REQUEST FOR A SPECIAL PROJECT 2016–2018

MEMBER STATE: UK……………………………………………………………..

Principal Investigator[1]: Professor Hannah Cloke…………………………………….….

Affiliation: University of Reading……………………………………….……

Address: Department of Geography and Environmental Science
The University of Reading
Whiteknights, PO Box 227
Reading
RG6 6AB
UK

E-mail: h.l.cloke@reading.ac.uk…………………………………….……

Other researchers:

Azin Howells , Professor Anne Verhoef

Project Title:

Evaluating land surface model uncertainty and strategies for improved forecast skill

If this is a continuation of an existing project, please state the computer project account assigned previously.	**SP** _____
Starting year: (Each project will have a well defined duration, up to a maximum of 3 years, agreed at the beginning of the project.)	2016
Would you accept support for 1 year only, if necessary?	YES √ NO ☐

Computer resources required for 2015-2017: (The maximum project duration is 3 years, therefore a continuation project cannot request resources for 2017.)	**2016**	**2017**	**2018**
High Performance Computing Facility (units)	250000	250000	250000
Data storage capacity (total archive volume) (gigabytes)	3000	6000	9000

*An electronic copy of this form **must be sent** via e-mail to:*   *special_projects@ecmwf.int*

Electronic copy of the form sent on (please specify date):

03.Jun.2015……………………………

Continue overleaf

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[1] The Principal Investigator will act as contact person for this Special Project and, in particular, will be asked to register the project, provide an annual progress report of the project's activities, etc.

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Project Title: Evaluating land surface model uncertainty and strategies for improved forecast skill ………………………………………

Extended abstract

It is expected that Special Projects requesting large amounts of computing resources (500,000 SBU or more) should provide a more detailed abstract/project description (3-5 pages) including a scientific plan, a justification of the computer resources requested and the technical characteristics of the code to be used. The Scientific Advisory Committee and the Technical Advisory Committee review the scientific and technical aspects of each Special Project application. The review process takes into account the resources available, the quality of the scientific and technical proposals, the use of ECMWF software and data infrastructure, and their relevance to ECMWF's objectives. - Descriptions of all accepted projects will be published on the ECMWF website.

Evaluating land surface model uncertainty and strategies for improved forecast skill

Improving the skill of flood and drought forecasts driven by numerical weather prediction requires developments in land surface modelling (LSMs). Particularly important is the representation of soil moisture, infiltration and runoff processes and the feedbacks to the energy cycle. For drought prediction this is particularly important at the seasonal forecasting scale. Here we evaluate land surface model uncertainty and strategies for improved forecasts skill using CHTESSEL, JULES and other LSMs driven by forecasts over a variety of time horizons.

This form is available at:
http://www.ecmwf.int/about/computer_access_registration/forms/