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**PRIMAVERA**

Grant Agreement 641727



**PRocess-based climate sIMulation: AdVances in high resolution modelling and  
European climate Risk Assessment**

**Deliverable D6.1**

***Model configurations for Stream1 integrations***

Deliverable Title	<i>Model configurations for Stream1 integrations</i>	
Brief Description	<i>Report on model configurations for Stream 1 integrations agreed by all partners and published on project website</i>	
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Lead Beneficiary	<i>KNMI</i>	
Contributors	<i>Rein Haarsma</i>	
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		<i>P - Prototype</i>
		<i>D - Demonstrator</i>
		<i>O - Other</i>
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		<i>PP - Restricted to other programme participants, including the Commission services</i>
		<i>RE - Restricted to a group specified by the consortium, including the Commission services</i>
		<i>CO - Confidential, only for members of the consortium, including the Commission services</i>

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## **1. Executive Summary**

The model configurations for stream 1 integrations for PRIMAVERA are the same as those for HighResMIP. They are described in the HighResMIP contribution for the CMIP6 special issue of Geoscientific Model Development (<http://www.geosci-model-dev-discuss.net/gmd-2016-66/>). This paper is published as a discussion paper 9 April 2016 and is now under review. Before submission it has been discussed and reviewed within PRIMAVERA and the HighResMIP community.

PRIMAVERA has initiated HighResMIP, that is now CMIP6 endorsed. Apart from the 6 PRIMAVERA centres<sup>1</sup> 13 other research centres will perform the Tier 1 integrations of HighResMIP.

## **2. Project Objectives**

With this deliverable, the project has contributed to the achievement of the following objectives (DOA, Part B Section 1.1) WP numbers are in brackets:

No.	Objective	Yes	No
A	To develop a new generation of global high-resolution climate models. (3, 4, 6)	Y	
B	To develop new strategies and tools for evaluating global high-resolution climate models at a process level, and for quantifying the uncertainties in the predictions of regional climate. (1, 2, 5, 9, 10)		N
C	To provide new high-resolution protocols and flagship simulations for the World Climate Research Programme (WCRP)'s Coupled Model Intercomparison Project (CMIP6) project, to inform the Intergovernmental Panel on Climate Change (IPCC) assessments and in support of emerging Climate Services. (4, 6, 9)	Y	
D	To explore the scientific and technological frontiers of capability in global climate modelling to provide guidance for the development of future generations of prediction systems, global climate and Earth System models (informing post-CMIP6 and beyond). (3, 4)		N
E	To advance understanding of past and future, natural and anthropogenic, drivers of variability and changes in European climate, including high impact events, by exploiting new capabilities in high-resolution global climate modelling. (1, 2, 5)		N
F	To produce new, more robust and trustworthy projections of European climate for the next few decades based on improved global models and advances in process understanding. (2, 3, 5, 6, 10)	Y	
G	To engage with targeted end-user groups in key European economic sectors to strengthen their competitiveness, growth, resilience and ability by exploiting new scientific progress. (10, 11)		N

<sup>1</sup> Met Office, KNMI, CERFACS, MPG, SMHI, BSC.

H	To establish cooperation between science and policy actions at European and international level, to support the development of effective climate change policies, optimize public decision making and increase capability to manage climate risks. (5, 8, 10)		N
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### **3. Detailed Report**

The link to the detailed report (35 pages) is:

<http://www.geosci-model-dev-discuss.net/gmd-2016-66/>

### **4. Lessons Learnt**

The lessons learnt are that an open discussion not only within PRIMAVERA, but also with other interested research centres is vital to obtain a successful protocol. This protocol will not only be followed by the PRIMAVERA partners, but also by a much larger community. For the Tier 1 integrations, apart from the 6 PRIMAVERA research groups, 13 other centres have expressed their interest to the CMIP6 panel to perform these integrations.

### **5. Links Built**

There is a strong link by HighResMIP with other CMIP6 endorsed MIP's such as GMMIP and CORDEX.