Management and Impacts of Climate Change Programme
GICC
CRP 2000

1/00 – Climate change simulations database for impact studies

Summary of Final Report

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The 'Climate change simulations database for impact studies' project resulted not only in the collection of a number of climate change simulations available in France and their conversion to a common format, but also in a higher level of communication between academic communities of climate specialists and those working on impact studies .

One of our first activities was to provide guidance to users of the database.
The most frequently asked questions concerned:

- the relationship between observations and the models' outputs, and more generally the meaning and the limitations of these data;
- the sampling in time and space of the simulated fields;
- the variables produced by the models; and
- the format that will be used to exchange data.

For each of these points, needs varied from one user to the next. We therefore had to adapt data sampling, the selection of variables and exchange format to each particular request.

A database was set up to expedite the management and documentation of the large quantity of outputs collected from the models, accessible at http://gicc.ipsl.jussieu.fr/. This Web page documents the available simulations and variables. We internally converted all the data to the same format, using the same standard units and signs to facilitate management and limit the probabilities of errors during distribution.

To provide the full diversity of formats required by users, we were forced to develop a range of filters to carry out the transformations. This was an important operation since it considerably simplified the utilization of the data and allowed users to focus more on interpretation.

We concluded from this two-year-long experiment that this type of database and the customized guidance it is able to offer constitute an indispensable environment, which GICC should attempt to put on a permanent footing. The associated workload is moderate but requires a high degree of availability and a genuine desire to serve the 'impact' community. Within the community of atmosphere specialists, the people best placed to hold this position are probably those working on the representation of land-surface processes, since their research activity already leads them to collaborate with the academic communities of agronomists, hydrologists and ecologists.