

# CMIP6 Model Documentation

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<b>Model:</b>	NORES2-HH
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<b>Note:</b>	* indicates a required property

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# 1 Key Properties

*Land ice key properties*

## 1.1 Key Properties

*Land ice key properties*

### 1.1.1 Name \*

*Name of landice model code*

**Enter TEXT:**

### 1.1.2 Keywords \*

*Keywords associated with landice model code*

**Enter COMMA SEPERATED list:**

### 1.1.3 Overview \*

*Overview of landice model.*

**Enter TEXT:**

### 1.1.4 Ice Albedo \*

*Specify how ice albedo is modelled*

**Select MULTIPLE options:**

- ☐ Prescribed
- ☐ Function of ice age
- ☐ Function of ice density
- ☐ Other - please specify:

### 1.1.5 Atmospheric Coupling Variables \*

*Which variables are passed between the atmosphere and ice (e.g. orography, ice mass)*

**Enter COMMA SEPERATED list:**

### 1.1.6 Oceanic Coupling Variables \*

*Which variables are passed between the ocean and ice*

**Enter COMMA SEPERATED list:**

### 1.1.7 Prognostic Variables \*

*Which variables are prognostically calculated in the ice model*

Select **MULTIPLE** options:

- ☐ Ice velocity
- ☐ Ice thickness
- ☐ Ice temperature
- ☐ Other - please specify:

## 1.2 Software Properties

*Software properties of land ice code*

### 1.2.1 Repository

*Location of code for this component.*

Enter **TEXT**:

### 1.2.2 Code Version

*Code version identifier.*

Enter **TEXT**:

### 1.2.3 Code Languages

*Code language(s).*

Enter **COMMA SEPERATED** list:

## 2 Grid

*Land ice grid*

### 2.1 Grid

*Land ice grid*

#### 2.1.1 Name

*Name of grid in landice model.*

**Enter TEXT:**

#### 2.1.2 Overview

*Overview of grid in landice model.*

**Enter TEXT:**

#### 2.1.3 Adaptive Grid \*

*Is an adative grid being used?*

**Select either TRUE or FALSE:**

☐ True      ☐ False

#### 2.1.4 Base Resolution \*

*The base resolution (in metres), before any adaption*

**Enter FLOAT value:**

#### 2.1.5 Resolution Limit

*If an adaptive grid is being used, what is the limit of the resolution (in metres)*

**Enter FLOAT value:**

#### 2.1.6 Projection \*

*The projection of the land ice grid (e.g. `albers_equal_area`)*

**Enter TEXT:**

## 3 Glaciers

*Land ice glaciers*

### 3.1 Glaciers

*Land ice glaciers*

#### 3.1.1 Name

*Commonly used name for the glaciers in landice model.*

**Enter TEXT:**

#### 3.1.2 Overview

*Overview of land ice glaciers in landice model.*

**Enter TEXT:**

#### 3.1.3 Description \*

*Describe the treatment of glaciers, if any*

**Enter TEXT:**

#### 3.1.4 Dynamic Areal Extent

*Does the model include a dynamic glacial extent?*

**Select either TRUE or FALSE:**

☐ True      ☐ False

## 4 Ice

*Ice sheet and ice shelf*

### 4.1 Ice

*Ice sheet and ice shelf*

#### 4.1.1 Name

*Commonly used name for the ice in landice model.*

**Enter TEXT:**

#### 4.1.2 Overview

*Overview of ice sheet and ice shelf in landice model.*

**Enter TEXT:**

#### 4.1.3 Grounding Line Method \*

*Specify the technique used for modelling the grounding line in the ice sheet-ice shelf coupling*

**Select SINGLE option:**

- ☐ Grounding line prescribed
- ☐ Flux prescribed (Schoof)
- ☐ Fixed grid size
- ☐ Moving grid
- ☐ Other - please specify:

#### 4.1.4 Ice Sheet \*

*Are ice sheets simulated?*

**Select either TRUE or FALSE:**

- ☐ True
- ☐ False

#### 4.1.5 Ice Shelf \*

*Are ice shelves simulated?*

**Select either TRUE or FALSE:**

- ☐ True
- ☐ False

## 4.2 Mass Balance

*Description of the surface mass balance treatment*

#### 4.2.1 Overview

*Overview of description of the surface mass balance treatment in landice model.*

**Enter TEXT:**

#### 4.2.2 Surface Mass Balance \*

*Describe how and where the surface mass balance (SMB) is calculated. Include the temporal coupling frequency from the atmosphere, whether or not a separate SMB model is used, and if so details of this model, such as its resolution*

**Enter TEXT:**

### 4.3 Basal

*Description of basal melting*

#### 4.3.1 Bedrock

*Describe the implementation of basal melting over bedrock*

**Enter TEXT:**

#### 4.3.2 Ocean

*Describe the implementation of basal melting over the ocean*

**Enter TEXT:**

### 4.4 Frontal

*Description of calving/melting from the ice shelf front*

#### 4.4.1 Calving

*Describe the implementation of calving from the front of the ice shelf*

**Enter TEXT:**

#### 4.4.2 Melting

*Describe the implementation of melting from the front of the ice shelf*

**Enter TEXT:**

### 4.5 Dynamics

#### 4.5.1 Overview

*Overview of in landice model.*

**Enter TEXT:**

#### 4.5.2 Description \*

*General description of ice sheet and ice shelf dynamics*

**Enter TEXT:**



### 4.5.3 Approximation \*

*Approximation type used in modelling ice dynamics*

Select **MULTIPLE** options:

- ☐ SIA
- ☐ SAA
- ☐ Full stokes
- ☐ Other - please specify:

### 4.5.4 Adaptive Timestep \*

*Is there an adaptive time scheme for the ice scheme?*

Select either **TRUE** or **FALSE**:

- ☐ True
- ☐ False

### 4.5.5 Timestep \*

*Timestep (in seconds) of the ice scheme. If the timestep is adaptive, then state a representative timestep.*

Enter **INTEGER** value: