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# ESM-Tools

## Newsletter November 2018

Last update from: November 9, 2018

### Announcements:

#### First release:

September 4, 2018

#### Next planned release:

February 5, 2019

#### Next planned code freeze:

January 21, - February 5, 2019

#### Next esm-tools Developer Meetings:

December 4, 2018

January 8, 2019

February 5, 2019

9:00-11:00, AWI, Building F,  
Glaskasten

### User Support:

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Dear users of the esm-tools,

this is the third edition of the esm-tools newsletter. We will give you an update about general news, new features, bug-fixes and upcoming features as discussed in the last esm-tools developer meeting. You are kindly invited to the next esm-tools developer meeting on December 4 from 9-11 in the Glaskasten of building F.

Best wishes

The esm-tools developer team

## 1. News

### 1.1. esm-tools@gitlab.dkrz

**Contribution guide:** A short description of the branching model and how to contribute to the development of the esm-tools can now be found in the release branch of esm-master and esm-runscripts (see file CONTRIBUTING.md and also an updated version of README.md).

**GitLab issue labels:** If you create a new issue for the esm-tools on GitLab, please consider to give it an appropriate label. There are already a few labels setup to choose from.

**GitLab issue templates:** For esm-runscripts (release branch) we started to create templates for new issues and merge requests. Please consider using such a template if suitable. We will continue to add more templates of different kinds.

### 1.2. esm-tools development

**Code documentation:** To enable the preparation of a code documentation we decided to establish a common way to comment the source code of the esm-tools. When you are a developer and work on new features or improvement of existing functions, please consider to add comments. To generate the code documentation, it is necessary to write these comments in a certain syntax. A short example of how such comments can be written is shown in the appendix box and will be described in more detail on the wiki page of the esm-runscripts repository.

### 1.3. Model experiments

**Pool data:** For Fesom1.4, a new pool directory for meshes and restart files is available on Mistral at DKRZ under the following path:  
/pool/data/AWICM/FESOM1/

## 2. Bug-fixes

Affected esm-tool: esm-environment

Bug: Error during compilation using esm-master (e.g.  
make comp-awicm-CMIP6)

Bug fixed in branch: release, develop

## 3. Pitfalls and known issues

### 3.1. Juwels

- Failing experiments on Juwels at FZJ. Status: User support is informed
- Pool directory of input data. Status: Data are copied to Juwels but need to be placed so that all users have access to it.

## 4. Upcoming features for next release

- Compiling of PISM with esm-master
- Vilma support
- GUI for esm-master
- NEMO and NEMO-IFS support
- Get around esm-environment
- Monitoring and error handling during model runtime
- Supported scenarios (e.g. HIST)
- Automated tests

## 5. Wishlist for upcoming features

- Possibility to change the Echam output via the run-script

## A. esm-tools@gitlab.dkrz

Each repository of the esm-tools has two branches. The default branch is 'release'. This is the branch that will come with 'git clone' and holds the latest stable version of the esm-tools. We highly recommend to all users to use this release branch when carrying out model experiments. We will only give full user support to this 'release' branch.

### Supported Branches

- release
  - Default branch
  - Latest stable release
  - Full user support
  - Update only at next planned release date
  - Bugfixes will be merged at any time
- develop
  - Branch to collect new features and bugfixes for next release
  - Testing
  - Work in progress
  - Limited developer support
  - Will be merged into release at next planned release date
- feature branches of developer
  - Development branches for new features and bugfixes
  - Non-permanent
  - No user support

## B. Documentation

### esm-usermanual

The current version of the usermanual can be found here:

[https://gitlab.dkrz.de/esm-tools/esm-usermanual/blob/release/esm\\_usermanual.pdf](https://gitlab.dkrz.de/esm-tools/esm-usermanual/blob/release/esm_usermanual.pdf)

### GitLab Wiki

For each esm-tools repository you find a Wiki page. Here you will find a How to ...? section and other FAQ and known issues. You are very much welcome to add new entries or answer questions from others. Thank you in advance for your participation. Here is the link to the esm-runscripts Wiki:

<https://gitlab.dkrz.de/esm-tools/esm-runscripts/wikis/home>

### Code documentation

To generate a documentation of the source code we use doxygen. The documentation will be generated automatically. In order to make your comments readable by the doxygen system they need to have the following syntax. Each comment line has to start with ##. Please place at least the following two lines directly above the function and adapt them with respect to your code:

```
## @fn function_name()
## @brief Short description
```