its implications. This could involve preparing and delivering presentations, conducting workshops, or developing educational materials.
- **Staying Informed:** Finally, each member would need to stay abreast of relevant legislative or regulatory changes. This could involve monitoring news or policy updates, attending relevant briefings or seminars, and informing the rest of WG1 about any important changes.

Overall, these tasks are designed to ensure that each member of WG1 contributes effectively to the group's overall goals and responsibilities.

3 Science for Policy (S4P) Strategy

This deliverable, i.e. the Science for Policy strategy, is submitted at month 12 (September 2023) and resubmitted at month 24 (September 2024) after revision.

3.1 Objective

OBJECTIVE

Translate results for 'engagement' to 'co-create' 'tools for action'
to 'monitor' and address climate change and health in Europe and across the globe

The Climate-Health Cluster will 'communicate' research results for advocacy, policy and programme development, using the traditional approach of:

- scientific reports and presentations,
- policy and advocacy briefs,
- and the 'all-important' peer review publications.

However, the Climate-Health Cluster wants to go beyond these 'traditional' deliverables. For the Cluster, the **key words are 'implementation action'.** Therefore, we will take an implementation science approach. Implementation science focus for the consortium will be on the **'how'** our research results can impact policy and practice in the area of climate and health. We expect our research will be **'translated'** to policy and programmes at local, national, regional and global levels.

3.2 Approach

This translation will therefore focus on **four key approaches:**

1. **Engagement**
2. **Co-creation**
3. **Indicators & monitoring**
4. **Tools for action**

These approaches can be translated to Climate-Health Cluster actions. It is also noted that these four key approaches can overlap during implementation, and that engagement underpins all of these.
An analysis of stakeholder engagement approaches was recently published by CLIMOS which highlights that "Stakeholder engagement is always challenging, mainly in the scope of Innovation Projects, however, it is crucial for successfully delivering project results." Please see full discussion at:
https://climos-project.eu/stakeholder-engagement-is-crucial-for-the-success-of-any-innovation-project/

First, Engagement
What does engagement with stakeholders actually mean? These six projects are all defining 'engagement' to begin at the conceptualisation of the project and lasting beyond the project end, not a once-off stakeholder report. We will include early interviews and observations of living and working conditions of target audiences, including in some cases with the help of **citizen science** as will be used in *IDAlert* and *HIGH Horizons* to make sure we hear their stories. But we also make sure that we hear a wide range of heartbeats, since in *TRIGGER*'s citizen science concept, wearable devices play a major role.

Second, Co-Creation
All projects will be developing a variety of tools using a co-creation process, also called user-centered or human-centered design. We will **engage potential users** whether communities, mothers, health workers,

health professionals or government in the design of the programme to assure relevance, acceptability and appropriateness to context. Examples include *TRIGGER's "*Climate-Health Connection Labs" that are established to co-design policies and tools for improving management of climate-related health risks and the *BlueAdapt* Innovation Slams which are interactive co-creation workshops with businesses to investigate potential innovations in the *BlueAdapt* space. In addition, all of our projects are multi-country in order to include users from a variety of contexts.

Third, Indicators and Monitoring
Through engagement and co-creation, we will also develop **indicators for monitoring climate effects on health** across a spectrum of potential impacts. For the purpose of early-warning systems and prevention as well as monitoring long-term impacts of climate change on the health of populations. Examples include *HIGH Horizons* that is developing health indicators and early notification for climate effects on mothers and children and *CLIMOS* for vector control.

Fourth and final (and most important), Tools for Action
Knowledge and learning produced by research is valuable, but our **ultimate endgame is action.** Action to protect individuals, act to prevent impacts and adjust policy and programmes now, and in the future. All six projects plan to deliver tools for action, such as the development of innovative surveillance and forecasting tools to facilitate effective response to environmental health hazards such as heat stress or allergenic pollen in *CATALYSE,* or *CLIMOS* for innovative technical solutions for vector monitoring.

The six projects are taking a variety of approaches and activities related to S4P translation.
Annex 1 provides a description of related strategies and activities for each partner. This is provided as reference so the Cluster partners can explore overlap and synergies throughout the lifetime of the Climate-Health Cluster.
Several areas of overlap have already been identified which could be leveraged by the Cluster as a whole, and then be applied at cluster level. We have now completed our 1st policy brief and are currently developing a joint action plan to promote the brief, with the main target audience of the incoming EU EU Members of European Parliament (MEPs). In collaboration across Cluster WGs we expect engagement to translate joint cluster science results from Early Warning Systems and Indicator Development in the next year.

Examples of cross-cutting strategies/activities used among the various members of the Climate-Health Cluster which can be shared across members and potentially applied at cluster level:

- Platforms for stakeholders
- Policy briefs
- Co-participation, engagement, citizen science
- Policy scenarios
- Cost-benefit assessments
- Frameworks for S4P/Change
- Equity/Gender/Vulnerability.

For example, a joint cluster policy brief has already been developed and the cluster is leveraging project expertise in advocacy to develop a joint advocacy plan to promote the policy brief among policymakers such as incoming Members of European Parliament (MEP).

3.3 Target audiences

This section provides an overview of the target audiences for the Climate-Health Cluster. Five main stakeholder groups have been identified:

1. Researchers and academia
2. Climate, environment professionals
3. Policy Makers, Policy Experts, Funding Agencies
4. Civil Society, NGOs, Citizens
5. Healthcare Providers, Patient Organisations, Healthcare Industry

As the S4P primarily will target **Policy Makers, Policy Experts, and Funding Agencies**, we highlight here the relevant sections from the Cluster's Dissemination, Exploitation and Communication (DEC) document. Across the Cluster, partners are engaging and collaborating with multi-level stakeholders, such as the World Health Organisation (WHO), European Commission's Directorate-General for Climate Action, and local-level public agencies in the rural parts of Bangladesh. The S4P will take a co-development approach that integrates the different priorities of the stakeholders to ensure long-term impact (e.g., enabling policy changes) beyond the lifetime of the specific projects.

The cluster has to date engaged with the **European Climate and Health Observatory** with in-person meetings in Sweden and Belgium. The Observatory also commented on our first policy brief and we hope to engage them in our advocacy efforts with Members of European Parliament and also to connect with other Cluster WGs for example promoting cluster developed indicators for use across Europe and beyond. We plan to have regular engagement with the Observatory as a key European partner for dissemination of our results and advocacy to address climate impacts on health. We have already created a news item and added the policy brief to the European Climate and Health Observatory resource catalogue.

Table 1 identifies the audience of policy makers, experts and funding agencies, how they will benefit from the Cluster's outputs, which key message should be directed to them and what is the desired behaviour after they have been reached.

Table 1: Description of and Considerations for Climate-Health Cluster Target Audiences

Policy Makers, Policy Experts, Funding Agencies	
Benefits from Climate-Health Cluster results	• Research results can help inform better decision making and drive better policy making both for healthcare provision and climate change adaptation. • Improved strategies, models, frameworks, and software to help achieve existing policy goals
Engagement	A number of stakeholders in this group are aware of the projects' individual objectives and their impacts and support the changes driven by the group of projects.
Message	Tailored messages will be developed in the coming months and will be added in the next update of the deliverable at month 18, following the drafting of the Cluster's Scientific Strategy deliverable at month 12.
Objective	Support policymakers in making evidence-based decisions and understanding the underlying health, economic and social impacts of climate and health policies. This will lead to new, more effective policies.
Desired/expected behaviour	• Consult policy briefs produced by the Cluster and taking action on these • Use of Cluster results for new policy outcomes (tracked through references, citations, inclusion of partners in panels, committees, or advisory boards) • Attend Thematic workshops on policy translation, organised by the Cluster • Attend the Cluster final event
Potential Barriers	• Large number of stakeholders at multiple levels to be reached • Coordination across projects and stakeholders • Social Media is both an enabler and potential barrier in terms of misinformation found across the internet • Competing political interests

Within the overall framework of our target audience of policy makers, policy experts and funding agencies all projects expect to work across three levels of stakeholders:

(1) Global/Regional/EU,
(2) National, and
(3) Sub-national/Local.

Annex 2 provides an overview of the laboratory or field sites specifications at regional, country, and local levels which would be directly relevant for policy maker engagement. See Figure 1 for a map of Cluster project sites and partners by country.

Figure 1: Map of Climate-Health Cluster project and partner sites

Annex 3 provides a temporary list of key stakeholders, including policy makers, policy experts and funding agencies, which were identified by the Horizon Results Booster service delivery team[1], based on the target stakeholders list provided by each of the six projects. The cluster's **stakeholder list** is a living document. The Cluster's S4P activities planned to engage with the policy stakeholders are described in section 3.4.

3.4 Cluster S4P activities

The Climate-Health Cluster has developed a common Cluster communication and dissemination strategy which includes a targeted plan (activities, means and channels of communication) to reach the target audiences and the relevant stakeholder communities, with the purpose of raising awareness on the impact of climate change on health and promoting Climate-Health Cluster actions.

Within the context of the Cluster's 'Science for Policy' strategy, we have identified the following means of communication and dissemination as the most relevant in our current Dissemination and Communication plan:

1) **joint policy briefs,**
2) **thematic workshops,**
3) **event participation,** and
4) **a final Climate-Health Cluster event**.

For translation of science into policy, we will also consider specific **outreach activities to policy makers/target audiences**, including communities from our research implementation sites; and at EU level with the European Climate and Health Observatory. More detail can also be found in the Climate-Health Cluster Scientific Strategy and Dissemination, Exploitation and Communication Strategy.

3.4.1 Joint policy briefs

The Cluster will deliver three joint policy briefs. These briefs aim to feed into the decision-making process and outcomes at the EU level and (inter)national levels with evidence-based knowledge and inputs. The messages and key actions covered will be defined based on the Cluster's policy and scientific strategies. Working Group 1 will draft the policy briefs, together with the designated project lead (respectively TRIGGER, BlueAdapt and CATALYSE).

A common template was designed by Working Group 3 for all three policy briefs, e.g., branded content, target audience(s), reading level (scientific, lay audience), languages, length (2-4 pages). A coordinated dissemination campaign will be launched by the Cluster and all projects to maximise visibility.

The topics covered in each policy brief will be discussed in Working Group 1 at least four months before the submission deadline and will be initiated by the leading project. Table 2 presents the initial work plan for the first policy brief which was finalised in September 2024. Other joint policy briefs will be submitted by September 2025 and March 2027.

[1] One of the Cluster projects, CATALYSE, applied for Horizon Results Booster services, specifically for Service 1 "Portfolio Dissemination and Exploitation Strategy (PDES)" - MODULE A: Identification and creation of the portfolio of R&I project result. The final report dates from 30 March 2023.

Table 2: Work plan for policy brief 1

Climate-Health Cluster Policy Brief 1	
Topic	A brief using European examples, to raise awareness about climate change and its impact on health, with example actions which can be taken by policy makers (as a generic introduction to the topic and introduce the EU Climate-Health Cluster)
Target audience	European policy makers
Timing	• Joint policy brief to be ready by end March 2024 • Submission of the deliverable at the latest on 31 March 2024 • Active dissemination of the policy brief in June-September 2024
Dissemination plan	• Uploading of the policy brief on the Cluster's website • Communication about the policy brief through the Cluster's and projects' social media • Direct mailing/emailing to the key stakeholders identified in the stakeholder list • Direct mailing by the projects to their own networks and specific policy stakeholders at (sub-)national level • Direct mailing and call for action to policy stakeholders at EU and global level • Dissemination through participation in 'Science for Policy' events at international, EU and national level

3.4.2 Thematic workshops/trainings

The Cluster will organise four thematic workshops. The themes have been identified and the following dates have been planned for their organisation: February 2024, September 2024, September 2025, September 2026. The first thematic workshop was organised in-person alongside the conference on "Research perspectives on the health impacts of climate change" in Brussels in February 2024, but we expect the other workshops to be online. **The second planned workshop in Autumn 2024 is specific to translating science to policy** corresponding with the action plan for our first cluster policy brief so these thematic workshops are also relevant to this plan as they can inform S4P action. While initially these workshops will focus on scientific content and training for internal Climate-Health Cluster members, as major results become available in later project years, public facing webinars will also be planned.

3.4.3 Event participation

Each of the six projects will regularly propose international and European events of interest in which the Climate-Health Cluster could be represented and promoted. For further communication and dissemination of the Climate-Health Cluster's activities and results related to science for policy, we plan to contribute to major EU and international policy events. The Cluster will actively look for policy-related events when research results of the projects become available for translation into policies, but the first opportunities are the conference on "Research perspectives on the health impacts of climate change" in February 2024 and the COP29 Climate Summit (European and/or Health Pavilion) at the end of 2024.

3.4.4 Final cluster event

A final event will be organised towards the end of the Cluster's lifetime in 2026-2027 to convey key results and messages to stakeholders such as national, EU and international policy makers and regulatory communities, NGOs, industry, and the scientific community. This event will be organised by the Cluster in close collaboration with DG RTD. Working Group 1 will ensure that at least one session will be specifically targeted at 'Science for Policy' translation and thus at policy makers, policy expert and funding agencies.

3.4.5 Outreach to policy makers and funding agencies

Apart from the above activities and deliverables already identified in the Dissemination and Communication plan, the Cluster considers specific outreach activities to policy makers, policy experts and funding agencies as listed in Table 3.

Table 3: Example outreach activities by the Climate-Health Cluster

Cluster outreach activities to policy makers, policy experts and funding agencies	
European Climate and Health Observatory	• Sharing of the Cluster's research results with the European Climate and Health Observatory and inclusion in the Observatory's Resource Catalogue. • The Observatory is requested to comment on policy briefs and all products from both the cluster and individual projects will be shared with the observatory. • Regular meetings with the Observatory will be held in hopes of contributing at the appropriate contact points.
Horizon Europe mission on Adaptation to Climate change	• Active dissemination and presentation of research results with the Horizon Europe mission on Adaptation to Climate Change
European Parliament	• Active dissemination and presentation of research results with the Committee on the Environment, Public Health and Food Safety (to be confirmed)
The Lancet Countdown on Health and Climate Change	• Sharing of the Cluster's research results with the Lancet Countdown on Health and Climate Change

3.4.6 Citizen Science and Engagement

Another important stakeholder group is the communities at the research sites. Most of the projects are using some measure of community engagement or co-creation over the lifetime of their project. Examples include: photovoice and co-creation of messaging or innovation slams. We expect this audience to be engaged from the beginning of the projects through final presentations of results to local communities from the research sites.

Jointly, the Cluster partners will share learnings from these engagements for cross-learning for future S4P engagement at local/community levels. Sharing of cross-learnings at the cluster level could include but are not limited to joint presentations at scientific meetings, webinars, and joint publications.

3.5 Work plans for the Science for Policy Strategy

Cluster work plans highlighting items relevant for S4P Strategy are outlined in Table 4.

The Cluster started in October 2022 and ends in March 2027. For some activities clear deadlines have been set. Activities such as event participation and outreach will be scheduled continuously (see blue colour).

Table 4: The cluster's S4P work plan

Activity	Year 1 (Oct 22 – Sept 23)	Year 2 (Oct 23 – Sept 24)	Year 3 (Oct 24 – Sept 25)	Year 4 (Oct 25 – Sept 26)	Year 5 (Oct 26 – March 27)
S4P Strategy Development	September 2023				
Joint Policy Briefs		March 2024	September 2025		March 2027
Thematic Workshops & Trainings		February 2024; September 2024	September 2025	September 2026	
Event Participation					
Final Cluster Event					To be decided
Outreach to Policy Makers and Funders					
Citizen Science & Engagement					

3.6 Evaluation

WG1 will be responsible for monitoring the implementation of this S4P Strategy. The evaluation will focus on monitoring and sharing of S4P related deliverables and reporting on joint cluster deliverables and outcomes described in 3.4. Consistent with the 'implementation science' approach described above, we will measure final success/impact as findings of the research being translated into at least one policy and/or programme change emanating from the cluster as a whole, and also within each project topic, e.g. maternal, newborn and child health, coastal oceans, vector-borne diseases. This could be at any level: local, national, EU/Regional or Global.

The role of the cluster is both for synergy and to amplify science emanating across the projects by supporting each other, to add value which might not be possible for each individual project on their own.

Annexes

Annex 1: Cluster projects' individual science for policy plans

The individual 'science for policy' plans of the six projects are extracted from the individual project grant agreements.

BlueAdapt

For policymakers, BlueAdapt will develop tools to help understand the implications of risks arising from bacterial and viral pathogens in our coastal waters and for assessing potential strategies to adapt to the risks. E.g., at the national level in the UK we will examine the potential for apps to influence behaviour and, in the Netherlands the application of an early warning system. At the local level, we will develop tools that will enable policy makers to tackle the complex, wicked problem of addressing the climate change risks associated with these pathogens. Balancing the needs of tourism, fisheries and public health is not a simple task, but through the development of tools to help local officials understand the risks through health impact assessment and economic valuation, BlueAdapt will provide the basis for evidence-based policy action. BlueAdapt will co-create these tools in Work Packages 4 and 6, to ensure they are designed in such a way as to be usable by key targets including consultants, officials in local authorities (including those in public health) and in environment ministries.

In Work Package 8, policy workshops will be conducted at both member state level in selected countries and at European level. These will bring together stakeholders from industry, from civil society and from the policy community to: a) inform them of the key results of the BlueAdapt project; and b) assess their reactions and garner how this knowledge may best be put into action in policy terms. Such co-creation of policy implications is necessary as the issue of coastal pathogens cuts across a number of sectors and ensuring each has voice in framing policy actions may be important in the later implementation of such policies. For example, data will be generated on the impacts of compounds on the Water Framework Directive Priority Hazardous Compound Watch List, relating to their ability to drive the evolution of AMR in aquatic environments, increasing the probability of the emergence of new AMR pathogens and exacerbating human transmission risks in coastal environments. These risks are highlighted in European and UK AMR Action plans which highlight the extent of knowledge gaps relating to the environmental dimension of AMR.

One of the key benefits of BlueAdapt will be to develop appropriate policy around the management of bacterial and viral pathogens in Europe's coastal waters. With the emergence of COVID-19, we have seen how emerging viruses can spread quickly and cause significant economic and societal disruption. Through a better understanding of the risks of such pathogens under climate change, BlueAdapt may yield significant benefits. The next pandemic threat may emerge from coastal waters or be viable in, and transmissible through, aquatic systems– and Europe needs to have a good understanding of these risks. A scenario where SARS-CoV-2 was infective in human waste, surface waters and receiving coastal waters would have altered the entire pandemic response necessary to safeguard public health.

BlueAdapt will feed into a number of existing policy areas – including coastal and marine spatial planning, future pandemic preparedness, managing the silent AMR pandemic, bathing water quality, food safety, and occupational and public health. We will build on the extensive networks in the BlueAdapt project and use social media extensively to communicate the key findings to different audiences. This will help ensure that BlueAdapt delivers in terms of increased awareness of the risks of bacterial and viral pathogens in Europe's coastal waters and in so doing leads to a reduction in the risk of mortality and morbidity outcomes from exposure. Developing appropriate metrics that may determine appropriate threshold levels for bacterial and viral pathogens originating from wastewater and agricultural pollution in coastal waters may be one example of how BlueAdapt could have wider influence. In addition, policy briefs developed as part of Work Package 7 will be supplemented by BlueAdapt scientists taking part in

activities which influence policy (e.g. feeding in to select committees, engaging with policy forums at both national and international level) and working alongside local level politicians to ensure that they also understand the implications.

For industry, there is the potential for innovation. Co-creation workshops (The BlueAdapt Innovation Slams) will be held as part of Work Package 8 to allow for the identification of novel solutions to the risks associated with bacterial and viral pathogens in our coastal waters. This may include e.g. novel fabrics to reduce exposures, novel technologies to mitigate emissions of pathogens to coastal waters, novel detection technologies or use of commercial apps as warning systems. This list is clearly not exhaustive, but by bringing together experts from BlueAdapt, industry and representatives of civil society, it is hoped that innovation slams may provide a mechanism to facilitate innovation in this topic area.
Public engagement is at the core of BlueAdapt – with this proposal having been commented on by representatives of the public in its development. One of the critical elements that the Health and Environment Public Engagement group at the University of Exeter raised was the need to consider the potential benefit for coastal communities from this research. Ensuring the sustainability of seafood, the quality of bathing waters and good health for those in coastal areas is an important aspect of BlueAdapt.

We will work with the local communities in each BlueAdapt case study to help us better understand the implications of inaction and of adaptation options to meet the risks associated with coastal pathogens. Public facing dissemination materials will be translated and tested by representative groups in the case study sites and these representative groups will also provide inputs to the refinement of the methodology in each case. This will help to ensure the relevance of BlueAdapt for coastal communities and to ensure effective two-way science communication. Social media (including Twitter and LinkedIn) will be used to widen the community engaged with the research.

In terms of how we hope policymakers will benefit: *Policy makers - better understanding of the need for adaptation to the risks of climate change associated with coastal pathogens (both bacterial and viral). Understanding of the costs and benefits of actions.*

Summary:

- Stakeholder workshops, surveys and interviews, for instance on early-warning modelling tool (with industry, regulators and policymakers) to gather feedback on the risk reporting system, on our extended One Health conceptual framework, and to co-design a toolkit to aid in policy making around the risks of coastal pathogens and impacts of climate change on these risks, including early warning systems
- Qualitative research (workshops, interviews, etc.), with stakeholders across our Case Studies (UK, Italy, Netherlands, Spain, Poland) – for instance workshops in Cornwall (UK) to identify potential adaptation strategies to coastal pathogen threats arising from climate change, and citizen survey on One Health Risk perceptions in Plentzia (Spain) to discuss expected impacts and one Health adaptation with local stakeholders
- Participatory approach involving end-users, for instance in Italy to co-develop/apply a new GIS Tool (the Potential Spreading of Pathogens Index) to evaluate the accumulation of pathogens in the food chain, and in Plentzia by developing a pilot One Health living lab to act as a living knowledge platform for discussion and collaboration
- Policy workshops – to co-create policy briefs and messaging (two EU-level workshops & several local/national ones)
- BlueAdapt Innovation Slams – interactive co-creation workshops with businesses to investigate potential innovations in the BlueAdapt space
- Definition of indicators and analysis to provide insights into how climate change and other environmental stressors impact pathogen survival, evolution and ecology. Definition and collection of climate indicators/data (historical and projected), spatial data (GIS layers of urbanisation, tourism activity, land use, beaches, shellfish harvesting areas, bathing waters, health data, etc.) and environmental data (tidal forcing data, bathymetry, water flow and quality, treated and untreated wastewater discharges) necessary for the early-warning model

- Development of a Common analytical framework to assess our case studies, which will include identification of common One Health indicators
- Visual modelling tool to determine how pathogens in coastal environments are impacted by climatic and environmental stressors, and to identify high risk areas in terms of human pathogen exposure. The model will be coupled to environmental data streams and public health data as well as linked to climate predictions, to create 'real-time' surveillance/alert system and be able to forecast public health risks in response to future urbanisation, land use, climate change and extreme weather event scenarios. The modelling will be open source, easily translatable to and implementable in other EU regions.
- Enhancement and evaluation of app for early warning of pollution in coastal bathing waters in the UK
- Development an application of new GIS tool (Potential Spreading of Pathogens Index) in Italy
- Toolkit to aid in policymaking (Decision support tool) around the risks of coastal pathogens and impacts of climate change on these risks, including early warning systems
- Three policy briefs on key BlueAdapt topics (topics still to be defined) and a Report on Policy Recommendations
- Online training course on coastal pathogens and climate change and BlueAdapt Summer School
- Materials for training of health professionals on climate change and health risks associated with coastal pathogens
- Final conference

Workplan & Deliverables:

- The most relevant activities that have related deliverables are as follows:
  - Report on modelling approaches to determine climate change impacts on pathogens in coastal environments (Nov. 2024)
  - Draft Platform for One Health living lab (March 2025)
  - Workshops on scoping of decision support tool (March 2025)
  - Five interactive stakeholder workshops held in the context of the modelling (by March 2026)
  - Report on BlueAdapt models and findings of interactive stakeholder workshops on the use of advanced modelling techniques for effective public health surveillance (May 2026)
  - Report on Policy Recommendations (Sep. 2026)
  - Final conference (likely June 2026, in any case before Sep. 2026)
  - Final policy toolkit (Sep. 2026)
  - Report on online training course and innovation slams (Sep. 2026)
  - Materials for training health professionals (Sep. 2026)
- Timings for some of the policy-focused workshops & engagement activities are still to be defined – most are likely to take place in 2025-2026.

CATALYSE

We will generate new knowledge about how key stakeholders perceive and engage with evidence on the health impacts of climate change, including differential impacts by gender. This work forms the WP4 of our project CATALYSE. We will: i) review the scientific literature regarding stakeholder perceptions and engagement with health impacts of climate change induced environmental hazards; ii) identify key stakeholders from within and beyond the USG (4.1); and iii) conduct focus groups and interviews with key stakeholders. Information collected in task 4.2 will inform tasks 4.3-5 and overall project communication plans.

We will investigate how evidence on health impacts of climate change induced environmental hazards is used in policy making. To do this, we will conduct in depth analyses of existing polices related to climate change and health in three European countries. The analysis will consider how different types of scientific evidence were used by policymakers in these policy processes in response to the various constraints and

opportunities. We will examine the following three policies: 1) the commitment by the UK's National Health Service to become the world´s first carbon net zero health service; 2) Poland's pledge to phase out coal; and 3) Portugal's community-based adaptation strategy for wildfires. Each of the analyses will consider how scientific evidence on climate change and health was used to inform the design, adoption, and implementation of these policies. We will pay particular attention to the use of evidence related to gender and vulnerable groups in these policy processes.

We will examine how communicating and framing evidence on the health impacts of climate change induced environmental hazards affects engagement, behavioural change, and support for climate policies across different types of actors. The analysis will be based on data collected through survey experiments (i.e. survey respondents randomly assigned different climate change messages), interviews, and focus groups. The precise frames that we will test will be shaped by the findings produced in 4.2 and 4.3 (together with research findings from the wider project) and will include testing how different health impacts of climate change affect engagement; whether an emphasis on threats or opportunities increases engagement; and the impacts of presenting wider trends compared to a focus on individual narratives. We will focus on three key audiences: policymakers, the health community, and the general public. The survey experiments and interviews/focus groups will target key stakeholders involved in the wider project from across Europe (e.g., EEA, CityLab Berlin, KLUG), and will also focus on the general public in five European countries (Bulgaria, Germany, Greece, Spain, UK).
This new evidence will be used to tailor communication through the online platform in 4.5.

Summary:

- General consultation/knowledge sharing/advisory throughout the project
- Help gain access to study populations (local government, policy makers, vulnerable groups, healthcare workers, etc.,)
- Help facilitate Theory of Change exercise (WP4)
- Design of online platform and target users (WP4)
- Evaluate policy recommendations that result from the project, the feasibility/barriers of implementation
- Understand local views/acceptability of climate mitigation policies in public policy realm, how policy makers/general public engage with information
- Communication/dissemination of project results to the public
- Assess validity/practicality of proposed guidelines that result from project
- Help to ensure that gender is properly taken into account in all WPs
  Help to ensure that vulnerable groups affected by climate change/heat illness are appropriately represented/consulted throughout the project (WP4)
- Contribute to the creation of EWS, indicators frameworks (WP1)
- Help create policy scenarios, quantify co-benefits/harms, cost-benefit analysis (WP2)
- Help with survey formulation (WP4)
- Formulation of interview and focus group guides, execution of interviews
- Testing of online platform that will come out of the project with end-users
- Framework development (WP5)
- Help design and develop training materials/guidelines in health community, help facilitate/take part in trainings (WP5)
- Participation in Theory of Change activity on decarbonisation of the Catalan health sector
- Development a framework and data repository of indicators to track health impacts and actions to address climate change induced environmental hazards.
- Generation of health-related indicators of climate change adaptation.
- Generation of health-related indicators of climate change mitigation.
- Generation of health-related indicators of economics and finance related to climate change.
- Heat-Health early warning system
- Allergic rhinitis early warning system

- Development of a sophisticated, multi-functional digital platform containing data and tools to inform, empower, and support advocacy and decision making. The platform will be designed to appeal to diverse audiences including citizens, civil society organisations, policy and decision makers as well as journalists.

Workplan & Deliverables:

- Establishment of User-Stakeholder group (October 2022)
- Report on perceptions and engagement (February 2024)
- Report describing policy scenarios (August 2024)
- Report on evidence in policy (August 2024)
- Report on EWS of allergic rhinitis (August 2025)
- Framework for adaptation in health systems, V1 (August 2025)
- Report on mitigation in health systems (august 2025)
- Report on heat-health EWS (August 2026)
- Workshop on models of cycling (August 2026)
- Report on digital surveillance tool (August 2026)
- Implementation of short course (February 2027)
- Online platform, final version (August 2027)

CLIMOS

CLIMOS aims to assist mitigation of climate- and climate change-induced emergence, transmission and spread of vector-borne and zoonotic pathogens based on Eco-health and One Health approaches. This will be achieved by quantifying climate and environmental-related drivers of sand fly vector populations and the sand fly-borne diseases (SFBDs) across Europe.

The project will provide an Early Warning System (EWS) and decision support frameworks for more accurate climate and health modelling, prognosis of infection risk and range expansions, and adaptation options. Socio-economic analysis and risk assessments will inform decision support providing social and cost-benefit evaluations. Towards these goals, an open access interactive CLIMOS online platform will be developed containing data on vector and SFBD species geography and up-to-date monitoring, climate, environment, and mathematical algorithms. The accompanying educational platform will enable evidence-based mitigation decision-making by social, environmental and financial stakeholders, public bodies and policy makers.

CLIMOS will generate science-based predictions, actions and policy-relevant recommendations to mitigate climate change-induced emergence and spread of SFBDs, by providing: precision vector and infection surveillance methods and networks across 10 countries; creation of big data time series (on vectors, disease, micro and macroclimate, environment and health, and on infection risk) to be available also for use at the EU Climate and Health Observatory, and as European Commission ISA JoinUP open-source tool for public and healthcare; new interoperability data ontologies (Open Biological and Biomedical Ontology [OBO] and Open Geospatial Consortium [OGC] for SFBDs and climate); new innovative technical solutions for vector monitoring (new trapping solution and EWS components); and at least 30 peer-reviewed open access publications, 2 policy reports, and diversity of public engagement materials.

Summary:

- Establishment of an early warning system (EWS) for sandfly triggered health infections and potential diseases, including all endemic sand fly vectors and the main pathogens (Leishmania parasites and Phleboviruses)
- Generate predictions to assist policy recommendations
- Provide interactive maps for risk management

- Carry out adaptation cost and benefit assessments
- Combine systematic vector surveillance, field experiments and pathogen identification with regional microclimate and global scale climate and environment modelling capabilities, and observation systems (such as COPERNICUS)
- Develop predictive models as a software and hardware platform
- Develop a low-cost standardised trap with semi-chemicals compounds for detection and fast screening of sand fly species, to be used with environmental devices for climate monitoring
- Development of suitable **indicators and monitoring mechanisms** to assess the health-relevant outcomes of climate policies and actions
- **Co-creation** approach with interested stakeholders and local communities, the private and public sector (public authorities, surveillance organisations, insurance), specifically to help translate the climate, vector and health information accrued into customised decision support tools
- Investigate the adaptation and mitigation policy measures outside the health sector
- Development of a low-cost semi chemical-based trap for in-field monitoring of sand flies
- Undertake field studies in 10 countries (France, Spain, Italy, Austria, Germany, Czech Republic, Israel, Croatia, Turkey and Portugal)
- Conduct socio-economic assessment of losses due to SFBDs for individuals and the society, and the benefits of implementing different adaptation measures
- Development of tools for health impact and cost-benefit assessment of climate change adaptation and mitigation measures
- Development of climate and environmental models of sand fly activity and SFBDs incidence and spread, to enable reliable prediction and forecasting
- Co-design scenario development for health and other impacts of effects of climate and environmental change to SFBDs
- Engagement with government, public, and private healthcare authorities from the consortium, as well as other stakeholders including policy makers, surveillance organisations, veterinarians, public and citizens to validate the CLIMOS results in 4 (four) cross-border pilots
- In consultation with stakeholders CLIMOS will provide development of training materials and guidelines to educate relevant actors, both on how to use the solutions, and how climate change impacts health
- Development of (at least two) policy papers to transfer information to stakeholders and policy makers, and to the interested experts, health professionals, and the public
- 3 two-day virtual and physical workshops and 5 meetings with local communities/ CSOs
- At least 10 semi-structured interviews to identify stakeholder requirements
- Engage with 3 Public health authorities to implement ambitious policies and programmes
- Publications in peer-reviewed journals and conferences, provided as open-access
- Online media presence: LinkedIn and Twitter and creation of CLIMOS website
- Prepare dissemination and communications materials, include a common graphic approach to materials, two videos, quarterly newsletters, press releases, blogposts, journal articles, webinars, conference and workshop presentations
- Special edition in a peer-reviewed journal on the climate-health topic

Workplan & Deliverables:

- Establishment of an External Scientific Advisory Board (ESAB) to assist scientific and technical management of the project
- Development of 3 Spatial and temporal sand fly databases (M13, 25, 30)
- Development of 3 Datasets on Leishmania and Phlebovirus detection in sand flies and dogs (M14, 26, 32)
- Development of a semi-chemical-based trap available for testing in field conditions (M25)
- New recombinant antigens available for testing as risk markers of sand fly exposure (M25)
- System requirements and functional specification (M12)
- Data collection, data processing models and algorithms Data collection, data processing models and algorithms (M30)

- Parameters, models and projections with climate change, with error correction (M32)
- Development of 3 EWS report with system specification (M18, 26, 35)
- Report on Scenarios development with documentation, namely executive summaries and infographics (also for policy) (M28)
- Definition of parameters of the socio-economic analysis (M35)
- Dissemination plan and communication activities, including project website (M3)
- Training documentation and recommendations (M18) to distribute to stakeholders, namely to veterinary health professionals and policy makers at regional and EU levels
- Report on the engagement and clustering activities, and events (M28)
- Development of three policy briefs (M36)
- EWS smartphone and web applications for prediction of occurrence of sand flies, pathogens and SFBDs, with decision support capabilities

HIGH Horizons

HIGH Horizons objectives all include components of science for policy and programmes. Examples of specific activities relevant for S4P include:

Building networks in the EU, globally, and Eastern and Southern Africa, through leveraging the Advisory Board and WHO Expert Group to amplify dissemination and exploitation of project findings. The WHO Expert Group will consist of approximately 25 global, EU, and national climate change and MNCH technical and programmatic leaders. While this group plays a critical role in guiding the process of indicator selection and in setting thresholds for the EWS, they have a major part to play in the dissemination and diffusion of the project findings. Representatives of existing WHO measurement and indicator advisory groups, including Mother and Newborn Information for Tracking Outcomes and Results (MONITOR) and Child Health Accountability Tracking (CHAT), will ensure harmonisation and integration of the results into their portfolios of work. Expert Group members will be selected to achieve diversity across geographical regions, gender and technical expertise. As results hold particular relevance for the EU, we will include EC, WHO EURO representatives, experts from different climate zones in the EU, and several EU policy groups such as HEAL and the EU Public Health Association. It will be important to include global and national policymakers and global experts to allow for reflections on specific country needs and adaptations. Implementing partners and donors may be invited to participate as observers, as they will play a major role in subsequent dissemination and diffusion of the project.
We have selected an external Scientific Advisory Board containing key influential global figures in the field. The Board includes a policy partner (HEAL) and covers diverse geographical regions and disciplines. The Board is tasked with amplifying the impacts of the project. This includes 1) making recommendations on advancing the strategic direction of the project; 2) recommending changes to optimise the effectiveness and impact of the project; 3) initiating regular reviews and updates in the work plan and dissemination strategy; 4) recommending and maintaining links with external organisations; and 4) facilitating partnerships and access to networks to increase the activity and impact of the project.

Taking advantage of the dissemination strengths and infrastructure of the international organisations. Including WHO, a key Global and EU policy partner, as an integral member of the project, aims to maximise our potential impact. WHO is the UN agency charged with establishing international reference materials, standards and guidelines for health. Including WHO is thus vital for effective dissemination and uptake of indicators. The organisation has committed to translating the project outputs into global guidance and disseminating these through the organisation's powerful EU, regional and country networks. WHO and UNICEF, together with UNFPA, will also exploit the annual indicator reports developed by the project to heighten awareness of the implications of climate change for MNCH. We will also mainstream our work on climate change measurement into global structures involved in measuring MNCH outcomes, which have yet to address climate change within their portfolio of work

In this project, having guidance issued by WHO, UNICEF, UNFPA and WMO will provide a strong impetus for EU, global and country uptake of the indicators and of the monitoring mechanisms we propose. Furthermore, links of consortium partners with key MNCH groups like MONITOR and CHAT will facilitate integration of project outputs into global maternal, newborn and child health strategies including the Strategies towards Ending Preventable Maternal Mortality (EPMM) and the Every Newborn Action Plan (ENAP). These are key vehicles for assisting regional- and national-level policymakers to integrate the indicators into their national commitments, strategies, and health information systems.

Networking with key global, EU and African partners. Outreach and networking will ensure the presence of the HIGH Horizons project in key events at which the target stakeholder groups are present. Linkages will be fortified with the Lancet Commission on Climate Change, and the European Centre for Environment and Health. We already work closely with several members of the Lancet Commission and included the Commission Chair in our Advisory Board. Networking, including through joint conference sessions to present results, will be conducted together with several professional associations, including the International Confederation of Midwives (ICM) and the International Federation of Gynaecology and Obstetrics (FIGO), the Council of Neonatal Nursing (COIN), as well as professional health worker associations in Sweden, Italy, Kenya, Zimbabwe and South Africa. Other implementing partners such as Save the Children, JHPIEGO and World Vision International, as well as donor organisations including USAID, SIDA, and the Bill and Melinda Gates Foundation, will also be contacted when the final indicators have been selected and are ready for widespread implementation.
The principal mechanism for networking in the African region will be through the CHANCE network established in the Horizons CRA ENBEL project. It serves as a Regional Coordination and Support Mechanism (RCSM) to coordinate climate policies and networking in the East and Southern African regions. From the onset and throughout the project we will integrate the HIGH Horizons activities into all meetings of the CHANCE network, aiming to influence the key national and NGO policy leaders who have joined the network. The network is a flexible mechanism, focusing on the areas in which the national governments require support, and which benefit from collaboration. The network includes national level policymakers, key NGOs, and civil society leaders in several countries in the sub-regions. The network has four aims: 1) To network and develop synergies in East and Southern Africa; 2) To facilitate knowledge exchanges, learning and cooperation; 3) To provide technical support for national or regional applications for funding directed at programme activities or research; 4) To support and inform policy processes. The meetings focus on heat-health concerns, including measurement of burden and effectiveness of adaptation interventions. The HIGH Horizons team will ensure that specific attention is given to addressing climate change and health among pregnant women and children.

Exploiting the ClimApp technology. There will be major benefits in strengthening the ClimApp brand. The principal target audience groups for the ClimApp include 1) pregnant women and mothers of infants, who have smartphones; 2) health workers tasked with contacting pregnant women and mothers of infants when dangerous levels of heat are forecast; 3) health workers, to enable them to protect themselves and their patients, and 4) public health authorities and surveillance organisations. HIGH Horizons will involve these populations in co-creation of locally relevant messaging through the use of such mechanisms as Photo-Voice allowing women to interrogate their own environments and suggest actions to be recommended what extreme heat events are expected.

Optimising communication and social media. Answers to the questions addressed in this study will constitute a major step forward in developing interventions to reduce vulnerability and build resilience against extreme heat. Achieving these impacts necessitates communicating the knowledge produced by the project and disseminating its policy implications through audience-relevant, open, and easily accessible means. The project's success rests on its ability to generate and disseminate outputs that are relevant and responsive to the needs of the community. Communication targeted at the public is especially critical given the rapidly escalating sense of anxiety about climate change in the EU and globally and the concomitant demand for actionable information on the topic. The magnitude and burden of heat on health outcomes remains underappreciated by the public, and it is thus beholden on projects such as

HIGH Horizons to demonstrate these links and communicate these effectively.

Summary:

- Approved TOR and establishment of WHO Expert Advisory Group
- Approved TOR and establishment of Scientific Advisory Board
- Publication policy
- Heat-health analysis reports from Italian, Greek, Swedish, Kenyan and South African data
- Heat-health attribution report
- Updated systematic reviews
- Assessment of Environmental exposures in health facilities
- Health workers impact studies
- Carbon emission assessment report
- Report on predictive heat warning thresholds
- Developed ClimApp EWS prototype
- Report on photo voice sub-study, and the locally adapted and optimised messaging
- Report and Tool for modelling of alternative mitigation interventions
- Evaluation of experiences and effectiveness of EWS and messages targeting pregnant and postpartum women, and infants
- Evaluation of experiences and effectiveness of adaptation and mitigation in health facilities
- Analysis of cost-benefits of heat adaptation interventions on workers' health and productivity
- Tools for cost-benefit analyses of interventions in healthcare settings
- Dissemination, exploitation and communication plan and strategy
- Project logo, social media and online presence established
- Report from contributions to CHANCE Network meetings
- WHO/UNICEF/UNFPA/WMO publication on global and national indicators for monitoring impact of heat on MNCH
- Set of risk assessment tools and communication materials for public authorities and professional associations
- Set of Policy Briefs and other knowledge products targeted at EU

Workplan & Deliverables:

- Establishment of Scientific Advisory Board (December 2022)
- Project Website (December 2022)
- Dissemination, exploitation and communication plan and strategy (December 2022)
- Project logo, social media and online presence established (December 2022)
- Establishment of WHO Expert Advisory Committee (April 2023)
- Health workers studies (March 2024)
- Photo-voice project with pregnant women and mothers with young children (March 2024)
- Report from three CHANCE meetings (September 2025)
- WHO/UNICEF/UNFPA publication on global and national indicators for monitoring impact of heat on MNCH (September 2025)
- Set of risk assessment tools and communication materials for public authorities and professional associations (September 2025)
- Set of two Policy Briefs and other knowledge products targeted at EU (September 2026)
- Dissemination meetings in all project sites with local stakeholders (September 2026)

HIGH Horizons - Expected Outcomes and Contributions

N	Expected outcomes	Contribution to outcomes
1	**Global and EU climate policies**, the EU Observatory for Climate and Health, and the Green Deal activities are supported with **up-to-date scientific evidence**	1) WHO, UNICEF and UNFPA guidance on indicators of climate change in MNCH to support global and EU climate policies 2) A model of integrated adaptive-mitigation packages to support the health sector components of the EU Green Deal 3) Updated data and improved indicators of morbidity from climate change to support the EU Observatory for Climate and Health 4) A suite of systematic reviews, updated bi-annually and published in peer-reviewed journals guide EU and global climate policies 5) Evidence to guide climate policies on an integrated cost-effective approach to adaptation-mitigation in health facilities
2	Public authorities and surveillance organisations have access to **predictive and early warning systems for direct and indirect health impacts** caused by climate-change induced events	1) Open Science predictive EWS tailored to risk strata in high-risk groups, with the predictive ability that is progressively refined, based on transparent assumptions, architecture and supervised machine learning 2) Open Science EWS for health workers, predictive of heat-induced negative wellbeing and health impacts
3	Public authorities, employers and risk managers draw benefit from **user-friendly tools for integrated risk assessments** and **cost-benefit analysis of climate change mitigation and adaptation actions** to support decisions across policy sectors	1) User-friendly tools developed, and field tested for health impacts and cost-effectiveness assessments of integrated-holistic adaptation and mitigation packages in health facilities 2) Tools developed for integrated risk assessments of the living and working environments for key high-risk groups and health workers 3) Tools developed for assessing cost-effectiveness of pivotal adaptation measures, including surveillance systems, EWSs and building modifications
4	Public and private health authorities and care providers use **guidelines and training materials produced to adapt and innovate health systems and practices** to prevent and mitigate climate change related health risks in cost-efficient and effective ways.	1) Global and EU public health authorities use WHO guidelines on climate change indicators 2) Private health authorities access guidelines for developing EWSs for high-risk groups 3) Guidelines and training materials on adapting health facilities to prevent heat impacts on health workers and to minimise emissions 4) Training materials to support an integrated adaptation-mitigation strategy for health and other services

SPECIFIC NEEDS	EXPECTED RESULTS	D & E & C MEASURES
1. Global and EU climate change and health indicators are required that cover a wide range of risk groups, health conditions and settings 2. The potential contribution of data science methods to climate change and health remains to be realised. 3. Interventions to reduce impacts of heat on pregnant women and infants are poorly developed worldwide, and current analyses are mostly restricted to documenting heat-health associations, leaving major knowledge gaps 4. Comparisons are needed across settings in the relative burden of heat exposure and cost-benefits of adaptive and mitigation actions 5. EWS need to be grounded in actual risks for different sub-groups in order to have adequate sensitivity and specificity 6. Health facilities are poorly built in many settings, providing little protection during periods of high temperatures and often responsible for large carbon emissions	1.Successful multi-centre demonstrations of innovative solutions to measuring heat-health impacts, stratified by risk groups and tracked over time 2. Agreement among WHO and key stakeholders on suitable indicators for tracking the burden of and climate action responses to extreme heat in priority population groups 3. Proof of feasibility of repeated measurement of regional- or district-level indicators of climate change impacts 4. Time-series statistical analyses, including cross-country comparisons of indicators, heat-health burdens and EWS effectiveness 5. Influential climate change networks in the EU, and in East and Southern Africa 6. New databases and datasets 7. Policy recommendations 8. Three PhD students trained	**1. Dissemination towards the scientific community**: Scientific publication with the results of each study component. Participating at conferences, and in EU and international technical working groups. Developing a platform of real-time indicator dashboards; Participation at EU and WHO meetings to disseminate the results and maximise the visibility of the project, especially the indicators and EWS **2. Communication towards citizens:** social and other forms of media **3. Exploitation of a new technology**: personalised EWS app for pregnant women, infants and health workers available on Google Play and Apple App Store; potential for the app to be commercialised through applications such as Samsung Health, which track daily life, contributing to wellbeing such as physical activity, diet, and sleep, but not dangerous heat exposure.

IDAlert

IDAlert - Dissemination, Exploitation and Communication measures

SPECIFIC NEEDS	EXPECTED RESULTS	D&E&C MEASURES
Monitoring and tracking transmission and emergence of climate-sensitive infectious disease. COVID-19 has exposed the inadequacy of preparedness and response to emerging infectious diseases. There is a need to prevent large scale outbreaks using a One Health approach. The convergence of two compounding risks, COVID-19 and climate change calls for better adaptation and early warning and response systems. The cascading risks from climate change in Europe and elsewhere exposed the need for long-term policy interventions. Tools for assessing unintended consequences of direct and indirect – upstream – policy and action for the prevention of infectious diseases transmission and emergence in Europe Novel tools and evaluation of transformation for decision-making and planning for timely responses, policy, and implementation strategies Indicators of climate change adaptation and mitigation policy in response to preventing climate-sensitive infectious diseases Need for indicators of response capacity of public health systems Understanding the heterogeneous societal impacts of increase in climate-sensitive infectious diseases	Co-development of a novel set of pan-European indicators tracking climate-sensitive infectious disease and policy responses in relation to the animal, environment, and human nexus IDAlert aims to develop effective strategies to tackle hazard, exposure, and societal vulnerabilities, to offset synergistic amplification of compounding risks (e.g. COVID-19). IDAlert will develop indicators for hazard, exposure, and vulnerability, to guide comprehensive climate policies. Bespoke early warning systems: IDAlert monitoring efforts complement passive surveillance by triggering active surveillance that identifies symptom onset in the primary case or the earliest epidemiologically linked case. These cascading risks from climate change can be met through a continuum of surveillance using the One Health approach, connecting human, animal, and environmental health. Climatic and environmental precursors of disease are monitored to provide reliable and valid health alerts to relevant authorities in public health and veterinary services. Comprehensive appraisal of national and local-level interventions. Update and better alignment of climate policy strategies on European and national level based on findings in IDAlert. Surveillance tools.	**Dissemination:** Extensive network, contribute, and be showcased on external platforms to leverage its impact and maximise its reach. Virtual events, quarterly climatic bulletins newsletters, engaging content on key results and deliverables (video capsules, infographics, interviews...) scientific publications, participation in events and conferences, and collaboration with related projects. A focus will be given to engaging with policymakers by participating and organising events, engaging in open dialogue and co-creation through recommendations, guidelines and policy briefs. **Communication:** IDAlert will carry out awareness campaigns, design public engagement and educational material for science festivals and public events, organise Climate Fresk workshops in universities, communicate extensively through social media and the project website, and engage in media relations. **Exploitation:** An internal mapping of all exploitable results by individual partners and the consortium, will be carried out. Two co-design workshops will allow the drafting of the exploitation strategy and post-project plan. An innovation camp with a participatory approach will explore replicability routes to expand the results and outputs to other sectors.

SPECIFIC NEEDS	EXPECTED RESULTS	D&E&C MEASURES
User-driven research and capacity building and training on indicator, early warning systems, and tools	Detailed bi-directional relationship between climate-sensitive infectious diseases and societal inequalities including occupational settings. Open science approach, co-creation with stakeholders and capacity building activities. All the outputs generated by IDAlert will be available to the public under open access license.	

IDAlert - Dissemination, Exploitation and Communication target groups and expected outcomes and impacts

TARGET GROUPS	OUTCOMES	IMPACTS
Scientific community 1. National and local public health authorities 2. Climate services community 3. ECDC 4. EEA 5. International policy makers, e.g. negotiators in the UNFCCC framework 6. European policy makers, e.g. DG Climate, DG Agri, European Mission on Adaptation 7. Adaptation planners 8. Mitigation planners 9. General public 10. Environment Protection Agencies 11. Tourism sector 12. Urban designers and developers 13. National veterinary agencies 14. FAO 15. European Observatory on Climate Change and Health 16. WHO 17. Research community 18. Research and practise capacity building networks	1. Use of findings, tools, and data in new prototyped research to policy applications 2. Novel indicators of climate change impact tracking on infectious disease transmission and emergence 3. Uptake of project results in SOER 2025 and IPCC report. 4. Novel user co-designed tools and indicators measuring co-benefits and unintended effects of policy 5. Tools and indicators showing system dependencies across stakeholder sectors 6. Scenario data to help the strategies formulation and planning of adaptation and mitigation 7. Prototyped new solutions and data streams for surveillance and monitoring by, i.e. citizen science and AI methods 8. Trained researchers with high interdisciplinary competence. 9. Identification of vulnerable groups in terms of health consequences to influence health policy focusing on how heterogenous impacts 10. Training materials 11. Improved knowledge among the public on climate-sensitive infectious diseases and measures to combat them.	***Scientific*** Enhanced methods and integration of data for monitoring of climate-sensitive infectious diseases Integration of One Health, EcoHealth, and Climate change and health and public health research communities in Europe Methods for system perspective analysis of policy across sectors Enhanced methods, data streams and integration of data for early warnings Robust evaluation and assessment of policy change and effect estimates of co-benefits and unintended consequence indicators Indicators for monitoring climate change trends and policy change impacts for infectious disease at past, present and future time scales Scenario simulations for decision-making in complex situation with systems perspective ***Economic*** Increased ability to jointly account for climate risks, adaptation, and mitigation in the

	12. Climate-health service prototype platform for cross-disease early warnings 13. Co-design and co-production among user and experts for contributing to user needs 14. Upload of indicators onto the European Observatory 15. Upload of tools and data onto the ClimateAdapt 16. Adherence to FAIR and providing access to open data from the project 17. Policy change monitoring	assessment of climate-sensitive infectious diseases. Accounting for direct and indirect economic effects in cost-benefit analysis from infectious disease response and prevention with climate policy and climate change impacts Future strategies for mitigation and adaptation linked to cost-benefit assessment and society impacts ***Societal*** Evidence-based support and recommendations to EU climate policies. Increased trust in scientific outcomes by the public through enhanced knowledge and open access. Improved surveillance and monitoring by authorities using data collection tools and analyses Improved cross-sectorial planning by considering a systems perspective on co-benefits and unintended consequences from climate and other policy Overview of policy change in relation to infectious disease prevention

Summary:

- Stakeholder-led needs assessment: Use a participatory process to identify a suite of policy-relevant indicators, conceptualised and designed with stakeholders.
- Indicators: Co-design and develop indicators with stakeholders to track policy impacts over time.
- Policy processes for adaptation: Assess policy processes for selecting adaptation projects in case studies and co-develop a metric with stakeholders to assess the impact of the adaptation.
- Communication/dissemination of project results to the public
- Publications in peer-reviewed journals and conferences, provided as open-access,
- Online media presence: LinkedIn and Twitter and IDAlert website
- Prepare dissemination and communications materials, including visual identity, videos, newsletters, press releases, blogposts, journal articles, webinars, conference and workshop presentations
- Quarterly Climatic-Health Bulletins geared toward medical and health practitioners will be prepared and shared informing on seasonal disease risk indicators in Europe.
- Dissemination guides and key policy briefs will be prepared and disseminated via various channels including the Red Cross Movement similarly to the Heat Wave Guide for Cities. The retrospective

indicators in the Lancet Countdown reports will be used to engage policy and decision-makers at national and sub-national launch events and through policy briefings.
- A series of virtual events will be organised alternating webinars and virtual open dialogues to promote the project results and engage wider stakeholder communities
- Open-access online training materials and guidelines
- Training the Trainers' Summer School

Workplan & Deliverables:
- Stakeholder workshop on Co-creating climate & health indicators at the European and local level
- Internal partners interviews with the goal to gain insights and create the external interview guides for the qualitative research

TRIGGER

The TRIGGER Project's pathways towards impacts:

By tackling the complex challenge of disentangling the multiple connections of climate change (CC) with human health and well-being (exposome approach) to ultimately influence policy priorities, TRIGGER will contribute to topics under Destination 2 "Living and working in a health-promoting environment" that include sustainable development, environmental protection and climate mitigation goals, specifically supporting global and EU climate policies, the EU Observatory for Climate and Health, and the Green Deal activities. In addition, TRIGGER will contribute to the Sustainable Development Goals (SDGs), notably #3 - Good health and wellbeing, #13 - Climate action, #11 - Sustainable cities and communities, #4 - Quality education. Pathways and components to reach the targeted impacts are detailed in the following:

Contribution of TRIGGER's expected results to Topic outcomes and Destination 2 impacts:
TRIGGER foresees the delivery of 23 concrete results, complementary to each other, to form in their integration all the necessary elements to reach the specific outcomes defined in the "Health impacts of CC, costs and benefits of action and inaction" call:
Summary of Expected Outcomes (EO) set out in the call topic, and expected contributions of TRIGGER:

EO1 - Global and EU climate policies, the EU Observatory for Climate and Health, and the Green Deal activities are supported with up-to-date scientific evidence. TRIGGER commitment is to contribute to strengthening the scientific evidence on the complex connections between CC induced events and health threats adopting a highly innovative and composite research strategy. Three complementary clinical studies (WP4) are envisage to explore such connections: the cross-sectional study analyse (~300 people) the cardiovascular and respiratory diseases in in a traditional and well-experienced way; the longitudinal study (~1,200 people) is inspired by the Exposome paradigm and will reveal new insight on the climate-health connections which will be also investigated through citizen science activities (WP3), supported by experts in the field of health science, climate science, environmental and socio-economic sciences that are part of the consortium; the large epidemiological study (>250,000 people, 20% in disadvantaged areas) will integrate pre-existing lifelong-health data with detailed climate and environmental data and will allow a long-time range analysis to identify new health threats. The clinical studies will be intersected with cutting-edge climate and environmental data provided by internationally recognised experts in the field and complemented with an up-to-date Call: HORIZON-HLTH-2021-ENVHLTH-02-03 – Environmental and Health (2021) 19 Project TRIGGER genomic investigation. The socio-economic aspects will complement such studies in a transversal way and provide additional evidence broadening the research to other key aspects of society. By adopting an innovative, non-linear and multidisciplinary research approach, TRIGGER will produce substantial scientific evidence to support EU policy actions in a systemic perspective. The CHC Hub (WP7) will ensure the establishment of a unique archive for climate-health data, with robust quality control and in anonymised form. The dissemination through the user-friendly tailored dashboard (WP7) will guarantee the interaction with existing European initiatives (e.g. GEOSS,

EuroGEO, Copernicus, European Climate and Health Observatory, and the recent European Strategy on Data) and the full exploitability by public and private authorities, and policy makers.

EO2 -Public authorities and surveillance organisations have access to predictive and early warning systems for direct and indirect health impacts caused by climate-change induced events and dispose of indicators for improved monitoring of policy actions. TRIGGER will design and deploy a novel predictive system (WP5) for health-impacting climate conditions covering the complete time span from the short-range (hours-days) to very long-term (decadal and beyond). Forecast and projection products will be co-designed with citizens, health authorities, policymakers involved in the five CHC Labs to ensure their uptake and use as practical alerting tools for climate-related health risk, that are grounded on data acquired in Labs. Attention will be paid to the development of a user-friendly dashboard and easy-to-use informatic tools, including an early warning system, (WP7) to foster access and use of the tools by the wider public and authorities. Indicators for health-related climate hazards will be co-developed (WP2-WP5), and the impacts of multiple scenarios foreseeing the adoption of a set of climate policy options co-designed with the Policy Consultation Board will be investigated (WP3-WP6). A consistent and integrated risk assessment (WP5) will be conducted on workers recruited within the Labs during the longitudinal study, that represent a variety of socio-economic contexts which are impacted by a wide range of climatic conditions. Overall, these represent a set of effective tools for quantifying and dynamically monitoring climate action and policy decisions.

EO3 - Public authorities, employers and risk managers draw benefit from user-friendly tools for integrated risk assessments and cost-benefit analysis of CC mitigation and adaptation actions to support decisions across policy sectors. Multi-sectoral data (e.g., essential climate variables, extreme weather events, climate actions implemented, socio-economic and health indicators) will be revised and acquired in CHC Labs and relative countries at the beginning of the project (WP2). This will allow both to define the baseline and to collect the necessary data for setting up risk assessment models (WP5), cost-benefit analyses (WP6) and guidelines development (WP8). Thanks to the direct involvement of experts in sensing and information technologies in the consortium, TRIGGER will co-develop cutting edge wearable and low-cost sensors for the integrated monitoring of health and climate variables (Table 1.2b) Sensors will be utilised for the continuous monitoring of workers engaged in the longitudinal study (WP3), thus guaranteeing a high level of spatial and temporal resolution of the observations. After rigorous quality checks, collected data will be stored in the CH2 infrastructure, and disseminated to the general public through a user-friendly, inter-operable dashboard (WP7). Up-to-date models for weather and climate (WP5) and economics (WP6) will complement the granular monitoring of local variables (e.g. local environmental conditions) to conduct consistent and integrated risk assessment and cost-benefit analyses of climate action and inactions. A carefully designed engagement strategy with a clear identification of stakeholders is functional to integrate local and regional policymakers in the CHC Labs (WP3). Upscaling and replication actions foreseen as part of WP8, as well as the synergies and dissemination activities undertaken in WP9 will ensure an international spread of the tools developed.

EO4 -Public and private health authorities and care providers use guidelines and training materials produced to adapt and innovate health systems and practices to prevent and mitigate CC related health risks in cost-efficient and effective ways. TRIGGER intends to summarise, generalise and upscale the project's findings on the relationships between CC, the socio-economic system and human health in a wide range of different outreach materials, targeted to specific groups. Thanks to the engagement of health authorities, practitioners and policymakers since the beginning of the project (e.g., Policy Consultation Board, Sect. 3.2), TRIGGER will ensure that climate policies are integrated and promote human health and wellbeing. In particular, TRIGGER foresees the co-creation of educational publications, guidelines, protocols, MOOCs, policy briefs and a serious game tool (WP8-9) tailored for the health authorities to adapt and innovate its system and practices towards the prevention and mitigation of climate-related risks. The involvement of practitioners from the six hospitals within the CHC Labs located in different Call: HORIZON-HLTH-2021-ENVHLTH-02-03 – Environmental and Health (2021) 20 Project TRIGGER European cultural contexts will ensure the possibility to replicate and generalise the findings of the project for a widespread adoption of the produced recommendations.

Furthermore, TRIGGER will contribute to the expected impacts (EI) set out in the Destination 2 "Living and working in a health-promoting environment" reported in a concise way below and clustered in the three main dimensions on which TRIGGER is based: **Policy** (including socio-economic, occupational, risk analysis and citizen engagement aspects) which groups (EI1) Policy-makers are aware about environmental, socio-economic and occupational risk factors; (EI2) Environmental, socio-economic and health policies are sustainable and based on solid scientific evidence; (EI8) Citizens understand better complex environmental and health issues. **Health** (including health services, working environment, and population adaptation aspects) which groups (EI5) Living and working environments are healthier, more inclusive, safer, resilient and sustainable; (EI6) The adaptive capacity and resilience of populations and health systems is strengthened. **Climate** (including environmental system, pollution, weather and climate aspects) which groups (EI3) The upstream determinants of disease are known, understood and reduced; (EI4) The health threats resulting from hazardous chemicals, pollution and contamination is reduced; (EI7) Citizens' health and well-being is protected and promoted. The contribution of TRIGGER on the wider expected impact indicated is summarised here:

TRIGGER contribution towards the destination wider Expected Impacts (EI) relevant for this section:
Policy (EI1 EI2 EI8) Advanced monitoring and warning systems for climate-health risks, along with socio-economic and psychosocial data, made available through easy-to-use and accessible web tools. Consistent risk assessment and cost-benefit analyses concretely assessed in the CHC Labs. Citizens and institutions are provided with information for evaluation of health exposure to extreme climatic events. Practical guidelines and measures demonstrating how mitigation and adaptation actions provide additional co-benefits. Practitioners are provided with hands-on cost-benefit tool co-developed with practitioners. This is a short/medium range impact.
TRIGGER's action is grounded on the quintuple helix approach, that establishes a concrete dialogue and co-creation process with different actors of the civil society, including health authorities, citizens, policymakers, and private stakeholders. The Policy Consultation Board (WP1) will ensure the possibility to replicate and upscale the project results, in a framework which will be generalised to ensure the applicability to other cities in Europe and worldwide, to tackle climate-health, societal risks and EU policy priorities. Supported by the business plan (WP8) and civil society stakeholders (WP3), TRIGGER will develop concrete plans for adoption and modification of local and national climate policies (WP8) to cover key aspects of health and wellbeing preservation together and to foster education in health risks of CC (WP9).

Summary:
TRIGGER specifically aims at directly **engaging citizens and stakeholders** in three ways:

1) by tools of citizen science through the use of low-cost and wearable sensors;
2) the co-design and co-development activities through apposite panels that actively participate in the elaboration of the project tools;
   This e.g., includes engagement of political actors in all CHC (Climate-Health-Connection) Labs, and their full engagement in the activities of the project ensures that the evidence-based connections between climate and health are readily translated in local regulations and policies, demonstrating the validity of developed tools and methodologies in policy-relevant case studies.
3) the organisation of events for the wider public to disseminate acquired knowledge and enhance a wide understanding about climate-change induced events and the related risks on health and human well-being.

A clear **co-creation** approach is followed also during the preparation of educational material to raise risk awareness, develop capacity and increase preparedness, but also when producing guidelines, protocols, MOOCs, policy briefs and a serious game tool.

Concerning **indicators and monitoring**, TRIGGER will provide

- Inventory of indicators, tools and models: Identification of specific indicators and proxies to best describe and assess direct and indirect relationships between climate, the social-economic system, and human health and well-being.
- Frameworks for the identification, monitoring and quantification of exposure and health impacts
- Meteorological, climate and air pollution indicators collected in the five Climate Health Connection Labs
- Frameworks for monitoring and evaluation of activities in the climate health connection labs framework

All **exploitation** activities in TRIGGER make sure, that the world of business and innovation management on the one hand and science on the other hand learn from each other and make sure that a maximum of the products produced by science will have a sustainable impact. Specifically, TRIGGER will provide exploitable tools to:
1) strengthen surveillance mechanisms and risk assessment,
2) translate robust evidence of climate-environment-health relationships into actionable information and
3) guidelines, to identify and prioritise cost-effective policies and actions.

As a main output, TRIGGER will e.g. develop a novel interoperable, scalable, user-friendly platform and its derivatives to empower health authorities, care providers and population groups to monitor personal exposure connected with the impacts of climate change.

Workplan & Deliverables:
This is TRIGGER's work plan for strengthening Public Policy to mitigate the coming Climate Health Crisis:

- TRIGGER analysed the support for climate-health adaptation and mitigation policy measures and the predictive role of trust in federal government and scientists among a sample of German citizens. The report on this will be ready in Summer 2024
- TRIGGER will translate its findings into guidelines to support evidence-based policy and decision making. In order to best integrate TRIGGER findings into innovative and sustainable principles for the inclusion of health and wellbeing into climate-related policies and measures, a draft version will be discussed with the relevant stakeholders to ensure the feasibility and effectiveness of the proposed measures in autumn 2025
- The final version of these guidelines will become available by spring 2026
- A series of EU Policy briefs for reduced exposure to CC threats will become available from summer 2024 onwards to summer 2026, providing short and hands-on information on the project's most impactful results to bring recommendations to policymakers at EU-to-local level
- All findings will result into clear protocols for better preparedness and response of the health systems and practices to climate induced hazards. Practitioners and health care providers, also actively involved in giving feedback on draft versions will have them ready from autumn 2026 onwards.

Annex 2: Overview of the laboratory or field sites specifications per project

BlueAdapt

The climate forces are: sea surface temperature, precipitation, river runoff, air temperature, humidity, pH (ocean acidification).
The pathogens/health threats among others: *E. coli*, *Vibrio* spp., harmful algal blooms (e.g. cyanobacteria), antimicrobial resistance (AMR), synergistic effects with aquatic pollutant dynamics.

Location	Hazard or climate forcing	Population Type
Coastal bathing waters in UK	Enhancement and evaluation of an app for early warning of pollution in coastal bathing waters, UK	
Paola coastal lake in Italy between Rome and Naples (IT)	Application of PSP Index at Paola coastal Lake, Italy	
Bathing waters, Netherlands;	Real time forecasting of bathing waters, Netherlands	
Arrone estuary in Italy, Maccarese;	Evaluation of sampling method, Arrone river and estuary, Italy	
Bay of Plentzia in Biscay, Spain;	One Health Pilot, Biscay-Plentzia Estuary, Spain	
Baltic coast, Poland	Effectiveness of information, Baltic Proper coast, Poland	
Cornwall, UK	Adaptation to Climate and Health Risks, Cornwall, UK	
Eastern Scheldt, Netherlands	Algal blooms and shellfish in the Eastern Scheldt, NL	

CATALYSE

Location	Hazard or climate forcing	Population Type
Spain	**Catalonia** Creation of a heat-health EWS incorporating weather forecasting, health data, and epidemiological modelling	European citizens
Europe	**Campania region (Italy), Berlin (Germany), Lahti region (Finland)** We will develop an EWS for allergic rhinitis, incorporating data on meteorological forecasting, air quality, allergenic pollen levels, and individual symptoms. Predictive skill of the EWS will be initially tested on the retrospective data sets of MASK-air® and will be further validated in terms of real-world utility through three case studies in the Campania region (Italy), Berlin (Germany), and in	Allergic rhinitis patients

Location	Hazard or climate forcing	Population Type
	the Lahti region (Finland). The validation will involve a randomised trial to assess the utility of personalised messages delivered through the EWS to improve patients' symptom management	
Europe	**Bulgaria, Germany, Greece, Spain, UK** Survey experiments and interviews/focus groups with key stakeholders to examine how communicating and framing evidence on the health impacts of climate change induced environmental hazards affects engagement, behavioural change, and support for climate policies across different types of actors	Key stakeholders involved in climate policy making, general public
Europe	**Spain, Italy, Austria** We will analyse how climate change affects healthcare demand among socially marginalised groups facing barriers to health service access and utilisation. In particular, we will focus on agricultural and other outdoor workers (many of whom are migrants) who are occupationally exposed to heat stress. We will work in three of the WP5 partner countries (Italy, Spain, and Austria) to co-create healthcare system strategies to bridge gaps between risk and risk perception and address unmet need for health services due to heat stress, which can be incorporated into broader health system adaptation goals	Migrant outdoor workers
Spain	**Catalonia** Theory of Change based on stakeholders' perceptions of climate mitigation in the Catalan healthcare system (Spain) - how to realise the goal of "net zero" healthcare	Key stakeholders working in the Catalan health sector

CLIMOS

Location	Hazard or climate forcing	Population Type
Portugal (regions/provinces of Faro, Setubal, Guarda, Portalegre, and Beja)	**Mediterranean** • heat • precipitation (including extreme rainfall) and relative humidity • evapotranspiration • soil moisture • land use • other ancillary climate or environmental drivers, such as wind speed, altitude, topography, vegetation, or moon phase.	Sand fly-borne pathogen: ***Leishmania*** spp. **1) Humans** living in or travelling to *Leishmania infantum* endemic areas (i.e., areas where parasite circulates between the sand fly vector and the vertebrate host). Prevalence of subclinical infection in population living in endemic areas, particularly in rural and peri-urban environments, is usually high. Risk factors amongst other factors for **visceral leishmaniasis** caused by *L. infantum*: malnutrition/poorer living conditions in childhood and immunosuppressive conditions and comorbidities in adults. **2) Dogs** living in or travelling to endemic areas of *L. infantum*. The percentage of infected dogs is higher than those that develop disease. Sand fly-borne pathogen: ***Phlebovirus*** spp. Population living in or travelling to endemic areas. Old patients are at higher risk of developing severe forms of disease (***Toscana phlebovirus***) due to comorbidities."
Spain (regions/provinces of Galicia, País Vasco, Cataluña, Madrid, Castilla-La Mancha, Murcia, and Andalucía)		
Italy (regions/provinces of Tuscany and Campania)		
France (region of Occitanie)		
Croatia (Istrian Peninsula and the Krk Island)		
Turkey (regions/provinces of Adana (South of Turkey), Sinop (Black Sea region of Turkey), and Manisa (Aegean Region of Turkey))		Sand fly-borne pathogen: ***Leishmania*** spp. **1) Humans** living in or travelling to *L. infantum* endemic areas. Prevalence of subclinical infection in population living in endemic areas, particularly in rural and peri-urban environments, is usually high. Naïve population living in highly endemic areas of **cutaneous leishmaniasis** caused by *L. tropica* and *L. major* are at risk of developing disease. Risk factors amongst other factors for **visceral leishmaniasis** caused by *L. infantum*: malnutrition/poorer living conditions in childhood and immunosuppressive conditions and comorbidities in adults. **2) Dogs** living in or travelling to endemic areas of *L. infantum*. The percentage of infected dogs is higher than those that develop disease. Sand fly-borne pathogen: ***Phlebovirus*** spp.

Location	Hazard or climate forcing	Population Type
		Population living in or travelling to endemic areas.
Israel (Negev Mountain)		Sand fly-borne pathogen: ***Leishmania*** spp. **1) Humans** living in or travelling to *L. infantum* and *L. donovani* endemic areas. Naïve population living in endemic areas of **cutaneous leishmaniasis** caused by *L. tropica* and *L. major* are at risk of developing disease. **2) Dogs** in or travelling to endemic areas of *L. infantum*. The percentage of infected dogs is higher than those that develop disease. Foxes and jackals are sylvatic reservoirs of *L. infantum*. **3) Rock hyraxes** (central and north Israel) and gerbilids are the local reservoirs of *L. tropica* and *L. major*, respectively Sand fly-borne pathogen: ***Phlebovirus*** spp. Population travelling to endemic areas.
France (regions/provinces of Grand Est, Bourgogne Franche Comté, Bretagne, Pays de la Loire)	**West-Central Europe** • heat • precipitation (including extreme rainfall) and relative humidity • evapotranspiration • soil moisture • land use • other ancillary climate or environmental drivers, such as wind speed, altitude, topography, vegetation, or moon phase.	Sand fly-borne pathogen: ***Leishmania*** spp. **1) Humans** travelling to *L. infantum* endemic areas. Risk factors amongst other factors for **visceral leishmaniasis** caused by *L. infantum*: immunosuppressive conditions and comorbidities in adults. **2) Dogs** travelling to endemic areas *of L. infantum*. The percentage of infected dogs is higher than those that develop disease. Sand fly-borne pathogen: ***Phlebovirus*** spp. Population travelling to endemic areas
Austria (regions/provinces of Burgenland, Carinthia, Lower Austria, Styria, Upper Austria, and Vienna) **Czech Republic** (South Moravia Region (districts Znojmo, Breclav, and Hodonin)) **Germany** (South-Western Germany; district Baden-Wuertemberg, district Rhineland-Palatinate		

HIGH Horizons

Location	Hazard or climate forcing	Population Type
Sweden (Stockholm)	**Northern Europe** • Extreme heat	• Pregnant women, postpartum women, newborns and infants up to 1 year old • Healthcare workers in maternal, newborn, child health settings • Data Analyses Heat and MNCH outcomes & thresholds
South Africa (Tshwane)	**E. Southern Africa** • Extreme heat	• Pregnant women, postpartum women, newborns and infants up to 1 year old • Healthcare workers in maternal, newborn, child health settings • Health Care Facilities – adaptation to heat & CO2 emissions mitigation • Data Analyses Heat and MNCH outcomes & thresholds
Zimbabwe (Mashonaland Central)	**E. Southern-Africa** • Extreme heat	• Pregnant women, postpartum women, newborns and infants up to 1 year old • Healthcare workers in maternal, newborn, child health settings • Health Care Facilities – adaptation to heat & CO2 emissions mitigation
Kenya (Nairobi)	**E. Southern-Africa** • Extreme heat	• Health Care Facilities – adaptation to heat & CO2 emissions mitigation • Data Analyses Heat and MNCH outcomes & thresholds
Greece (Thessaly)	**Southern Europe** • Extreme heat	• Data Analyses Heat and MNCH outcomes & thresholds • Biomarkers of heat impacts on MNCH outcomes
Italy (Lazio)	**Southern Europe** • Extreme heat	• Data Analyses Heat and MNCH outcomes & thresholds

IDAlert

Location	Hazard or climate forcing	Population Type
Girona Province, & Barcelona Municipality, ES	**Southern Europe** • Mean/max/min temperature • Mean/max/min precipitation • Normalised difference water index • Vegetation index • Land use • Demographic (age, sex) • Economic (SES)	Girona is a province in northeast Spain, with a mixture of urban and peri-urban environments, together with coastal wetlands and dry/flooding (rice) agricultural fields. Barcelona is a large Mediterranean city of ~1.7 million people infested with *Ae. albopictus.*
Attica Region including Athens Municipality, GR	**Southern Europe** • Mean/max/min temperature • Mean/max/min precipitation • Normalised difference water index • Vegetation index • Land use • Demographic (age, sex) • Economic (SES)	Attica region encompasses the city of Athens, Greece with 3.828 million inhabitants. It has a distinct, long, dry period in the summer and a short, wet period in the winter. For *Aedes albopictus* the peak period is recorded during September-October while *Culex pipiens* (native mosquito species) is active during the whole year.
South Holland Province & Rotterdam Municipality, Netherlands	**Northern Europe** • Mean/max/min temperature • Mean/max/min precipitation • Normalised difference water index • Vegetation index • Land use • Demographic (age, sex) • Economic (SES)	Rotterdam is the second largest city in the Netherlands (>600.000 people), located in the North Sea delta in South Holland province with the Rhine and Meuse rivers discharging into the North Sea. Nearby coastal areas and water rich nature areas are home to large numbers of migrating and resident birds.
Uppsala County & Stockholm Municipality, Sweden	**Northern Europe** • Mean/max/min temperature • Mean/max/min precipitation • Normalised difference water index • Vegetation index • Land use • Demographic (age, sex) • Economic (SES)	Stockholm is the most populous urban area in Sweden. Uppsala is 71 km north of Stockholm. Both cities are connected with various parks, forest areas, and nature reserves frequently used by the urban population and visitors.
Dhaka Municipality & Teknaf Subdistrict, Bangladesh	**South Asia** • Mean/max/min temperature • Mean/max/min precipitation • Normalised difference water index • Vegetation index • Land use • Demographic (age, sex) • Economic (SES)	Dhaka is the capital of Bangladesh. It is the tenth largest and the fourth-most densely populous city in the world with more than 20 million Dengue is endemic in Dhaka. Teknaf is a costal sub district under Cox's Bazar district of Bangladesh.

TRIGGER

Location	Hazard or climate forcing	Population Type
Oulu (Fi)	**North Europe** • heat waves associated with high humidity in summer (expected to become more frequent due to global warming), • heavy rainfall and snowfall events and extreme cold spells in winter.	Mixed population, based on retrospective studies.
Augsburg (DE)	**West-Central Europe** • air pollution of particulate matter, nitrogen oxides and ground-level ozone, • heat waves in summer, • heavy rains throughout the year.	Same as Bologna
Geneva (CH)	**West-Central Europe** • heat waves, exacerbated by severe air pollution and relative humidity in summer, • severe thunderstorms, and persisting high pressure conditions, which are expected to increase in frequency and intensity due to global warming.	Same as Bologna
Bologna (IT)	**Mediterranean** • heat waves characterised by high air humidity in summer, • heavy convective rains in summer, • persistent high pressure and clear sky favour high pollutant concentration especially in winter, • UV radiation and high levels of ozone.	Mixed population: healthy volunteers and occasional patients entering ER with suspicion of climate-related issues. Age group: working age and their families (children and parents) ADULT PATIENTS with one of the following diagnoses as the main reason for hospital admission: • Acute Heart Failure (diagnosis confirmed by a specialist) • Atrial Fibrillation (diagnosis confirmed by a specialist) • Asthma and chronic obstructive pulmonary disease exacerbation (diagnosis confirmed by a specialist)
Heraklion (GR)	**Mediterranean** • heat waves, • droughts in spring, summer and autumn, • occasionally heavy rains in winter and autumn, • dust storms of Saharan origin associated with respiratory diseases, asthma and respiratory infections throughout the year., • clear skies favour UV radiation.	PEDIATRIC PATIENTS with one of the following diagnoses as the main reason for hospital admission: • Gastroenteritis (diagnosis confirmed by a specialist) • Syncope (considering specific type, diagnosis confirmed by a specialist) • Asthma or acute bronchiolitis/bronchitis/pneumonia (diagnosis confirmed by a specialist)

Annex 3: Stakeholder list

Based on the analysis in target stakeholders, the Horizon Results Booster service delivery team identified a dissemination network with around 50 contacts and related social media channels identified across the stakeholder groups to start engaging with. This list served as the start of the Cluster's stakeholder list, which is a living document which is updated continuously and which is an important basis for future dissemination activities.

Beside this, the EC recently published a "Social media guide for EU funded R&I projects" listing several social media pages and profiles to follow and engage with. The guide is available at http://ec.europa.eu/research/participants/data/ref/h2020/other/grants_manual/amga/soc-med-guide_en.pdf.

The table below lists the stakeholders identified across the Cluster projects until September 2024. Contact details are only registered by the individual projects and when permission is given. The stakeholders are listed in alphabetical order.

Table 5: Cluster's stakeholder list

Stakeholder name	Stakeholder type	Website
Academic Network for Sexual and Reproductive Health and Rights Policy (ANSER)	Health platform	https://www.ugent.be/anser/en
Africa Advocacy Foundation	NGO	https://www.africadvocacy.org/contact
African Population and Health Research Center (APHRC)	Researchers and academia	https://aphrc.org/
AGES	Public health organisation	https://www.ages.at/en/
Association of Schools of Public Health in the European Region (ASPHER)	Public health organisation	https://www.aspher.org/
Austrian Federal Environment Agency	Climate, environment professionals	https://www.umweltbundesamt.at/en
Austrian Institute for Health Technology Assessment	Researchers and academia	https://www.inahta.org
Backyard Brains Germany	Researchers and academia	https://backyardbrains.com/
BeBrit project	Researchers and academia	https://www.bebritproject.com/
Belgian Climate Centre	Climate, environment professionals	https://www.climatecentre.be/
Belgian Minister of Climate, the Environment, Sustainable Development and Green Deal	Policy makers/experts	https://khattabi.belgium.be/en

Stakeholder name	Stakeholder type	Website
Bill & Melinda Gates Foundation	Funding agency	https://www.gatesfoundation.org/about/contact
Catalan Advisory Council of Sustainable Development	Policy makers/experts	https://cads.gencat.cat/ca/qui-som/historia-cads/
Catalan Health Institute	Public health organisation	https://ics.gencat.cat/ca/inici/
Centre for Planetary Health Policy	Policy makers/experts	https://cphp-berlin.de/en/
Centre for Public Governance, ESADE	Policy makers/experts	https://www.esade.edu/faculty-research/en/esadegov
Centre for Vectors and Infectious Diseases Research/National Institute of Health	Public health organisation	https://www.insa.min-saude.pt/
Charité Medical University	Healthcare provider	https://www.charite.de/en/
CINEA networks	Policy Makers/Experts	https://cinea.ec.europa.eu/contact-0_en
CityLAB Berlin	Researchers and academia	https://citylab-berlin.org/en/start/
Climate and Health Africa Conference (CHAC)	Policy makers/experts	www.climatehealthconf.africa
Climate Change AI	Researchers and academia	https://www.climatechange.ai/
Climate System Analysis Group (UCT CSAG) at University of Cape Town	Researchers and academia	csag.uct.ac.za
Climate-Health Africa Network for Collaboration and Engagement (CHANCE)	#	https://www.enbel-project.eu/chance
Competence Center Climate & Health	Public health organisation	https://agenda-gesundheitsfoerderung.at/kokug/en
CRDF Global	Policy makers/experts	https://www.crdfglobal.org/become-a-partner/
Deutsche Allianz Klimawandel ¬ Gesundheit (KLUG)	Health platform	https://www.klimawandel-gesundheit.de/
Diagnostic Veterinary Laboratory	Animal health organisation	
European Centre for Disease Prevention and Control (ECDC)	Policy Makers/Experts	https://www.ecdc.europa.eu/en
European Centre for Medium-Range Weather Forecasts	Policy makers/experts	https://www.ecmwf.int/
European Climate and Health Observatory	Policy Makers/Experts	https://climate-adapt.eea.europa.eu/en/observatory

Stakeholder name	Stakeholder type	Website
European Commission - DG Clima	Policy Makers/Experts	https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/climate-action_en
European Commission - DG Santé	Policy Makers/Experts	https://commission.europa.eu/about-european-commission/departments-and-executive-agencies/health-and-food-safety_en
European Federation of Asthma and Allergy Patients Associations	Health platform	https://www.efanet.org/
European Federation of Pharmaceutical Industries and Associations	Health platform	https://www.efpia.eu/
European Food Safety Authority	Public health organisation	https://www.efsa.europa.eu/en
European Health Forum Gastein	Health platform	https://www.ehfg.org/
European Medicines Agency	Health platform	https://www.ema.europa.eu/en
European Network for HTA	Public health organisation	https://www.eunethta.eu
European Network of Sustainable Development Advisory Councils	Climate, environment professionals	https://eeac.eu,
European Organisation for Rare Diseases	Health platform	https://www.eurordis.org/
European Parliament - Members of the ENVI Committee	Policy makers/experts	Members | Home | ENVI | Committees | European Parliament (europa.eu)
European Parliament - Members of the SANT Committee	Policy makers/experts	https://www.europarl.europa.eu/committees/en/sant/home/members
European Patients Academy	Patient organisation	https://www.eu-patient.eu/Projects/eupati2/
European Patients Forum	Patient organisation	https://www.eu-patient.eu/
European Public Health Alliance (EPHA)	Public health organisation	https://epha.org/about-us/
European Veterinary Parasitology College	Animal health organisation	https://ebvs.eu/colleges/EVPC
European Veterinary Association	Animal health organisation	https://www.eaeve.org/
Faculty of Veterinary Medicine Ss. Cyril and Methodius University in Skopje	Researchers and academia	https://fvm.ukim.edu.mk/en/
FAO	Policy Makers/Experts	https://www.fao.org/home/en
FIOCRUZ	Climate, environment professionals	https://portal.fiocruz.br/
FS Consultancy	Citizens	https://www.fsconsultancy.com.sg/

Stakeholder name	Stakeholder type	Website
Fundacio Unio Catalana d'Hospitals	Public health organisation	https://www.uch.cat/fundacio-unio.html
Global Heat Health Information Network (GHHIN)	Policy makers/experts	https://ghhin.org/
Greener NHS, UK	Healthcare provider	https://www.england.nhs.uk/greenernhs/
Health and Environment Alliance (HEAL)	NGO	https://www.env-health.org/
Health Care Without Harm Europe	NGO	https://noharm-europe.org/
Health in All Policies, part of the CDC, USA	Healthcare provider	https://www.cdc.gov/policy/hiap/resources/
IDEXX Laboratories	Healthcare industry	https://www.idexx.com/en/
Institute of Public Health Albania	Public health organisation	https://www.ishp.gov.al/
Institute of Tropical Medicine Antwerp	Researchers and academia	https://www.itg.be/en
Institute of Veterinary Medicine Belgrade	Animal health organisation	https://www.vet.bg.ac.rs/en
Instituto de Salud Carlos III	Public health organisation	https://www.isciii.es/Paginas/Inicio.aspx
Intergovernmental Panel on Climate Change (IPCC)	Policy Makers/Experts	https://www.ipcc.ch/
International Alliance of Patients Organisations	Patient organisation	https://www.iapo.org.uk/global-voice-patient-centred-healthcare
IQWiG	Researchers and academia	https://www.iqwig.de/en/
IRD (Institut de Recherche pour le Développement)	Public health organisation	https://www.ird.fr/
Istituto Zooprofilattico Sperimentale Lazio e Toscana	Researchers and academia	https://www.izslt.it/
IZSLER	Researchers and academia	https://www.izsler.it/
Joint Authority for Health and Wellbeing in Päijät-Häme, Finland	Healthcare provider	https://medanets.com/references/medanets-welfare-district-of-paijat-hame/
Lancet Countdown Europe	#	https://www.lancetcountdown.org/europe/
Lebanese University-Faculty of Public Health	Researchers and academia	https://www.ul.edu.lb/faculte/branch.aspx?branchId=46
Leipzig University	Animal health organisation	https://www.uni-leipzig.de/en

Stakeholder name	Stakeholder type	Website
Liverpool School of Tropical Medicine (LSTM)	Researchers and academia	LSTM | Liverpool School of Tropical Medicine (lstmed.ac.uk)
Local authorities in the Lazio region, Italy	Policy makers/experts	
LSHTM Centre for Maternal, Adolescent, Reproductive, & Child Health (MARCH)	Researchers and academia	https://www.lshtm.ac.uk/research/centres/march-centre
LSHTM Climate and Maternal and Child Health (CLIMACH) Interest Group	Researchers and academia	https://www.lshtm.ac.uk/research/centres/march-centre/climate-and-maternal-and-child-health-climach-interest-group
Médecins Sans Frontiers (MSF)	NGO	https://www.msf.org/
National Centre of Infectious and Parasitic Diseases	Public health organisation	https://www.ecdc.europa.eu/en
National Institute for Health and Care Excellence UK	Public health organisation	https://www.nice.org.uk
OECD	Policy Makers/Experts	https://www.oecd.org/climate-change/
Office of the Tyrolean Provincial Government	Policy makers/experts	https://www.tirol.gv.at/en/
Partners for Patients	Patient organisation	https://www.pfp.ngo/
Polish Coalition of Doctors and Scientists for Clean Air	Health platform	https://lekarzedlaklimatu.pl/
Polish Society of Health Programmes	Health platform	http://www.ptpz.pl/en/main-page/
Portuguese Association of Veterinary Specialists in Companion Animals	Animal health organisation	https://wsava.org/associations/apmveac/
Red Cross	NGO	https://www.icrc.org/en
Science for Africa	Researchers and academia	Home | Science for Africa Foundation
Sezonieri Austria	NGO	https://www.sezonieri.at/en/startseite_en/#pll_switcher
Southern Europe SEASLAB	Researchers and academia	https://seaslab.es/
Special Rapporteur on human rights and the environment	Policy makers/experts	
Standing Committee of European Doctors (CPME)	Public health organisation	https://www.cpme.eu/
Swedish Veterinary Institute	Animal health organisation	https://www.sva.se/en/

Stakeholder name	Stakeholder type	Website
The Cyprus Institute	Researchers and academia	https://www.cyi.ac.cy/
The HEat and HEalth African Transdisciplinary Center (HE2AT Center)	Researchers and academia	https://heatcenter.wrhi.ac.za/
The University of Agriculture Peshawar	Citizens	https://www.aup.edu.pk/
Tirol Kliniken, Innsbruck (hospital)	Healthcare provider	https://www.tirol-kliniken.at/page.cfm?vpath=standorte/landeskrankenhaus-innsbruck
UN Special Rapporteur on the right to health	Policy makers/experts	https://www.ohchr.org/en/special-procedures/sr-health
UNEP Climate and Clean Air Coalition	Civil society	https://www.ccacoalition.org ,
UNEP International Methane Emissions Observatory	Researchers and academia	https://www.unep.org/topics/energy/methane/international-methane-emissions-observatory
Universidad Autónoma de Madrid	Researchers and academia	https://www.uam.es/uam/en/inicio
University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca, Romania	Animal health organisation	https://apply.eu-medstudy.com/#study-medicine-in-europe
University of Prishtina "Hasan Prishtina"	Researchers and academia	https://uni-pr.edu/
University of the Balearic Islands	Researchers and academia	https://www.uib.eu/
University of Turin Dept. of Veterinary Sciences	Researchers and academia	https://en.unito.it/
USAMV Cluj-Napoca	Animal health organisation	https://www.usamvcluj.ro/
Wellcome Trust	Funding agency	Climate and health | What we do | Wellcome
World Health Organization	Public health organisation	https://www.who.int/teams/environment-climate-change-and-health/climate-change-and-health/capacity-building/toolkit-on-climate-change-and-health/early-warning-systems
World Meteorological Organization	Climate, environment professionals	Homepage | World Meteorological Organization WMO
World Organisation for Animal Health	Animal health organisation	https://www.woah.org/en/home/


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Blue Adapt


CATALYSE


CLIMOS


HIGH
HORIZONS


iDAlert


trigger