Guidelines for Model Descriptions

Contact: EU-MIDAS@ec.europa.eu

This document gives guidance on what is required **to add a new model description in MIDAS**. Complete and save the filled document and email it to EU-MIDAS@ec.europa.eu.

The information provided will be published under EU copyright. Information coming from existing technical reports or scientific articles needs to be clearly cited, not to violate existing copyrights. This is especially relevant if the organisation running the model is different from the one that owns the intellectual property rights.

Some information requested **will not** be made available on the public website. These fields are clearly indicated in red.

General editorial guidelines:

- **Figures, tables and footnotes are not allowed**. Please complete the sections in plain text.
- **Spell out all acronyms.**
- **Cite any source** (such as reports and scientific publications, data, and software) using **scientific citation standards**. Include identifiers such as DOI, catalogue number assigned by the Publications Office or JRC number, whenever these are available.
- Reference to a policy must be accompanied by its official number (example: COM/20XX/NNNN). In case of doubt, follow the Interinstitutional style guide.
- Consult the Commission style guide for web writing.

Model Name and Acronym

Provide the acronym under which the model is known (do not include version numbers) and the full name of the model (do not repeat the acronym).

Acronym:

Full title:

Model Overview

Main purpose

Explain the essence of the model. We strongly suggest to use non-technical language and to simply describe the type and main purpose of the model (max 250 characters).

Summary

This is the non-technical summary of the model description, while the details are provided in the various sub-sections. The summary should be of very good quality and concise (suggested length is 250 to 300 words). Avoid anything that causes this section to be quickly outdated, like references to upcoming developments. We suggest to structure the summary in three paragraphs:

- **(WHO), WHAT and WHY?** If relevant, you may include (in maximum 1 sentence) the model history, such as who is the main developer (example: The model was designed by … in order to simulate … for the purpose of ….).
- **HOW?** Brief summary of the model type, structure and modelling approach.
- **ROLE IN THE POLICY CYCLE**: Potential use of the model in the various phases of the policy cycle. You may optionally include past and present highlights.

Subject Matter

List the main subject matters applicable to the model. Be aware that, where possible, MIDAS will map your selection to an entry in the **Digital Europa Thesaurus (DET)** so it may not appear exactly as listed. This element is used to tag the models in MIDAS.

Model Category (thematic)

Please select from the list. This element is used to tag the models in MIDAS. More than one option can be selected.

- ☐ Agriculture
- ☐ Climate
- ☐ Health
- ☐ Economy
- ☐ Energy
- ☐ Environment
- ☐ Fisheries
- ☐ Population
- ☐ Territory
- ☐ Transport
- ☐ Other

Ownership & license

Ownership

In MIDAS, ownership is the information about a person or an entity who holds the Intellectual Property Rights (IPR), more specifically copyright, in a model and/or computer code underpinning it.

Please select from the list the type of ownership of the model in the sense of Intellectual Property Rights:

- ◯ EU ownership (European Commission)
- ◯ EU ownership (other than European Commission: e.g. European Parliament, European Central Bank, ...)
- ◯ EU agencies' ownership
- ◯ Third-party ownership (commercial companies, Member States, other organisations, …)
- ◯ Co-ownership (EU & third parties)
- ◯ Public domain
- ◯ Other

Ownership details

if you selected third party, please name the third party.

Licence type

We distinguish two possible types (free and non-free), with the following conditions. For each type please always try to specify the specific licence.

Type	Definition
Free software license	The free software licence grants: • freedom to run the program for any purpose; • freedom to study (by accessing the source code) how the program works, and change it so it does to enable computing; • freedom to redistribute copies; • freedom to distribute copies of modified versions to others. You can use the European Union Public Licence (https://joinup.ec.europa.eu/software/page/eupl/licence-eupl). Even though considered a free licence, it is not fully compatible with the GNU General Public Licence (https://www.gnu.org/licenses/gpl-3.0.html).
Non-Free Software licence	If any single freedom comprising free software licence is restricted, software licences are not free: • Licence that prohibits creation of derivative works; • Licence that prohibits commercial use; • Licence that obligates to share the licensed or derivative works on the same conditions; • Licence with any combination of the restrictions above.

Please select as applicable:

- ○ free license
- ○ non free license
- ○ unknown/absent

Specific licence (not on public website):

Please specify, if known, the specific licence you are using or bound by.

Details

Model type

Please select from the list the type of model:

- ○ Top-down Computable general equilibrium (CGE) model
- ○ Top-down Dynamic Stochastic General Equilibrium model
- ○ Top-down Input-output model
- ○ Top-down Econometric model
- ○ Top-down System dynamics model
- ○ Bottom-up Partial equilibrium (PE) model
- ○ Bottom-up Multi-agent model
- ○ Bottom-up Micro-simulation model
- ○ Bottom-up Simulation model
- ○ Bottom-up Optimization model
- ○ Process (or Physics)-based model
- ○ Statistical model
- ○ Cost-Benefit Analysis (CBA) model
- ○ Other

Model structure and approach

Describe the model structure and modelling approach with any key assumptions, limitations and simplifications.

Input and parametrization

Please list the key inputs used for the model, using bullet points.

- INPUT 1
- INPUT 2
- ….

In addition, you may also provide additional information on input and parametrization, such as formats and sources.

Note: please be brief. Information related to the model itself, like information flow within the system, can be added in the section above ‘Model structure and approach’.

Main output

Please list the key outputs produced by the model, using bullet points.

- OUTPUT 1
- OUTPUT 2
- ….

In addition, you may provide additional relevant information.

Spatial extent

Does the model output refer to one or more specific entities of **economic geography**? Please list the entities (Global, EU Member states 27, BRICS countries, Switzerland, Italy …..)

Spatial resolution

What is the spatial resolution of the model output? Please select as applicable from the list below. More than one option can be selected.

- ☐ World-regions (supranational)
- ☐ National
- ☐ Sub-national (NUTS1)
- ☐ Sub-national (NUTS2)
- ☐ Sub-national (NUTS3)
- ☐ Sub-national (other)
- ☐ Municipality
- ☐ Entity (farm, bank, vehicle, bicycle, cell, project etc.) **(specify)**:
- ☐ Regular Grid < 1km
- ☐ Regular Grid 1km - 10km
- ☐ Regular Grid 10km - 50km
- ☐ Regular Grid >50km
- ☐ Irregular grid
- ☐ Other **(specify)**:

Temporal extent

What is the temporal extent of the model output? Please select as applicable from the list below. More than one option can be selected.

- ☐ Very short-term (less than 1 year)
- ☐ Short-term (from 1 to 5 years)
- ☐ Medium-term (5 to 15 years)
- ☐ Long-term (more than 15 years)
- ☐ Other **(specify)**:

Temporal resolution

What is the temporal resolution of the model output? Please select as applicable from the list below. More than one option can be selected.

- ☐ Milliseconds
- ☐ Seconds
- ☐ Minutes
- ☐ Hours
- ☐ Days
- ☐ Weeks
- ☐ Months
- ☐ Quarterly
- ☐ Seasons
- ☐ Years
- ☐ Multiple years
- ☐ Other (example: flexible, i.e. depending on the input data) **(specify)**:

Quality & reliability

Please complete the questions. Select a response and provide explanations using clearly understandable sentences. The information must refer to the model itself and not to its use in one specific impact assessment or study.

Model uncertainties

Models are by definition affected by uncertainties (in input data, input parameters, scenario definitions, etc.). Have the model uncertainties been quantified? Are uncertainties accounted for in your simulations? [If not, why? (E.g. too demanding, don't know how to do it, other reasons)]

- ◯ Yes
- ◯ No
- ◯ Not applicable

Explanation

Sensitivity analysis

Sensitivity analysis helps identifying the uncertain inputs mostly responsible for the uncertainty in the model responses. Has the model undergone sensitivity analysis? [If not, why? (too demanding, don't know how to do it, other reasons)]

- ◯ Yes
- ◯ No
- ◯ Not applicable

Explanation

Model validation

Has model validation been done? Have model predictions been confronted with observed data (ex-post)?

- ◯ Yes
- ◯ No
- ◯ Not applicable

Explanation

Peer-review

Have model results been published in peer-reviewed articles?

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide persistent identifier(s) to the article(s) (such as DOI)

Scientific review

Has the model formally undergone scientific review by a panel of external experts? (Please note that this does not refer to the cases when model results were validated by stakeholders)

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide persistent identifier(s) to the report(s) (such as DOI)

Transparency

Please complete the questions. Select a response and provide explanations using clearly understandable sentences. The information must refer to the model itself and not to its use in one specific impact assessment or study.

Input data

To what extent do input data come from publicly available sources? (Note: this may include sources accessible upon subscription and/or payment)

- ○ Entirely based on publicly available sources
- ○ Based on both publicly available and restricted-access sources
- ○ Entirely based on restricted-access sources

Is the full model database as such available to external users? (The answer 'yes' comprises the cases when access to the database implies a specific procedure or a fee)

- ○ Yes
- ○ No

If the answer is ‘yes’, please explain how the database can be accessed or provide a URL where to find information about access conditions.

Output data

Have model results been presented in publicly available reports? (Note: this excludes IA reports and peer-reviewed articles)

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide persistent identifier(s) to the report(s) (such as DOI).

Have output datasets been made publicly available? (Note: this could also imply a specific procedure or a fee)

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide a URL where these datasets can be found.

Is there any user-friendly interface presenting model results – such as dashboards or interactive interfaces – that is accessible to the public?

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide a URL or explain.

Source code

Is the model code open source?

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide a URL where the source code is published.

Can the code be accessed upon request? (Select 'not applicable' if the model code is open source)

- ◯ Yes
- ◯ No
- ◯ Not applicable

If the answer is 'yes', please explain how the code can be accessed or where to find information about access conditions.

Documentation

Has the model been documented in a publicly available dedicated report or a manual? (Note: this excludes IA reports)

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide persistent identifier(s) to the documentation (such as DOI).

Is there a dedicated public website where information about the model is provided?

- ◯ Yes
- ◯ No

If the answer is 'yes', please provide a URL.

The model's policy relevance and intended role in the policy cycle

Policy areas

Please select from the list the policy areas the model is designed to contribute to. Multiple choices are possible.

- ☐ Agriculture and rural development
- ☐ Banking and financial services
- ☐ Borders and security
- ☐ Budget
- ☐ Business and industry
- ☐ Climate action
- ☐ Competition
- ☐ Consumers
- ☐ Culture and media
- ☐ Customs
- ☐ Digital economy and society
- ☐ Economy, finance and the euro
- ☐ Education and training
- ☐ Employment and social affairs
- ☐ Energy
- ☐ Environment
- ☐ EU enlargement
- ☐ European neighbourhood policy
- ☐ Food safety
- ☐ Foreign affairs and security policy
- ☐ Fraud prevention

- [ ] Home affairs
- [ ] Humanitarian aid and civil protection
- [ ] Institutional affairs
- [ ] International cooperation and development
- [ ] Justice and fundamental rights
- [ ] Maritime affairs and fisheries
- [ ] Migration and asylum
- [ ] Public health
- [ ] Regional policy
- [ ] Research and innovation
- [ ] Single market
- [ ] Sport
- [ ] Statistics
- [ ] Taxation
- [ ] Trade
- [ ] Transport
- [ ] Youth

Policy cycle

Please select from the list the phases of the policy cycle the model is designed to contribute to. Multiple choices are possible.

- [ ] Anticipation – such as foresight and horizon scanning
- [ ] Formulation – such as ex-ante impact assessments
- [ ] Implementation – this also includes monitoring
- [ ] Evaluation – such as ex-post evaluation
- [ ] Other: European Semester

Model's potential: summary

Please describe in short if and how the model can be used in support of the policy cycle, focusing on the potential. You can also add here if the model has been designed to support a specific policy or group of policies. You might illustrate relevance and intended role by highlighting past and ongoing activities.

Impact assessments

Please fill in the following section if the model was used in ex-ante impact assessments of the European Commission.

In case the model contributed to more than 2 impact assessments please fill and save an additional form.

Impact assessment 1

Date:

Impact assessment title:

The model contributed to:

- ☐ baseline and assessment of policy options (most common case)
- ☐ contribution to baseline only
- ☐ problem definition
- ☐ (ex post) evaluation of existing policy

Organization running the model in support of the impact assessment:

Provide a paragraph describing the models contribution to the impact assessment. Please note here (if applicable) the full reference to any study carried out in support of the impact assessment.

Impact assessment 2

Date:

Impact assessment title:

The model contributed to:

- ☐ baseline and assessment of policy options (most common case)
- ☐ contribution to baseline only
- ☐ problem definition
- ☐ (ex post) evaluation of existing policy

Organization running the model in support of the impact assessment:

Provide a paragraph describing the models contribution to the impact assessment. Please note here (if applicable) the full reference to any study carried out in support of the impact assessment.

Who runs the model, why & how

Please provide an overview of who runs the model on behalf of the Commission and how the model is configured.

Organisation acronym:

Organisation name:

Organisation type:

- ○ European Commission
- ○ External

Commission Departments using the model:
e.g. JRC.E.1 or ECFIN.DDG2.B.3

Contact point (not on public website):

Purpose (not on public website):
Reason why the model is run, e.g. on behalf of a policy DG, as part of an operative system, in the context of a research project, etc.

Other References

Please list any other relevant references (policy relevant studies, modelling exercises etc.) about the model, using identifiers such as DOI, catalogue number assigned by the Publications Office or JRC number, whenever these are available. Elsewhere in the document you have already provided references to any peer-reviewed articles, other publicly available reports presenting model results and model documentation, you do not need to repeat these here.