

Links to regional and global modelling toolbox and data

The Regional and Global nexus models and their properties

	 Water	 Food	 Energy		
Model feature	PCR-GLOBWB	CAPRI	PROMETHEUS	GEM-E3	GLOBIO
Model type	Global hydrology and water resources rainfall model	Global agro-economic model with regionalized EU detail	Global macro-econometric energy, environment and economy model	Multi-regional, multi-sectoral, general equilibrium (CGE) model	Global biodiversity model
Main topics	- climate and socioeconomic change impact assessment - water abstraction - water availability	- agricultural trade, - bioenergy - water policies, - climate impacts	-energy balances -CO2 emissions -energy technology penetration, -prices and costs.	Macro-economy and its interaction with the environment and the energy system	-freshwater fish species distributions and diversity
Nexus components	Water, land, climate	Food, water, bioenergy, environment, climate	Energy, climate, environment	Energy, Environment, Economy	Environment, biodiversity
Geographic coverage	Global	Global	Global	Global	Global
Spatial resolution	5 arcminutes (about 10x10 km)	World regions	World regions	World regions	5 arcminutes (about 10x10 km)
Application to case studies	Global	Global		Global and	Global
Time step	Daily	Annual		Decadal	5 years steps
Time frame	Until 2100	Until 2050	Until 2050	Until 2050	Until 2100
Partner	UU	UPM	E3M	E3M	PBL

Also at European scale:

  LISFLOOD-EPIC

 CAPRI

 PRIMES

Regional and global model codes

Below are the links to the source code (when available) and model documentation of the Nexus models that are part of the regional and global modelling toolbox.

PCR-GLOBWB 2

Model code

https://github.com/UU-Hydro/PCR-GLOBWB_model

Model documentation

<https://pcrglobwb.readthedocs.io/en/latest/#>

Lisflood-EPIC

model code

<https://github.com/ec-jrc/lisflood-code>

Model documentation

<https://ec-jrc.github.io/lisflood-model/>

PRIMES

Model documentation

[PRIMES – E3 Modelling](#)

Also description on the EC portal for modeling tools: [Modelling tools for EU analysis - European Commission](#)

PROMETHEUS

Model documentation

[PROMETHEUS – E3 Modelling](#)

GEM-E3

Model documentation

[GEM-E3 – E3 Modelling](#)

CAPRI

Model executables

https://www.capri-model.org/dokuwiki_help/doku.php?id=getting_started_with_capri#download_the_current_release

Model documentation

https://www.capri-model.org/dokuwiki_help/doku.php

GLOBIO

Model code

<https://github.com/GLOBIO4/GlobioModelPublic/wiki>

Model documentation

<https://www.globio.info/>

Regional and global model data from scenario runs

Tier 1 – Global

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/1_PCR_GLOBWB/)

[shared/2_Baseline_tier_1_model_runs/1_Global_models/1_PCR_GLOBWB/](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/1_PCR_GLOBWB/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/2_CAPRI_global_runs/)

[shared/2_Baseline_tier_1_model_runs/1_Global_models/2_CAPRI_global_runs/](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/2_CAPRI_global_runs/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/3_PROMETHEUS/)

[shared/2_Baseline_tier_1_model_runs/1_Global_models/3_PROMETHEUS/](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/3_PROMETHEUS/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/4_GEM_E3/)

[shared/2_Baseline_tier_1_model_runs/1_Global_models/4_GEM_E3/](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/4_GEM_E3/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/5_GLOBIO/)

[shared/2_Baseline_tier_1_model_runs/1_Global_models/5_GLOBIO/](https://geo.data.uu.nl/research-gonexus-shared/2_Baseline_tier_1_model_runs/1_Global_models/5_GLOBIO/)

Tier 1 – Europe

Lisflood-EPIC

HTTPS: <https://jeodpp.jrc.ec.europa.eu/ftp/private/zyWXm7fga/cSqZ5potYSKnyZt5/>

Tier 2 – Global

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/1_PCR_GLOBWB/)

[shared/3_Baseline_tier_2_model_runs/1_Global_models/1_PCR_GLOBWB/](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/1_PCR_GLOBWB/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/3_PROMETHEUS/)

[shared/3_Baseline_tier_2_model_runs/1_Global_models/3_PROMETHEUS/](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/3_PROMETHEUS/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/4_GEM_E3/)

[shared/3_Baseline_tier_2_model_runs/1_Global_models/4_GEM_E3/](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/4_GEM_E3/)

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/5_GLOBIO/)

[shared/3_Baseline_tier_2_model_runs/1_Global_models/5_GLOBIO/](https://geo.data.uu.nl/research-gonexus-shared/3_Baseline_tier_2_model_runs/1_Global_models/5_GLOBIO/)

Policy – Global

[https://geo.data.uu.nl/research-gonexus-](https://geo.data.uu.nl/research-gonexus-shared/4_GoNEXUS_solution_runs/1_Global_models/1_PCR_GLOBWB/)

[shared/4_GoNEXUS_solution_runs/1_Global_models/1_PCR_GLOBWB/](https://geo.data.uu.nl/research-gonexus-shared/4_GoNEXUS_solution_runs/1_Global_models/1_PCR_GLOBWB/)