TAKE THE INITIATIVE!

#EUGreenWeek
13–17 MAY 2019

SIM4NEXUS
Greenweek Partner Event
Brussels
16 May 2019

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 689150 SIM4NEXUS
The Nexus concept in transdisciplinary research

• Sustainable Integrated Management FOR the Nexus of water-land-food-energy-climate for a resource-efficient Europe
  • Target at a resource-efficient Europe
  • Nexus-compliant practices at different scales (regional, national, transboundary, European and global) regarding water-land-food-energy-climate
  • Focus on the sustainable & integrated management of resources
Nexus approach

• **Scientific inquiry** explicitly focusing on bio-physical, socio-economic and policy interactions (synergies and trade-offs) across sectors, with end goal of sustainable and integrated management of natural resources

• **Approach to (cross-sectoral) decision making and planning** that takes an explicit focus on interactions (synergies and trade-offs) between policy goals and instruments across sectors to enhance policy coherence
Achieving resource efficiency in Europe is a challenge. It requires exploitation of synergies and mitigation of trade-offs across water, energy, food, climate and land. Implementations need the active participation among government, the private sector, academia and civil society. Nexus concept will support this.

Resource efficiency is supported by knowledge on how Nexus sectors operate: how to create synergies in climate action with water, energy, food and land? Search for policy coherence.
The solution in SIM4NEXUS

A Serious Game is developed to learn from modelling tools, using impact assessment approaches and expert knowledge. SIM4NEXUS develops the game through 12 cases across Europe. The case studies use transdisciplinary approaches, driven by stakeholder needs.
Visualisation and interaction tool
What can be the role of biomass in the Dutch transition to a low-carbon economy by 2050?

Is it possible to enlarge energy self-supply, by widening the use of renewable energy sources in Latvia?

How to achieve both the transition to low-carbon economy and the sustainable management of water resources in the Rhine region?

Does the landscape structure dominated by monoculture-like crop areas in some of the lower parts and its alterations by energy production affect the water cycle in an unfavorable way?

How national policies in water management, renewable power production and land, affect each other and result in changes in food production, tourism, GHG emissions, quantity & quality of water resources?

How can agricultural and environmental policies be integrated to address pressures on land and water whilst promoting their sustainable use and economic development?

How to reach a resilient system able to satisfy all demands under climate change?

Does the goal of becoming a fossil-free nation interfere with some of the national environmental objectives such as sustainable development of water and forest resources?

What are the Nexus issues at the global scale?

What are the implications of Azerbaijan’s transition to a low-carbon economy on the different Nexus domains?
Examples of good practice

United Utilities uses qualitative and quantitative approaches to assess a wide range of risks associated with operational, financial and corporate resilience issues. The company also uses these approaches to develop options that include collaborating with third parties and promoting solutions that take advantage of, and work with, natural processes.

South West Water also provides high-quality evidence of collaboration with stakeholders to develop efficient options and integrated systems around resilience. One example is its collaboration within the multi-stakeholder SIM4NEXUS research project to improve its understanding of the inter-relationships and interdependencies of water, energy and land management in the South West of England.
Playing the SIM4NEXUS Serious Game

• Beta version (use Use Chrome)
• Link to game site: http://seriousgame.sim4nexus.eu/
• Game in action - youtube: https://youtu.be/oNQ7-akoaaw
• Introduction document: https://docs.google.com/document/d/15bI NdQHRXXafMgY3xFejrL84qOxGA9MyWSntAlN3Dtc/edit?usp=sharing
Program of today

• Achieving SDGs for water, land, energy, food and climate (Jonathan Doelman, PBL) – The Nexus in the SDGs

• How will achieving the climate goals affect energy, water, land, agriculture, food? (Jason Levin-Koopman, WR) – Nexus and transition towards a low-carbon economy in Europe

• Successful policies in a nexus context (Trond Selnes – WR; Maria Witmer – PBL)

• Nexus: Global – European – national and regional
Thanks for your attention!

For further information please consult www.sim4nexus.eu, follow us at @SIM4NEXUS
floor.brouwer@wur.nl