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Project acronym: ENSEMBLES

Project title: ENSEMBLE-based Predictions of Climate Changes and their Impacts

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**Deliverable Reference Number and Title**

**Milestone 3.6**

**Every RCM is assigned a GCM/emission scenario member to be used as boundary/forcing conditions in RT2B.**

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Organisation name of lead contractor for this deliverable

Revision [draft, 1, 2, ..]

<b>Project co-funded by the European Commission within the Sixth Framework Programme (2002-2006)</b>		
<b>Dissemination Level</b>		
<b>PU</b>	Public	
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	
<b>CO</b>	Confidential, only for members of the Consortium (including the Commission Services)	

### **Milestone 3.6: Every RCM is assigned a GCM/emission scenario member to be used as boundary/forcing conditions in RT2B**

In order to focus on the choice of GCM-RCM combinations we have decided to use the A1B scenario for all simulations (Decision made at RT3 workshop in Copenhagen March 2006). Uncertainties due to the choice of emissions scenario are in many aspects less important than the choice of GCM-RCM combinations for European conditions by the end of the century (Déqué et al., PRUDENCE Special Issue of Climatic Change). Also, since most of the simulations will only cover the first half of the 21<sup>st</sup> century, choice of emissions scenario will be less important in determining the overall uncertainty.

A matrix of GCM-RCM combinations has been set up by WP3.3 (see Table). The table expresses how we ideally would see the RCM/GCM matrix filled in order to fulfil the basic requirements for becoming more evenly spread across the ENSEMBLES of GCM models, than would be the case using a simple 'wish list' (i.e. where all participants list their own first choice). When completing the table we have decided not to assign the first priority by partners as the contractual obligation run(s). Instead these choices have in several instances become the additional run that we would like to include in the ENSEMBLES of RCM simulations and partners have indicated their willingness to this.

In addition to the simulations listed in the table there is an opportunity to downscale also two members of the perturbed physics ensemble as simulated by HadCM3 at the Hadley Centre. The two simulations are chosen so that they span a significant range of climate sensitivity (close to the range of the models assessed in the IPCC AR4) and have a significant range of climate responses over Europe (in terms of surface temperature and pressure and precipitation). Access to these experiments has been offered by the Hadley Centre.

**Table.** Proposed simulations with Global models and Regional models. Instead of naming the models we list the name of the partner producing the simulations (for more detail refer to Table 6.9 in the DoW). Simulations denoted with \* are outside of the contractual obligation of the partners. Partners denoted \*\* are not obliged to do any simulations within RT2B of ENSEMBLES. Simulations beyond 2000 are part of the RT2B contribution to ENSEMBLES, while simulations up till 2000 are for RT3.

<b>Global model</b>	<b>METO-HC</b>	<b>MPIMET</b>	<b>IPSL</b>	<b>CNRM</b>	<b>NERSC</b>	<b>Total number</b>
<b>Regional model</b>						
<b>METO-HC</b>	1950-2100	1950-2100				2
<b>MPIMET</b>		1950-2100	1950-2050*			2
<b>CNRM</b>				1950-2050		2
<b>DMI</b>		1950-2100		1950-2050*		2
<b>ETH</b>	1950-2050					1
<b>KNMI</b>		1950-2050				1
<b>ICTP</b>		1950-2050				1
<b>SMHI</b>	1950-2050				1950-2050*	2
<b>UCLM</b>	1950-2050					1
<b>C4I</b>		1950-2050				1
<b>GKSS**</b>			1950-2050*			1
<b>Met.No**</b>					1950-2050*	1
<b>CHMI**</b>	1950-2050*					1
<b>Total (1950-2050)</b>	5	6	2	2	2	17