

BIOPHYSICAL AND SOCIO-ECONOMIC MODELLING

In the NEXOGENESIS project, the use of **biophysical and socio-economic modelling** defines interactions and interdependencies among human and natural systems needed to verify and improve policies related to the WEF (Water-Energy-Food-Ecosystem) nexus for effective resource management. But what is biophysical and socio-economic modelling? Here are some explanations.

What is “biophysical and socio-economic modelling”?

First of all, here are some definitions to better understand the concept of “biophysical and socio-economic modelling”:

- “Biophysical” = interdisciplinary science of biological and physical factors that define interactions between atmosphere, hydrosphere, biosphere, natural resources and their use, as a whole NEXUS ecosystem.
- “Socio-economic” = socioeconomics is an interdisciplinary science which mixes tools and methods used in social science and in economics to investigate the economic evolution of societies.
- “Modelling” = modelling is the activity of using mathematical models to do calculations, simulations of impacts of policies or exogenous events (e.g., pandemic), or predict what might happen in the future, under certain conditions.



Biophysical and socio-economic modelling in the NEXOGENESIS project

In NEXOGENESIS, we will investigate the biophysical (e.g., climate, hydrology, land cover) and socio-economic (economic development, agriculture, urban growth) conditions that affect the WEF nexus through the combination of already existing models and data.

This will provide series of future scenarios taking into account different biophysical and socio-economic conditions in order to provide indications to policy makers about exacerbation of conflicts and relationships in the WEF nexus.

To learn more about the project, please visit our website: <https://nexogenesis.eu/>

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