



Max-Planck-Institut
für Meteorologie



Max-Planck-Institute for Meteorology

ICON Modelling Framework

License Agreement

4. July 2018

Software License Agreement

between

Max-Planck-Gesellschaft zur Förderung der Wissenschaften e.V.

represented by

Prof. Dr. Jochem Marotzke

Director

Max Planck Institute for Meteorology (MPI-M)

Bundesstrasse 53, 20146 Hamburg, Germany

- (hereinafter referred to as „**the Licensor**“)

and

the Licensee.

The Licensee will identify himself before downloading the software and will be registered in a Database

or

accepts the license by using the software,

hereinafter jointly called the „**Parties**“

concerning



Licensing of the ICON-Software for Personal Non-commercial Research Purposes

Preamble

In recent years The Deutscher Wetterdienst (DWD) and The Max Planck Institute for Meteorology (MPI-M) have jointly developed the comprehensive modelling framework ICON (ICOsahedral Nonhydrostatic) for numerical weather prediction, climate simulation and process studies (ICON modelling framework).

The ICON-Software is a scientific software and addresses the scientific community.

Accordingly, DWD and MPI-M are willing to make available the corresponding ICON-Software to the scientific community using many elements of open source licensing, but not all. The software is available via free download on a public domain, the use will be free of charge for non-commercial research purposes, users can develop new code and distribute the outcome freely with a copyleft note and a developing community, repository or forum will be established.

Notwithstanding the foregoing the user is not entitled to distribute and/or pass on the licensed software unless expressly permitted.

However, the ICON-Software developed must remain controllable and documented. It is also important and desirable to provide feedback to the model developers, to report errors and to suggest improvements of the code. This is the spirit behind the following Software License Agreement, which the Licensor must ask the users to accept before a user can receive the ICON-Software.



It is to be noted that the ICON-Software is made available under this Software License Agreement as a personal, non-institutional, license for non-commercial research purposes only.

1. Implementation and Scope of this Software License Agreement

This license is issued via a web platform¹ being provided by the Licensor. Licensees will become part of the ICON-research community and will receive news regarding important developments of the ICON-Software.

The licensed product will be delivered via download. This Software License Agreement needs to be accepted before the download by way of a checkbox on the web platform.

Any use of the ICON-Software is conditional upon and therefore leads to an implied acceptance of the terms of this Software License Agreement. The ICON-Software repository includes a copy of this Software License Agreement with the source code containing a reference to it.

The Licensor reserves the right to license the ICON-Software under different terms and conditions at any time.

The failure to comply with this agreement terminates the rights under this license. In case the Licensee destroys or deletes the ICON-Software, this license will be terminated automatically. The user may obtain a new and recent version of the ICON-Software including a recent license on the above mentioned web platform.

2. The Licensed Product

Subject to the provisions of this Software License Agreement, the Licensor grants to the Licensee the right to use the following software referred to as the "ICON-Software". The ICON-Software includes the source code, executable programs, run scripts and data files.

Name: ICON modelling framework

¹ <http://www.mpimet.mpg.de/en/science/models/license/>



Short description: Non-hydrostatic numerical model for the simulation of the atmosphere, the ocean and the surface/soil.

Access: The ICON-Software is accessible to the Licensee via a password protected server at MPI-M

The ICON modelling framework is built up from several components (e.g. model data) which can be configured to obtain different model configurations. Depending on the version of the ICON modelling framework, different model configurations are provided to the Licensee.

The Licensor reserves the right to modify the ICON modelling framework and releases new versions of it. Together with each new version of the ICON modelling framework, the Licensor can release a new version of this license. Each version of the ICON modelling framework must only be used with the corresponding version of this license.

The ICON-Software consists and makes use of components / configurations being jointly developed and provided by the MPI-M and the DWD (see Section 2.1) as well as various other third party components (see Section 2.2) as set out in detail in the following sections.

2.1. ICON modelling framework

The ICON modelling framework is built up from several components which can be configured to obtain different model configurations. The following configuration has been developed by the MPI-M and DWD as part of this license.

- Atmosphere: Dynamical core and physics packages
- Ocean: Dynamical core, physics package and ocean-biogeochemistry , wrapper for AWI-Sea-Ice model
- Land: physics packages and land biogeophysics and biogeochemistry.
- Grid generator
- MTIME
- Grid Tools by DWD
- CDI
- ESM Scripting Environment



2.2. Third party components

The ICON-Software makes use of the following third party components:

- AWI Sea Ice model (modified GNU GPL v2)
- ECMWF Routines (See appendices)
- YAC (GNU GPL V3)

The applicable license terms regarding third party components being used by Licensor are set out in in appendix “Third party license terms”. The Licensor provides these “Third party license terms” by way of information only. The Licensee is responsible for compliance with the respective license terms.

3. Grant of Rights

The ICON-Software is licensed for non-commercial research purposes only. The term “non-commercial research purposes” refers to any academic research which is not undertaken for profit and is not intended to produce results, works, services, or data for commercial use by anyone. For clarification purposes, academic sponsored research (“third party funding”) is not a commercial use under the terms of this license agreement.

The licensing or any other transfer of the ICON-Software (as licensed by Licensor to Licensee) to a third party is not permitted unless authorized by the Licensor. Each and any use of the ICON-Software beyond the stipulated rights of use is not permissible and is regarded as a breach of this Software License Agreement and will automatically terminate the license. The Licensor may terminate the contract at any time in case of a justified important cause.

If not stipulated otherwise in this Software License Agreement, Licensor grants to Licensee the right to install, execute, copy, decompile, modify, revise or form a work based on the ICON-Software without limitation in time, manner or place subject to the terms of this Software License Agreement. The Licensee may use, modify, develop or create new configurations out of the provided model configurations. All alterations to the ICON-Software by the Licensee have to be marked clearly and publications of the results obtained with modified versions of the ICON-Software must contain a description of the changes made.



The Licensor does not assume any responsibility nor liability for configurations being modified or newly created by the Licensee.

Products (e.g. model forecasts/simulations) obtained from the use of the ICON-Software may be used only and exclusively for non-commercial research purposes.

Insofar Licensee has modified the ICON-Software as licensed by Licensor to Licensee, Licensee may only grant rights of use with regard to any such modified ICON-Software to third parties being themselves already Licensees to the ICON-Software. Depending on the version of the ICON modelling framework, different model configurations may be provided to the Licensee. Scripts with various model configurations are included in a tarball archive as part of the ICON-Software. It is recommended to use recent ICON modelling framework versions including recent model configurations only; older versions may not reflect the recent state of the art.

Apart from components being developed by the MPI-M and the DWD (see Section 3.1), the ICON-Software makes use of or requires the use of third party components that are subject to certain license conditions. If not stated otherwise, licensing of third party components is not part of this Software Licensing Agreement, instead the Licensee is required to obtain the applicable licenses from the respective Licensor (see Section 3.2).

3.1 ICON modelling framework

The ICON-Software underlies certain restrictions of use by the licensee. Use of the ICON-Software is permitted for non-commercial research purposes only. It is explicitly prohibited to use the ICON-Software or parts of it, whether modified or not, for commercial purposes or operational use.

The Licensee is encouraged to communicate any use, results, modification or publications documenting model improvements of the ICON-Software to the ICON-Forum² so that the information can be used to improve the ICON-Software.

² <http://www.mpimet.mpg.de/en/science/models/icon/icon-users-forum/>



When publishing results generated with ICON-Software, Licensee agrees to refer to appropriate publications according to the appendix "Reference list" of this Software License Agreement. The ICON-Software must be explicitly mentioned and modifications must clearly be described. Depending on the degree of involvement of scientists of the MPI-M or DWD in the publications, their help must be acknowledged and co-authorship shall be offered.

In addition, notice of copyright, serial numbers or any other means used for the identification of the ICON-Software may not under any circumstances be removed or altered.

3.2 Third party components

The ICON-Software makes use of or requires the use of third party components (including - as the case may be - components of Open-Source Software) that are being provided under certain license conditions (see Section 2.2). The use of third party components is subject to the respective license terms of the respective rights holder. The Licensor does not grant any rights to third party components, which are required for the use of the ICON-Software, even if these components are being provided by the Licensor. In order to make use of these components the Licensee is obliged to acquire the necessary licenses from the respective Licensor on the Licensee's own initiative and responsibility. In this regard, Licensee's contractual partner is the rights holder named in the respective license terms and conditions.

4. Intellectual Property Rights of the ICON-Software, of the Outcomes and further Developments of ICON Software

The intellectual property rights of the ICON-Software belong to DWD and MPI-M and other creators of the software. Regarding the use of third party components, the Licensee is obliged to comply with the requirements as set out in the respective license terms. Licensee may obtain and make use of intellectual property rights only to the extent provided for in the respective third party license terms.

Subject to the above, the following applies:



The intellectual property rights to the outcomes (i.e. all knowledge that could be derived from the usage of the ICON-Software, in particular through the scientific analysis of the products generated) and the further development of the software belong to the Licensee.

The Licensee herewith grants to the DWD and MPI-M the non-exclusive, free of charge right to use the outcomes and further developments of the ICON-Software, for commercial and operational purposes, for the fulfilment of the respective statutory tasks, and non-commercial research, academic and teaching purposes, without limitation in time, manner and place.

If the Licensee plans to apply developments to the code for commercial and/or operational purposes or for the fulfilment of statutory tasks which demand substantial investments, change the IPR of the resulting code or require in-depth expertise w.r.t. the existing code or w.r.t. merging developments back into the existing code, he is asked to consult the Licensor on obtaining an institutional license (ref).

In that case a shared copyright is to be established for those developments.

Licensee grants Licensor the right to pass on the respective outcomes/developments of the ICON-Software to third parties under the abovementioned conditions.

Licensee has the right to use all outcomes and further developments of the ICON-Software free of charge for non-commercial research and teaching purposes.

5. License Fees

The license is free of charge for non-commercial research purposes.

The licensor reserves the right to demand license fees for the grant of rights of later versions or other configurations of the ICON Framework or in case of commercial and/or operational use of the license granted.

6. Liability, Damages

Licensor does not provide any support for the ICON-Software.



Licensee acknowledges that the ICON-Software has not been fitted especially to Licensee's purposes and will be provided "as is". Licensee needs to make sure that the ICON-Software does fulfill Licensee's requirements.

Due to the fact that this Software License Agreement qualifies as a donation, according to Section 521 of the German Civil Code (Bürgerliches Gesetzbuch – BGB) Licensors as donors are liable for intent and gross negligence only.

If the Licensor fraudulently conceals a legal or material defect, they are obliged to compensate the Licensee for the resulting damage.

Licensor shall be liable for loss of data only up to the amount of typical recovery costs which would have arisen had proper and regular data backup measures been taken.

For the avoidance of doubt Licensor shall be liable in accordance with the German Product Liability Act in the event of product liability.

The foregoing applies also to Licensor's legal representatives or assistants in performance.

Any further liability shall be excluded.

7. Defects of the ICON-Software including defects in title

Defects of the ICON-Software must be notified in writing to the Licensor with a comprehensible description of the error symptoms. The notification of the defect should enable the reproduction of the error.

Amendments or additions to the ICON-Software which Licensee carries out shall lead to a loss of Licensee's rights in case of defects, unless Licensee proves that the amendment or addition did not cause the defect. Licensor shall also not be responsible for defects, which are caused by improper use or improper operation or the use of unsuitable means of operation by Licensee.

Licensor has done the utmost to avoid any faults or defects in title in the ICON-Software provided. To the Licensor's knowledge, the ICON-Software delivered or provided by Licensor is free from third party rights, which prevent the use in accordance with the Software License Agreement. However,



the Licensor does not warrant or represent that the ICON-Software is free from the abovementioned third-party rights and Licensor does not assume any responsibility nor liability in this regard. Any responsibility and liability shall vest in Licensee.

Licensee shall inform Licensor in writing without delay of any claim by a third party. In addition, Licensee shall give Licensor all powers of attorney and authorisations which are necessary in order to defend the software against these claims.

To the extent that there are defects in title, Licensor is entitled at his option to either (i) take legitimate measures to remove the respective third party components, which impair the contractual use of the ICON-Software, or (ii) remedy the enforcement of third party claims, or (iii) change or replace the ICON-Software in such a manner, that it no longer infringes the rights of third parties.

8. Final Provisions

This Agreement shall be governed by the laws of the Federal Republic of Germany except for the UN Sales Convention.

The courts of Munich shall have exclusive jurisdiction over all disputes under and in connection with this Agreement if upon the commencement of legal proceedings, Licensee has no place of business or ordinary residence in the Federal Republic of Germany.

Should any provision of this Software License Agreement be or become invalid, this shall not affect the validity of the remaining terms.

9. Appendices

Reference list:

- Crueger T. et al. (2018). ICON-A, the atmosphere component of the ICON Earth system model: II. Model evaluation. Journal of Advances in Modeling Earth Systems, 10.
<https://doi.org/10.1029/2017MS001233>
- Giorgetta M. A. et al. (2018). ICON-A, the atmosphere component of the ICON Earth system model: I. Model description. Journal of Advances in Modeling Earth Systems, 10.
<https://doi.org/10.1029/2017MS001242>
- Heinze R. et al. (2017). Large-eddy simulations over Germany using ICON: a comprehensive evaluation. Q. J. R. Meteorol. Soc., 143(702), 69–100. <https://doi.org/10.1002/qj.2947>
- Korn P. (2017). Formulation of an unstructured grid model for global ocean dynamics. Journal of Computational Physics, 339(C), 525–552. <https://doi.org/10.1016/j.jcp.2017.03.009>
- Zängl, G., Reinert, D., Ripodas, P. and Baldauf, M. (2015). The ICON (ICOsahedral Non-hydrostatic) modelling framework of DWD and MPI-M: Description of the non-hydrostatic dynamical core. Q. J. R. Meteorol. Soc., 141, 563-579. <https://doi.org/10.1002/qj.2378>
-

Third party license terms

- AWI FEOM Sea Ice License ("FEOM License.pdf")
- License for ECMWF Routines ("LicenseECMWF-Routines.pdf")
- License for YAC ("GNU GPL V3.pdf")