



Project no. **GOCE-CT-2003-505540**

Project acronym: **Euro-limpacs**

Project full name: **Integrated Project to evaluate the Impacts of Global Change on European Freshwater Ecosystems**

Instrument type: **Integrated Project**

Priority name: **Sustainable Development**

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Generation of Climate change scenarios for key sites in Euro-limpacs adapted to the requirements of modelling groups in all work programmes

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Actual submission date: July 2005

Start date of project: **1 February 2002**

Duration: **5 Years**

Organisation name of lead contractor for this deliverable: **NERC (Report by UIBK)**

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Dissemination Level (tick appropriate box)		
PU	Public	<input checked="" type="checkbox"/>
PP	Restricted to other programme participants (including the Commission Services)	<input type="checkbox"/>
RE	Restricted to a group specified by the consortium (including the Commission Services)	<input type="checkbox"/>
CO	Confidential, only for members of the consortium (including the Commission Services)	<input type="checkbox"/>

INTRODUCTION

Future climate scenarios for key freshwater sites across Europe are derived from Regional Climate Models within Task 1 of Workpackage 1. Results from the Regional Climate Models will be adapted to the specific requirements of the different working groups at the selected key sites. The same approach will be used as in the current EU-CLIME project. A major task is to provide consistent scenarios for all the work within Euro-limpac.

MODELS

Driving Global Circulation Models are HadAM3 (Hadley Center, UK) and ECHAM4/OPC3Y (Max-Planck Institute, Germany) using the IPCC SRES forcing scenarios A2 and B2. The applied Regional Climate Model is RCAO (Rossby Centre, SMHI, Sweden) with a horizontal resolution of about 50 km (Table 1).

Table 1. Available simulations.

RCM	RCAO					
Simulation	Control (1961-1990)			Scenario (2071-2100)		
Applied GCM	HadAM3	ECHAM4 / OPYC3	HadAM3		ECHAM4 / OPYC3	
SRES scenarios			A2	B2	A2	B2

DATA

There is a general need for :

- monthly, daily and 6-hourly output data from the RCAO model for the scenario period 2071-2100 as well as for the control simulations (1961-1990)
- transient scenarios

Partners were provided with a guide to download climate scenario data from the EU-PRUDENCE web-page (<http://prudence.dmi.dk/>). This project has finished by October 2004, and there is open access now to climate scenario data from various Regional Climate Models. Daily, monthly and seasonal climate scenario data for the period 2071-2100 (partners can select up to 18 variables, Table 2) can be downloaded either in ASCII format or by the DODS data system.

Table 2. List of variables available from the EU-PRUDENCE web-page (<http://prudence.dmi.dk/>):

t2m	2-meter temperature (K)
precip	Precipitation (mm/day)
clcov	Total cloudiness (Fraction)
evap	Evaporation (mm/day)
snow	Snow water equivalent (mm)
runoff	Total runoff (mm/d)
soilw	Soil moisture (mm)
Psurf	Surface pressure (hPa)
MSLP	Mean sea level pressure (hPa)
t2max	Daily maximum 2-meter temperature (K)
t2min	Daily minimum 2-meter temperature (K)
w10m	10-meter wind speed (average length of the wind vector) (m/s)
w10max	10-meter daily maximum wind speed (m/s)
q2m	2-meter specific humidity (kg/kg)
SWnet	Net SW radiation (W/m ²) positive
SWdown	Downward SW radiation (W/m ²) positive
LWnet	Net LW radiation (W/m ²) positive
LWdown	Downward LW radiation (W/m ²) positive downward

Data available from the PRUDENCE web page meet the requirement for providing all working groups with consistent climate scenario data.