

Set up the GoNEXUS website and communication materials

Anya Gregory
Deliverable 8.2



GoNEXUS has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement number 101003722.

www.gonexus.eu

Version 1

February 2022

8.2: Set up the GoNEXUS website and communication materials

Lead by Arctik

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Dissemination level of document

Public

Abstract

The following document details the process of setting up the GoNEXUS project website. It includes the process of integrating the visual identity, the structure of the website as well as images of the website at time of submission of the deliverable.



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Version History

Version	Date	Authors	Description
V1	23/02/2022	Anya Gregory (Arctik), Katrien Witpas (Arctik)	Full draft of deliverable
V1	25/02/2022	Hector Macian-Sorribes (UPV)	Feedback on deliverable
V1	25/02/2022	Andre Müller (adelphi)	Feedback on Flyer
V2	28/02/2022	Anya Gregory (Arctik)	Final deliverable

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1. Use of visual identity

Arctik has already designed the visual identity and branding for GoNEXUS (as a part of deliverable 8.1), keeping in mind the EC guidelines for research projects.

For the set-up of the website, this visual identity has remained consistent with carry-over elements such as logo, colours, icons etc. The design of the logo (Figure 1), as well as the dedicated GoNEXUS illustration, tell the story of the project. The logo showcases the project's focus on the Nexus and the interlocking WEFE elements.



Figure 1: GoNEXUS logo

As seen in the logo, there are four colours used. These colours are reflected throughout the pages' design, especially in the WEFE explanation on the homepage.

These different colours represent the four areas of the nexus:

- water is blue
- energy is orange
- food is yellow
- ecosystems is green.

In addition to the logo, a dedicated illustration was created and used on the homepage to reflect all four areas of the WEFE nexus.



Figure 2: GoNEXUS illustration

Water is shown through a body of water in the middle, energy is represented by windmills, food is represented through the wheat, and the ecosystem is shown by trees

As part of the visual identity, some additional icons were designed (as seen in figures 3 and 4), and these icons will be used on both the website and other marketing materials such as the flyer.

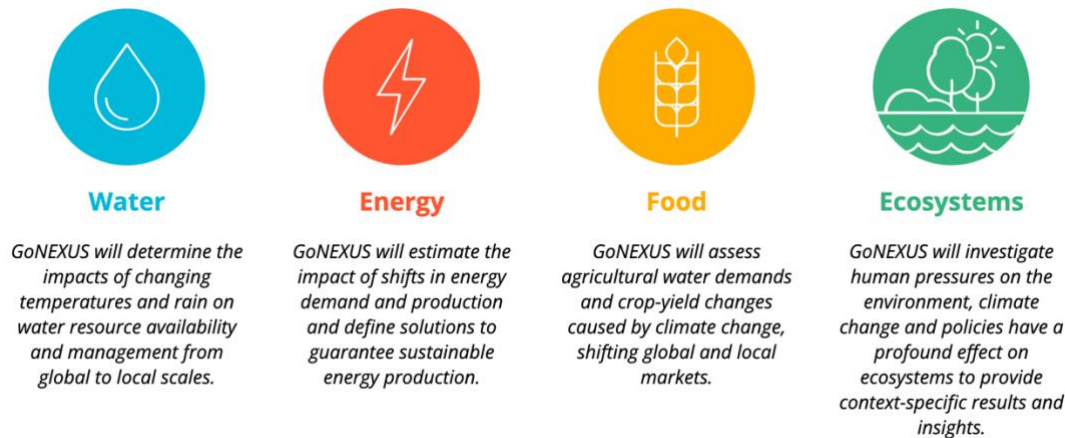


Figure 3: WEFE Nexus diagram from homepage



Figure 4: Icons for scenarios

2. Set up the full website

The full website was launched in January 2022 at <https://gonexus.eu/>.

As explained in section 1, the website has been designed to respect the project's visual identity, using attractive visuals to enhance the website's visual appeal.

1. Menu

The sections of the website were designed in collaboration with all work package partners, including a more in-depth collaboration with adelphi and UPV.

The structure of the menu is as follows:

1. About
 - a. About GoNEXUS
 - b. Consortium
2. Case Studies
 - a. Danube
 - b. Lake Como
 - c. Tagus-Segura
 - d. Senegal

- e. Júcar River Basin
 - f. Zambezi
 - g. Global
 - h. EU
- 3. Methodology
 - a. Scenarios
- 4. Solutions
- 5. News
- 6. Library
- 7. Events
- 8. Contact

2. Website Pages

The following descriptions of the website pages give a more complete view of the different sections of the full website. An image of each of the pages below can be found in the Annex.

Homepage

The homepage presents the key information about the GoNEXUS project. It can also act as a secondary means of navigation for visitors who prefer to scroll down rather than inspect the menu. From this section, you can access the about page, case studies page, news page, and events page.

About GoNEXUS

The 'about GoNEXUS' page provides a high-level introduction to the goals of the project as well as each of the activities. It includes a more general overview that is more detailed than the homepage, prompting the user to learn more about each of the activities.

Consortium

A dedicated page with logos of each of the project partners is found on the 'consortium page'.

Consortium member page

Each consortium member has a dedicated page for more information about their organisation and role within the project. Included in the Annex you will find an example from adelphi where a contact person has also been selected to put a face to the name.

Case Studies

The case studies page includes an overview of all the case studies which will be studied in the project. The map is responsive and if you click on either the icon beside each case study or the region, you will be able to go directly to the dedicated case study page.

Case study pages

Each of the case studies has a dedicated page with more information about the location of the case study as well as the key challenges in this area. The Danube River basin is shown in the Annex as an example.

Methodology

The methodology page takes you through the overall approach that GoNEXUS researchers will take in each of their respective activities and how these activities relate to one another. Included you will find an overview of the case studies, nexus dialogues, model toolbox and future scenarios.

Outcomes

This page details which project outcomes and solutions will be shared at the end of the project.

News

The news section showcases the latest updates from the project in the form of short news articles.

Library

The library serves as a repository of materials created throughout the project cycle. This includes all academic publications, communications toolkits, deliverables, and videos. There is a category for each of these material types so that they can be found easily.

Events

Both project events and related events can be found in the events page.

Contact

The contact page is used to contact the consortium.

3. Communication Materials

Based on the visual identity, we have begun to create a series of communication materials to be shared with the consortium for wider dissemination (at events, with stakeholders etc. on social media). The materials include a project presentation and a flyer.

Project Presentation

The project presentation has been drafted and is currently in the final stages of development (draft version available in the Annex). The presentation is available in two versions, a long version and a shorter version depending on the length of presentation needed. The long version goes into more detail for each of the case study areas as well as the project outcomes, whereas the short version showcases a more high-level overview. The presentation can be used by consortium members when discussing the project at an event or with stakeholders during a nexus dialogue or meeting. The presentation will be finalised before the first GoNEXUS event.

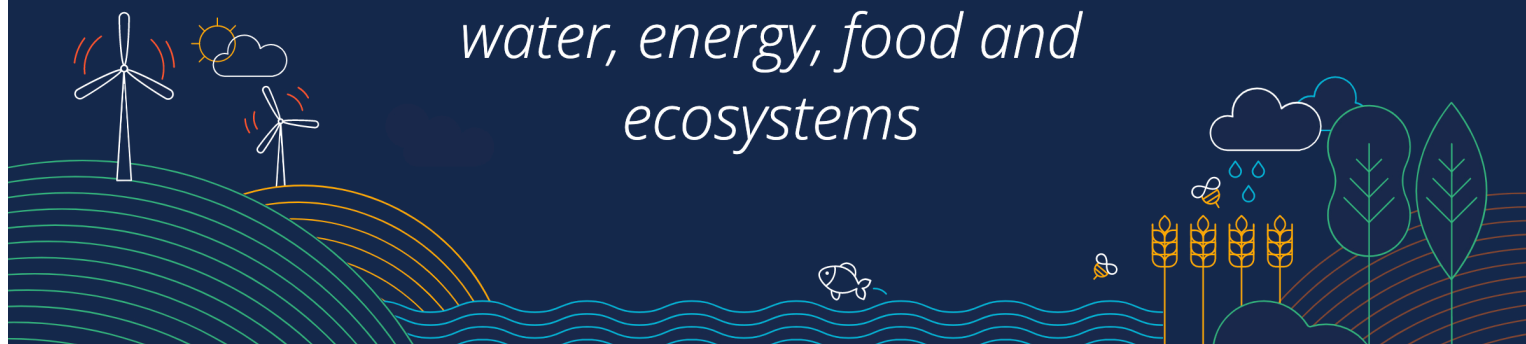
Flyer

The flyer is an easily understandable document that includes an overview of all activities of the project. Its main use is to replace the website in an event setting or during a meeting.

The flyers will be disseminated during all in-person as well as online events. We will also share the flyer on the [Twitter account](#) and [LinkedIn page](#). In the Annex, you will find the 4-page flyer.

4. Annex

Integrated solutions for water, energy, food and ecosystems



As populations and economies continue to grow, the demand for water, energy and food is set to increase as well. The effects of global climate change will only put further strain on natural resources, and life as we know it will be left hanging in the balance. Over the next 4 years, GoNEXUS will work to re-balance water, food and energy ecosystems to maximise our planet's environmental security. Through in-depth case studies and scenarios, GoNEXUS will create a future-proof toolbox and a framework to manage the **WEFE nexus**.



Water

GoNEXUS will determine the impacts of changing temperatures and rain on water resource availability and management from global to local scales.



Energy

GoNEXUS will estimate the impact of shifts in energy demand and production and define solutions to guarantee sustainable energy production.



Food

GoNEXUS will assess agricultural water demands and crop-yield changes caused by climate change, shifting global and local markets.



Ecosystems

GoNEXUS will investigate human pressures on the environment, climate change and policies have a profound effect on ecosystems to provide context-specific results and insights.

[LEARN MORE](#)

Cases studies



Danube River Basin

The most international river basin in the world

Shared by 19 countries and located in central and south-eastern Europe, the Danube River Basin is the most international river basin in the world. It includes a diversity of habitats ranging from glaciated mountains and hills, upland plateaus, and plains to wetlands near sea level.



READ MORE

Lake Como

A highly controlled water system

The Lake Como basin is located in the Italian Alps region. The regulation of the lake is driven by two competing goals: water supply and flood control. Hydropower, navigation, fishing, tourism, and precious ecosystems further challenge existing water management strategies.



READ MORE



News



How GoNEXUS modelling



GoNEXUS at the Nexus



GoNEXUS kicks off!

can help understand climate change effects in the long-term

In the coming 4 years, GoNEXUS will use models and data to create a series [...]

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Cluster Workshop

GoNEXUS' Coordinator Manuel Pulido-Velazquez represented our GoNEXUS project at a recent Nexus Cluster Workshop entitled 'Advancing [...]

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The GoNEXUS project kicked off on 7-8 October 2021 at the Polytechnical University in Valencia [...]

[+ READ MORE](#)

[READ ALL NEWS](#)

Events

Dresden Nexus Conference 2022

23.05.2022
25.05.2022

DNC2022 focuses on strengthening biodiversity
DNC2022 focuses on strengthening biodiversity with other challenges in society (e.g., climate [...]

[+ READ MORE](#)

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About GoNEXUS

Economic prosperity and well-being are closely linked to the efficient and sustainable management of our natural resources. Global trends, in particular population growth and economic expansion, are expected to increase the demand for water, energy, and food as well as their interdependence. Consequently, supplies of these vital interconnected resources are becoming less secure. The main goal of water-energy-food-environment nexus studies is to improve system efficiency and achieve sustainability through an integrated understanding and management of those resources.

GoNEXUS is a 4-year Horizon 2020 project supported by the European Commission. Through 8 in-depth [case studies](#) using river basins in Europe and Africa, its researchers will collaborate with stakeholders to re-balance water, food, energy, and ecosystems. The data from these case studies will be used to create [scenarios](#) for future impacts on the global and continental levels as well as for the climate and policy areas. GoNEXUS will develop an evaluation framework to design and assess innovative solutions for an efficient and sustainable coordinated governance of the water-energy-food-ecosystem nexus.

Case studies

Over the course of the project, GoNEXUS researchers will carry out 8 case studies. 6 will examine river basins in Europe and Africa, while the other 2 will look into the global and continental (EU) factors related to the WEFE nexus. The results from each of those studies will form the basis of the discussions for the nexus dialogues, a series of workshops held with stakeholders throughout the project. The data collected will also feed into the future scenarios.

Nexus Dialogues

Nexus dialogues are participatory engagement sessions to collect information from local stakeholders. These two-way discussions will help us gain an in-depth understanding of the local state of play for each river basin as well as European and global implications. Through a series of workshops, we will identify existing conflicts and challenging trade-offs, incoherent sectoral policies, synergies, and uncertainties. The outcomes of the dialogues will support the co-design of scenarios, models, and solutions throughout the project and beyond.

Future scenarios

To chart possible outcomes, GoNEXUS researchers will develop a series of future projections for the period of 2020-2030 and beyond. These scenarios will cover climate, global land and socio-economic factors, continental land and socio-economic factors and policy. They will be based on existing datasets combined with stakeholder knowledge stemming from the NEXUS dialogue workshops. The outcomes of each of the scenarios will be presented in the form of fact sheets and policy briefs which will be disseminated to relevant scientific and policy stakeholders who can build on their outcomes.

Model toolbox

GoNEXUS will build a new model toolbox that combines existing numerical models of the different sectors of the WEFE nexus from the global to the basin/local scales. The toolbox will include an assessment on the historical and future evolution of the WEFE nexus, through evidence on the nexus management performance. Its thematic models will consider the interdependency of WEFE sectors (e.g. water-environment or climate-energy) under a changing climate. GoNEXUS' toolbox will facilitate the linkages within the nexus for future researchers and will assess the impact of GoNEXUS solutions to meet the challenges of climate change.

Solutions

Based on inputs from the case studies and NEXUS dialogues, GoNEXUS will develop a **solutions evaluation framework** to aid in the transition to integrated management and governance. These solutions will be evaluated using the model toolbox to assess trade-offs between water food and energy security.

Solutions will include:

- policy changes
- new institutional arrangements
- markets and trading
- risk-hedging actions across nexus components
- better-integrated information systems
- improved communication among WEFE nexus stakeholders
- development and improvement of infrastructure.

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Consortium

adelphi 

Arctik

REPUBLIQUE
FRANÇAISE
 Géosciences pour une Terre durable
brgm

 **Modelling**
Energy Economy Environment

ETH zürich

Famife 

 **cmcc**
Centro Euro-Mediterraneo
sui Cambiamenti Climatici

 **Fresh Thoughts
Consulting**
where science meets policy


Joint Research Centre
JRC

 PBL Netherlands Environmental
Assessment Agency

 **POLITECNICO**
MILANO 1863


POLITÉCNICA

 UNIVERSITAT
POLITÈCNICA
DE VALÈNCIA

 Université Cheikh Anta Diop
de Dakar
LUX - MEA - LEX

 **UNIVERSITÉ
LAVAL**

 **Utrecht
University**



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Adelphi Research



adelphi is the leading independent think-and-do tank in Europe for climate, environment and development. We are some 280 strategists, thought leaders and practitioners working at the local and global levels to find solutions to the most urgent political, economic and social challenges of our time. As a policy consultancy, we support a just transition towards carbon neutrality and sustainable, liveable societies. Our work is grounded in trans-disciplinary research, evidence-based consulting and stakeholder dialogues. With these tools we shape policy agendas, facilitate political communication, inform policy processes and support decision-makers.

adelphi's interdisciplinary team working on water and water diplomacy analyses the impacts of global changes on sustainable development and resources management as well as on foreign policy and security. In particular, adelphi assesses interconnected and cross-cutting challenges, such as climate change, the WEF nexus, migration, and conflict, and engages practitioners and policymakers across sectors, geographies, and levels of governance to design appropriate responses.

In GoNEXUS adelphi leads the work on multi-level Nexus-dialogues, focussing on the transboundary and global levels, including on hydro-diplomacy. We will also develop the GoNEXUS sustainability assessment framework to assess nexus challenges under different future scenarios as well as the effectiveness of proposed solutions to address these. As the responsible partner for dissemination, we ensure that GoNEXUS results reach their target groups from research, policy and practice.

[More on Adelphi research in water](#)

<http://www.adelphi.de/en>



Annika Kramer

Head of Programme Water

<https://www.linkedin.com/company/adelphi/>

Case studies

Case studies

Over the 4-year project, a series of diverse case studies will dive into the WEFE issues focusing on the role of water, energy, food and ecosystem governance. These include 6 case studies based on river basins in Europe and Africa and 2 case studies tackling the global and EU issues in a broader sense. The 6 river basins are unique in their own way. They are diverse in terms of their climate, geography, economic issues, and politics. Some of the river basins span across several countries, while others occupy a small geographical area. Researchers will carefully monitor the river basins in dialogue with local stakeholders and apply this knowledge to **future scenarios**, **tools and solutions**. Learn more about each of the case studies by clicking the pictures below:



Danube River Basin



Lake Como



Júcar river basin



Tagus-Segura



Senegal River basin



Zambezi river





Danube River Basin

*The most international
river basin in the world*



Lake Como

*A highly controlled water
system*



Júcar river basin

*Juggling water demand
and availability*



Senegal River basin

*Balancing infrastructural
developments with
traditional use*



Tagus-Segura river basin and water transfer

*The largest inter-basin
water transfer in the
Iberian Peninsula*



Zambezi river basin

*The fourth largest river
basin in Africa*



EU Region

*Collaborating on a
coordinated and
sustainable management*

*of the WEF nexus on the
continent.*

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Danube River Basin

The Danube river basin is located in central and south-eastern Europe and is shared by 19 countries, making it the world's most international river basin.

The Danube river basin hosts a tremendous diversity of ecosystems, ranging from glaciated mountains and hills covered in forests to low-lying areas. This natural richness paired with its vast area and its many smaller rivers and streams make the management of the Danube River basin challenging.

Historically, the water from the river basin has mostly been used for agriculture. In the past decades, industry and hydropower energy production have become additional major water consumers in the area. This change is putting the river basin under pressure. The exacerbation of weather events due to climate change and the increase in population add to it. In addition, pollution by organic and hazardous substances reduces the supply of clean water. Furthermore, the river basin faces changes to its overall composition including an increase in invasive species, pollution on the groundwater level and the quality and quantity of sediment.

Working together with local stakeholders will be crucial for the results of GoNEXUS, which aim to shape the basin's future through developing scenarios of what the basin could look like in 2030. Following a period of data collection in the river basin, our researchers will organise a tailored Nexus Dialogue to meet with local actors and to determine the next steps and solutions which should be applied to the Danube river basin.

[ALL CASE STUDIES](#)

METHODOLOGY

Nexus dialogues

The nexus dialogues are a series of participatory discussions between stakeholders, policymakers and experts at various levels (including the local/ basin level, EU level, and global). They will help the GoNEXUS team to better understand existing WEFE nexus conflicts and trade-offs, incoherent sectoral policies, synergies, and uncertainties. They will also support the co-design of scenarios, models, and solutions to address nexus problems.

During the dialogue process, stakeholders will explore the projections outlined in our scenarios to discuss risk management across the nexus. Bringing together a diverse group of stakeholders will ensure that synergies and trade-offs for different sectors and WEFE elements can be thoroughly explored. The process hopes to build trust and mutual understanding between these diverse stakeholders to improve the legitimacy and uptake of solutions proposed by GoNEXUS.

Model toolbox

The model toolbox will present GoNEXUS' modelling efforts at both global and local scales. It will showcase the functional links the project aims to establish between existing global and continental models that tackle separate elements of the WEFE nexus. In addition, it will include basin-level WEFE models which will combine a variety of system analysis techniques for each different case study basin linked to global and continental model results. The model toolbox will not only allow us to assess the viability of our solutions but can also act as a methodological starter kit for future nexus research.

The model toolbox will include:

- **Thematic models** that consider the interdependency of different sectors as well as policy models for impact assessment
- A combination of existing **numerical models** of the different sectors of the WEFE nexus from global to basin/local scales
- **River basin WEFE models** that integrate all relevant nexus elements in case-study-adapted modelling frameworks.

For both the continental and global assessments, our toolbox will start with existing models for climate-water (PCR-GLOBWB and LISFLOOD-EPIC); climate-energy (PROMETHEUS and PRIMES); agriculture and land-use (CAPRI); ecosystems (GLOBIO); and the interaction of the economy, energy, and the environment (GEM-E3). Though these models are already fully operational and have been used for research and decision-making, none of them considers all WEFE components and their interconnections. GoNEXUS will work to establish a fully functional communication system between these models to better account for WEFE trade-offs and links.

GoNEXUS will contribute by:

- making the linkages between sectors and filling the gaps to create a more holistic analysis
- downscaling the assessments of global and continental WEFE models through increased modelling detail.
- enabling a detailed analysis of synergies and trade-offs across WEFE elements through explicitly incorporating WEFE linkages in a single modelling framework
- defining joint efficient and sustainable WEFE management and policies.

The **river basin models** will be tailored to each of our river basin case studies which will rely on a combination of high-resolution modelling, many-objective decision-making, hydro-economic modelling, system dynamics and agent-based behavioral modelling. By downscaling global model assessments, GoNEXUS will be able to better support work and create possible solutions at the local level.

In addition, the toolbox will also be used to **assess** the historical and future evolution of the WEFE nexus, providing evidence on the nexus management performance. It will also be used to **evaluate** the performance of solutions across multiple scales and sectors and **assess the impact** of GoNEXUS solutions to meet the challenges of climate

change and will facilitate the linkages within the nexus to be used by future researchers.

Scenarios

GoNEXUS will develop scenarios projecting future climate conditions, land use and socioeconomic effect, and policy trajectories. Combining existing datasets with expert knowledge from the nexus dialogues., we will define scenarios for 3 periods:

- 2020-2030, in line with the time horizon of the UN 2030 [Agenda for Sustainable development](#) and the EU policy framework for energy and climate 2030-2050, aligned with the time horizon of the [EU Green Deal](#)
- 2050-2100, to assess long-term implications of scenarios and solutions from the proposed scenarios from previous periods and to consider longer-term strategies (e.g., new EU energy scenarios).

Different data sets will be used for each of the scenarios:

- Land-use scenarios will be developed using data from the [Land Use Harmonisation Project](#)
- Environmental, socioeconomic, and policy scenarios will be defined based on EU strategies and adapted to the regional and local scale as defined in the nexus dialogues



POLICY SCENARIOS

will theorise how current and future nexus policies and strategies will be aligned with climate, land-use, and socio-economic projections.



REGIONAL LAND-USE AND SOCIO-ECONOMIC SCENARIOS

will be developed for each case study and will take into account global forces as well as local factors of change.



GLOBAL LAND-USE AND SOCIO-ECONOMIC SCENARIOS

Global and continental drivers meet local factors of change to estimate future land uses and socioeconomic trends.



CLIMATE SCENARIO

The new climate scenarios from the IPCC AR6 report will be adapted from global to local scales to inform adaptation decisions.

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Outcomes

Evidence and solutions

GoNEXUS will develop a dedicated **sustainability assessment framework** to identify potential security hotspots that call for water diplomacy interventions. It will include:

- indicators that assess the WEFE nexus interlinkages (such as water productivity or energy productivity)
- a set of sustainability indicators to assess the environmental, social, and economic situation and effects of interventions
- indicators that describe drivers of local and transboundary conflicts, such as migration and/or health crisis.

Building on the data collected through the case studies and scenarios, GoNEXUS will identify and assess innovative win-win solutions for more efficient, sustainable and coordinated governance of the water-energy-food-ecosystem nexus. GoNEXUS will also co-develop a **Solutions Evaluation Framework** – with the aim to co-design and assess integrated management and governance solutions and measures within the WEFE nexus across multiple scales.

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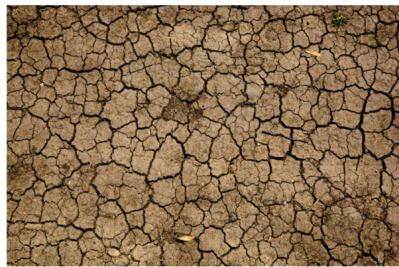
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News



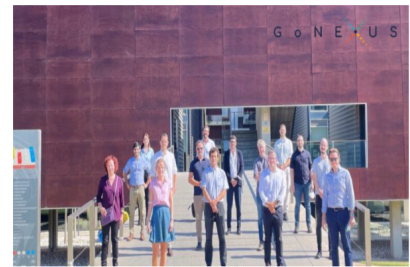
How GoNEXUS modelling can help understand climate change effects in the long-term

In the coming 4 years, GoNEXUS will use models and data to create a series [...]

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GoNEXUS at the Nexus Cluster Workshop

GoNEXUS' Coordinator Manuel Pulido-Velazquez represented our GoNEXUS project at a recent Nexus Cluster Workshop entitled 'Advancing [...]

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The GoNEXUS project kicked off on 7-8 October 2021 at the Polytechnical University in Valencia [...]

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Library

[Categories](#)

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Events

Dresden Nexus Conference 2022

23.05.2022
25.05.2022

DNC2022 focuses on
strengthening
biodiversity
DNC2022 focuses on
strengthening
biodiversity with other
challenges in society
(e.g., climate [...])

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Contact

Please, feel free to contact us
for any inquiries.

Title

Mx

Name



First



Last

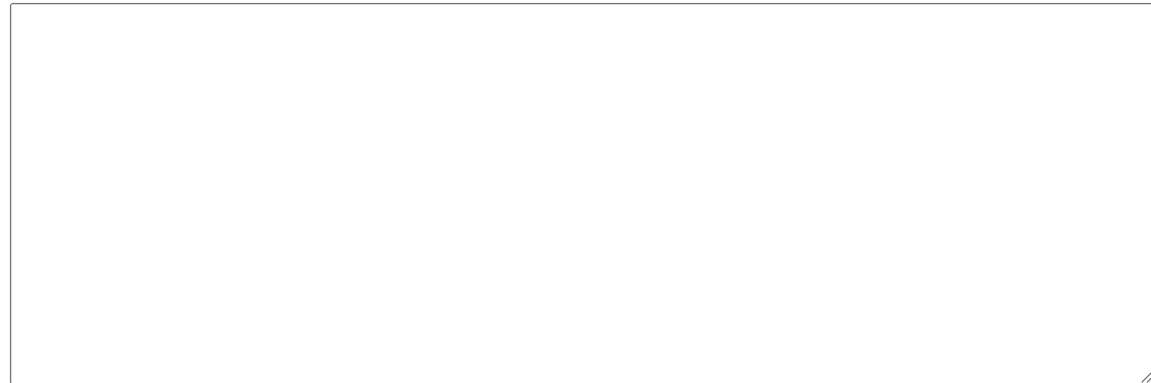
Organisation



Email *(Required)*



Message *(Required)*



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SUBMIT

Integrated solutions for water, energy, food and ecosystems

A presentation on GoNEXUS

Author and organisation

Email



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www.gonexus.eu

Please REMOVE before presenting

- All slides have notes where additional information can be found for presenting
- There are two versions of the presentation (a short and a long)
- Feel free to modify the slides to match a specific presentation **however** be sure to save as a different title
- If you are presenting these slides as a part of an external event, please take a picture and share with Arctik to post on the GoNEXUS social media
- If you have any suggestions of content to add to the general slides please email anya.Gregory@arctik.eu

For the shortened version:

- Remove full versions of case studies
- Remove full slides on goals and outcomes (scenarios, framework, solutions, toolbox)

Project Goal and Methods

- Re-balance water, food, energy and ecosystems to maximise our planet's environmental security
 - Innovative tools and solutions for governing the water-energy-food-ecosystems NEXUS
 - 8 in-depth case studies and 4 scenarios, to create a toolbox and governance framework to manage the WEF E nexus
 - H2020 project with 17 partners in Europe, Africa and Canada.
 - June 2021 – May 2025
-

The WEFE nexus



Water



Energy



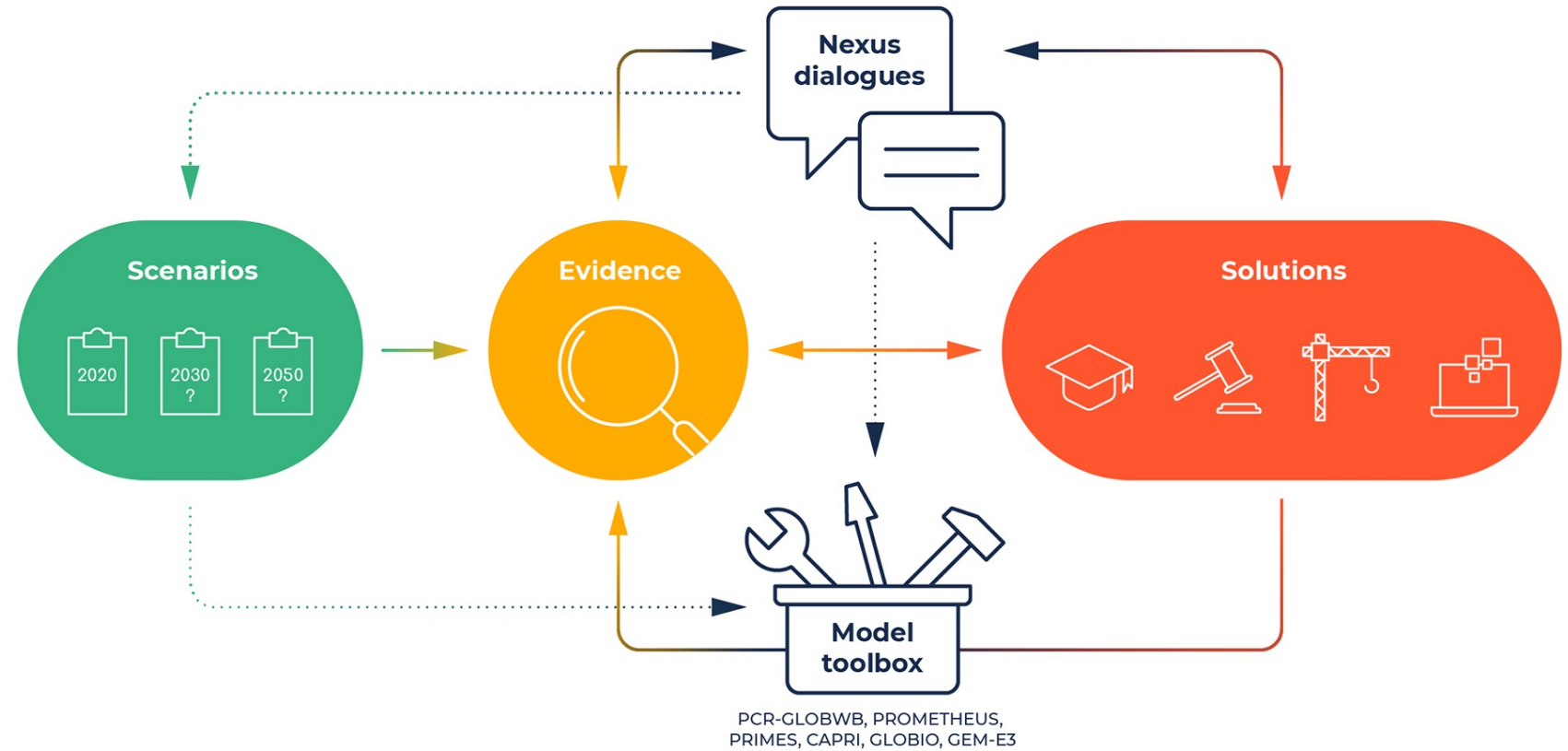
Food



Ecosystems

- tightly interlinked but mostly managed and regulated separately
- Current EU directives:
- not well aligned
- difficult local implementation

Methodology



8 unique case study areas

1. Global
2. Europe
3. Danube river basin
4. Lake Como river basin
5. Júcar river basin
6. Senegal river basin
7. Tagus-Segura river basins and water transfer
8. Zambezi river basin



Case Studies

8 case studies in Europe, Africa and Global

Danube River Basin

Objective: Assess impact of irrigation expansion (middle/lower basin) on water quality and quantity

Expected Impact:

- Improved solutions for water quality management for ecosystem conservation, the cooling of power plants and water pollution

INSERT MAP OF RIVER
BASIN AREA (FROM
WEBSITE)

Lake Como River Basin

Objective: To address 4 key challenges facing Lake Como:

- seasonal allocation of water for food and energy production, and ecosystem preservation
- development of new management for drought events
- climate change in the Alpine catchment
- adoption of novel financial tools to hedge risk

Expected Impact:

- Solutions to improve each of the challenge areas

INSERT MAP OF RIVER
BASIN AREA (FROM
WEBSITE)

Jucar River Basin

Objective: Assess equilibrium between resources and demands

Expected Impacts:

- Solutions to balance climate change impacts on WEFE production
- Improved Jucar river operating rules accounting for trade-offs
- Co-development and assessment of climate change adaptation measures accounting for the WEFE

INSERT MAP OF RIVER
BASIN AREA (FROM
WEBSITE)

Tagus-Segura river basin and water transfer

Objectives:

Improved management of the Tagus-Segura transfer to reconcile agriculture, hydropower, and environmental status in both rivers

Expected Impact:

- Mapping future evolution of regional and international conflicts
- Solutions for improved management

INSERT MAP OF RIVER
BASIN AREA (FROM
WEBSITE)

Zambezi river basin and watercourse

Objective: To address the ecosystem components of the WEFE at river corridor scale by monitoring agriculture and energy security

Expected Impacts:

- Improved food and energy security
- Determining how basin development plans relate to global and regional drivers
- Improved governance and water diplomacy solutions

INSERT MAP OF RIVER
BASIN AREA (FROM
WEBSITE)

Senegal River Basin

Objective: Improved understanding of conflicting visions on new dams, flood pulse, role of floodplains and link between climate trends and conflicts

Expected Impacts:

- Governance solutions for the river basin from nexus dialogue
- Sequencing of investments in new hydropower plants
- Impacts of a more regulated flow regime
- Influence of agriculture and development policies on ethnic conflicts

INSERT MAP OF RIVER
BASIN AREA (FROM
WEBSITE)

EU case study

Objective: More sustainable policies and solutions for the efficient and sustainable management of the WEFEnexus in Europe

Expected impacts:

- Link EU water policy objectives with sustainable objectives
- Assess the impacts of EU regulatory framework
- Reduce institutional fragmentation --> increased cross water, energy, food collaboration and multi-stakeholder engagement

Global case study

Objective:

Increased solutions and policies for WEFE nexus around the globe

Expected Impacts:

- Tailored climate change scenarios generated using global projections
 - Multi-model approach created using global climate models
 - Cross-cutting solutions
-

NEXUS dialogues

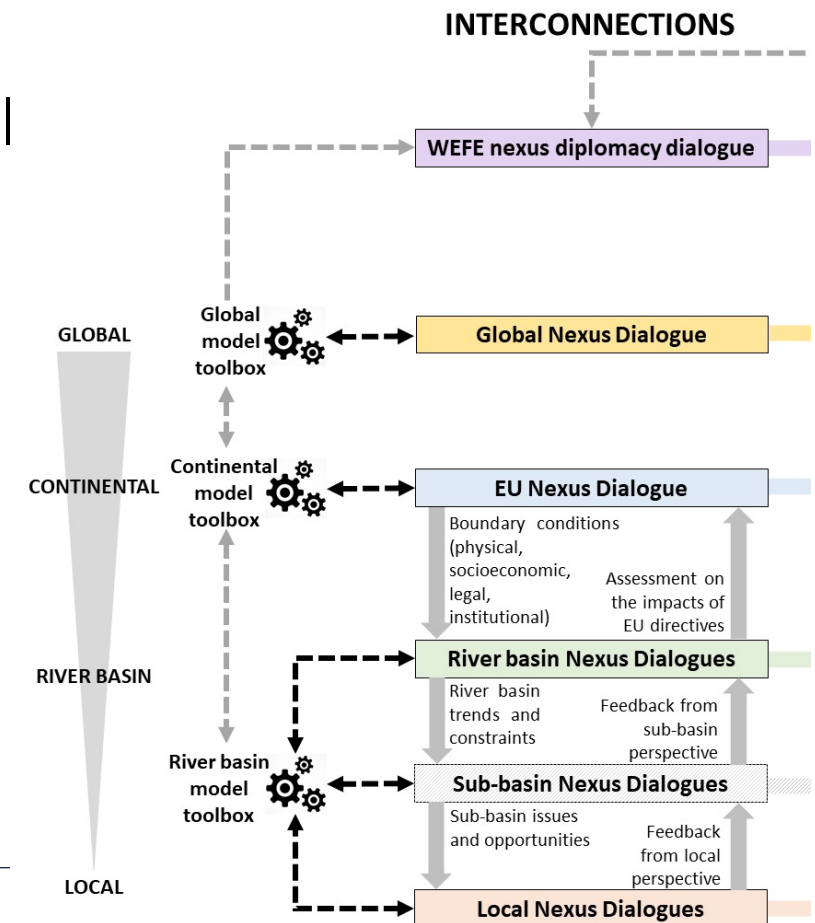
Stakeholder meetings to co-design scenarios, models, indicators and solutions

Goal : understand conflicts & trade-offs, sectoral policies, synergies, and uncertainties

Types of dialogues:

- WEF nexus diplomacy dialogue
- Global Nexus Dialogue
- EU Nexus Dialogue
- River basin Nexus Dialogues
- Sub-basin nexus dialogues
- Local nexus dialogues

EDIT DIAGRAM (ARCTIK)



Project goal and outcomes

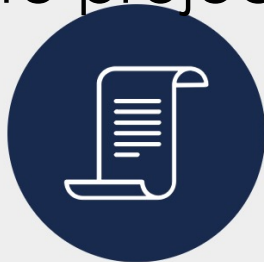
Overall goal: develop a framework for designing and assessing innovative solutions for an efficient and sustainable coordinated governance of the WEF E nexus.

Concrete outcomes include:

- Future projection scenarios
 - Solutions Evaluation Framework (SEF)
 - Sustainability Assessment Framework
 - Solutions
 - Model Toolbox
-

Future projection scenarios

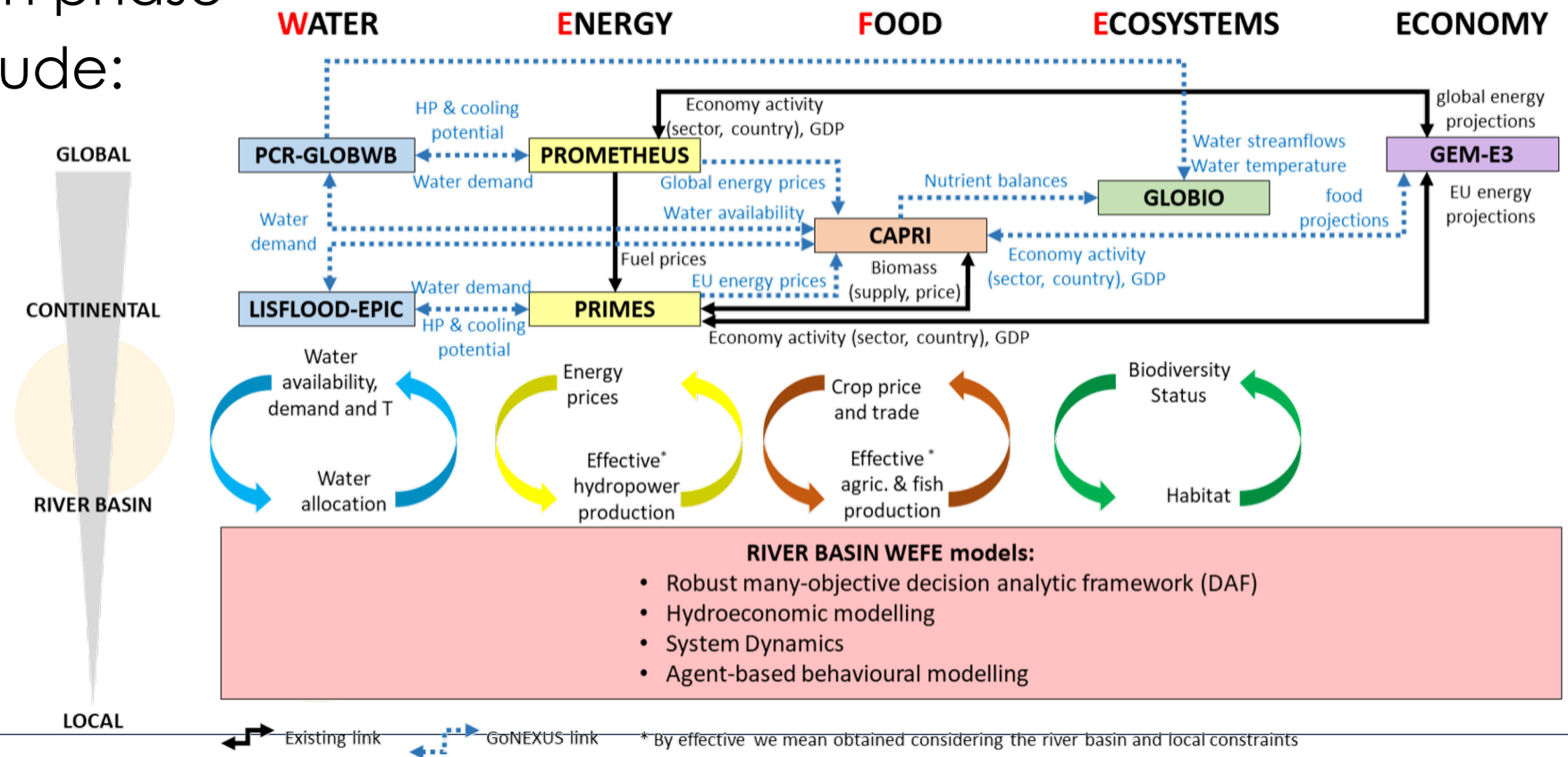
- 2030 and beyond (3 temporal periods)
- 4 scenarios tackling:
 - Current and future nexus policies and strategies
 - Continental land-use and socio-economic scenarios
 - Global land-use and socio-economic scenarios
 - Climate projections using data from tailored climate projections



Models and model toolbox

The model toolbox will consolidate models used throughout the project's research phase

Models used include:



Solutions Evaluation Framework (SEF)

- The framework will:
- co-designing & assessing innovative nexus interventions tailored to each case study
- include sustainability indicators to assess environmental, social, and economic effects of interventions
- The process includes several stages:
 1. Identify nexus solutions
 2. Assess using the Model toolbox to generate new evidence
 3. Engage dialogues to promote and co-design solutions
 4. Perform an assessment to identify barriers and design win-win solutions

Sustainability Assessment Framework (SAF)

- a hierarchical set of indicators to enable a holistic evaluation
- WEFE indicators and sustainability indicators to provide a solid evidence
- Case-study tailored and co-developed within the Nexus Dialogues

INSERT IMAGE

Evidence and solutions

- WEF E nexus management solutions will be co-designed and tested using the **Solutions Evaluation Framework**.

Including:

- Technical and operational solutions
 - Risk-hedging instruments
 - Institutional changes
 - Policy changes
-

Optional addition: Status, Progress and Next Steps

- Add information depending on the presentation you are giving and the timeline of the presentation

Contact us!

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Project Partners



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G O N E X U S

*Integrated solutions for
water, energy, food and
ecosystems*



Introduction

As populations and economies continue to grow, the demand for water, energy and food is set to increase as well, placing a strain on ecosystems and challenging livelihoods and economic development. The effects of global climate change will further increase pressure on natural resources, and life as we know it will be left hanging in the balance.

GoNEXUS will work to re-balance water, food, energy and ecosystems to maximise our planet's sustainable development and wellbeing. Through in-depth case studies scenarios, and dialogues the project will create a future-proof toolbox and solutions to manage the WEFE nexus.

Case study areas

A total of six case study basins in Europe and Africa.
Two additional studies will span Europe and the globe.



WATER

GoNEXUS will determine the impacts of changing temperatures and rain on water resource availability and management from global to local scales.



ENERGY

GoNEXUS will estimate the impact of shifts in energy demand and production and define solutions to guarantee sustainable energy production.



FOOD

GoNEXUS will assess agricultural water demands and crop-yield changes caused by climate change, as well as shifting global and local markets.



ECOSYSTEMS

GoNEXUS will investigate the impact of climate change and increased human pressures on the environment, which all profoundly affect ecosystems to provide context-specific results and insights.

> Danube River Basin

Shared by 19 countries, the most international river basin is challenged by its diverse ecosystems and increased usage for hydropower energy production.

> Lake Como

This popular tourist destination sees agriculture, tourism, drinking water supply and hydropower competing for resources.

> Júcar River Basin

In a precarious resource-demand balance, the different actors in this basin are faced with dwindling water availability under a changing climate.

> Tagus-Segura River Basin and water transfer

The largest inter-basin water transfer, bringing together two unique rivers to supply one of the most important agricultural areas in Europe, is now being challenged by growing demand, strong climate vulnerability and controversy.

> Senegal River Basin

Infrastructural developments and traditional resource uses are on a collision course in this river basin.

> Zambezi River Basin

Crossing eight states and serving 30 million inhabitants, this basin faces WEFE nexus issues and trade-offs including hydro-power, agricultural development and environmental protection.

> Europe

Studying WEFE trends on the continental level can unearth potential trends and solutions which can be used to achieve the objectives of EU environmental policies like the EU Green Deal.

> Globe

This case study will analyse global trends in the WEFE nexus and the impact of current global policies to determine possible cross-cutting solutions.

Future scenarios

Looking forward to 2030 and beyond, GoNEXUS will develop the following scenarios based on existing data and stakeholder inputs.



Land-use and socioeconomic scenarios (regional and global)

Land-use and socioeconomic scenarios will take into account the global/continental driving forces, such as climate projections, global and continental land use trends and policy drivers, as well as local factors of change.



Climate scenarios

Climate scenarios will project future climate conditions using a multi-model ensemble and data from an ensemble of General Circulation Models.

These scenarios will be done for both the river basin and local scales as well as global and continental scales.



Policy scenarios

Policy scenarios will theorise how current and future WEFE policies and strategies will align with climate, land-use, and socio-economic projections.

Our results

GoNEXUS will co-design solutions with stakeholders and develop a **solutions evaluation framework (SEF)** to ensure that the solutions are technically, socially and politically feasible, efficient, and sustainable.

Evidence and the Sustainability Assessment Framework (SAF)

The SAF will guide the processing of the raw scenario data and model toolbox results to understand nexus interlinkages and the effectiveness of solutions towards pressing nexus challenges.

The model toolbox

The model toolbox will be used to evaluate the current situation and provide the data used to assess the effectiveness of solutions to address the challenges caused by climate change and other projected changes. It will start from existing models, such as CAPRI, LISFLOOD-EPIC, PROMETHEUS, and GEM-E3.

The solutions will include:



Policy solutions that build on existing policies and reflect the interlinked nexus-related synergies and trade-offs



Technical and operational solutions to increase efficiency and suggest new methods for evaluating infrastructure developments



Risk-hedging instruments such as water pricing policies, water markets and index-based insurance policies



Institutional changes reflecting good practices for coordinated resource governance

Contact us

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