



**HORIZON 2020**

**IMMERSE**

(Grant Agreement 821926)

Improving Models for Marine EnviRonment

SErvices Deliverable D2.2 **Public**

## 1. Introduction and context

While the development of the NEMO ocean model code-base has long been centralized and coordinated by the NEMO consortium, the specific configuration of the model code-base used for setting up a modelling system is generally left to the users. There is therefore no centralized distribution of NEMO configurations beyond the reference configurations which are distributed as examples with the NEMO code-base.

SIMSAR defines a protocol for users (inc. CMEMS MFCs) to exchange the information required for reproducing a NEMO experiment across different groups. The ambition of this tool is to improve the reproducibility of NEMO experiments by allowing users to exchange their model configurations effortlessly. With this approach, we hope to accelerate CMEMS service evolution in the future.

## 2. Scope of NEMO-SIMSAR

Ocean model simulations that are based on the NEMO ocean modelling framework ([nemo-ocean.eu](http://nemo-ocean.eu)) consists of several components:

- The *source code* provided by NEMO and by the user (FORTRAN code)
- *Build settings* (model components, compiler options)
- Runtime *parameters* (FORTRAN and XML namelists)
- *Input data* files (e.g. grid, bathymetry, boundary conditions, initialisation)

While the first two components define a certain "configuration", the latter two provide the details for a specific experiment with the said configuration. Both together form a simulation.

SIMSAR allows users to create a package containing all the necessary information in order to share it with other users intending to reproduce the simulation or to start from this simulation with their own settings.

## 3. NEMO-SIMSAR code

The source code for SIMSAR is available at : <https://github.com/immerse-project/nemo-simsar>

github.com/immerse-project/nemo-simsar

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mscheinert	Update issue templates	9377f51 on 13 Oct 2020	13 commits
.github	Update issue templates		8 months ago
bin	release-1.0.0-beta.2		8 months ago
docs	FIX: #3 (add disclaimer&privacy text, link and disable google fonts)		8 months ago
overrides/partials	FIX: #3 (add disclaimer&privacy text, link and disable google fonts)		8 months ago
src	release-1.0.0-beta.2		8 months ago
tests	Initial Commit, starting with release-1.0.0-beta.1		8 months ago
.gitignore	release-1.0.0-beta.3: minor changes in README, fixed Logo link & ...		8 months ago
README.md	release-1.0.0-beta.3: minor changes in README, fixed Logo link & ...		8 months ago
mkdocs.yml	Fix: #19		8 months ago

README.md



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## nemo-simsar

Document your NEMO ocean model simulations and share them with others using git remote repositories.

This project is part of the [IMMERSE Project](#) funded by the EC.

### 1. Description

Ocean model simulations that are based on the NEMO ocean modelling framework (`nemo-ocean.eu{: target=_blank}`) consists of several components:

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While the first two components define a certain "configuration", the latter two provide the details for a specific experiment with the said configuration. Both together form a **simulation**.

The recipes and the tools in this project allows users to create a package containing all the necessary information in order to share it with other users intending to reproduce the simulation or to start from this simulation with their own settings. See also the documentation in the `doc/` folder for more details.

#### Features

- Interactive script in order to create a README file (Markdown format) giving an overview of the simulation's settings and providing instructions how to include it in your own NEMO framework.
- Recipe to extract and upload a configuration from inside the NEMO framework into a remote git repository

### 2. Requirements

Assuming you're working on a \*nix like system you have to meet the following pre-requisites before running a tool or following a recipe from this project:

- A working **NEMO framework** (see `nemo-ocean.eu{: target=_blank}`)

**About**  
Tools and guides how to share NEMO user configurations & experiments with others using a git repository.  
Readme

**Releases**  
No releases published  
[Create a new release](#)

**Packages**  
No packages published  
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**Environments** 1  
`github-pages` Active

**Languages**

- Python 98.5%
- HTML 1.5%

#### **4. Documentation**

A comprehensive documentation, including instructions and examples is available on IMMERSE project website at : <https://immerse-ocean.eu/nemo-simsar/>

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# nemo-simsar

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