



defra

SID 5 Research Project Final Report

- **Note**

In line with the Freedom of Information Act 2000, Defra aims to place the results of its completed research projects in the public domain wherever possible. The SID 5 (Research Project Final Report) is designed to capture the information on the results and outputs of Defra-funded research in a format that is easily publishable through the Defra website. A SID 5 must be completed for all projects.

- This form is in Word format and the boxes may be expanded or reduced, as appropriate.

- **ACCESS TO INFORMATION**

The information collected on this form will be stored electronically and may be sent to any part of Defra, or to individual researchers or organisations outside Defra for the purposes of reviewing the project. Defra may also disclose the information to any outside organisation acting as an agent authorised by Defra to process final research reports on its behalf. Defra intends to publish this form on its website, unless there are strong reasons not to, which fully comply with exemptions under the Environmental Information Regulations or the Freedom of Information Act 2000.

Defra may be required to release information, including personal data and commercial information, on request under the Environmental Information Regulations or the Freedom of Information Act 2000. However, Defra will not permit any unwarranted breach of confidentiality or act in contravention of its obligations under the Data Protection Act 1998. Defra or its appointed agents may use the name, address or other details on your form to contact you in connection with occasional customer research aimed at improving the processes through which Defra works with its contractors.

Project identification

1. Defra Project code
2. Project title
3. Contractor organisation(s)
4. Total Defra project costs (agreed fixed price)
5. Project: start date
end date

6. It is Defra's intention to publish this form.
Please confirm your agreement to do so..... YES NO

(a) When preparing SID 5s contractors should bear in mind that Defra intends that they be made public. They should be written in a clear and concise manner and represent a full account of the research project which someone not closely associated with the project can follow.

Defra recognises that in a small minority of cases there may be information, such as intellectual property or commercially confidential data, used in or generated by the research project, which should not be disclosed. In these cases, such information should be detailed in a separate annex (not to be published) so that the SID 5 can be placed in the public domain. Where it is impossible to complete the Final Report without including references to any sensitive or confidential data, the information should be included and section (b) completed. NB: only in exceptional circumstances will Defra expect contractors to give a "No" answer.

In all cases, reasons for withholding information must be fully in line with exemptions under the Environmental Information Regulations or the Freedom of Information Act 2000.

(b) If you have answered NO, please explain why the Final report should not be released into public domain

Executive Summary

7. The executive summary must not exceed 2 sides in total of A4 and should be understandable to the intelligent non-scientist. It should cover the main objectives, methods and findings of the research, together with any other significant events and options for new work.

Software products form important outputs from many Flood and Coastal Erosion Risk Management (FCERM) R&D projects and will be used to help implement the Environment Agency's Flood Risk Management Modelling Strategy. For these software products to be readily useable by the Environment Agency, other operating authorities and their consultants, it is important that the software adheres to relevant software standards. The FD2121 project has developed guidance material to assist research contractors in understanding and conforming to the relevant standards with an emphasis on Environment Agency standards. In addition, the project has reviewed the software modularity of the RASP family of decision support tools and has initiated documentation of common modules and certain enabling architecture.

The primary source of relevant standards for FCERM software is the Environment Agency's Corporate Information Services (CIS) 'Enterprise Architecture: Technical Reference Model' (TRM). Guidance material for R&D contractors has been developed from the TRM and from discussions with CIS staff and other industry experts. The guidance is presented in R&D Technical Report FD2121/TR2 'R&D Software Development Projects – Guidance for Research Contractors'. In addition to the objective of guiding the R&D contractor towards producing conforming software, the guidance documentation is also designed to foster early informed discussions between the R&D contractor and CIS.

The utility of the guidance has been demonstrated through three trial applications: the GLIM-CLIM rainfall generator, MDSF2 and the NFFS Triton Adapter. These represent examples of classes of software ranging from background university R&D (rainfall generator), through projects focussing on delivery of new methods to operating authority and consultant staff (MDSF2), to specific commercial modelling software development for Agency systems (NFFS Triton Adapter). The development of the guidance has highlighted a number of areas which could be addressed by improvements to the TRM or other process documentation, these include: the need for more guidance on .NET, the need to facilitate end user involvement in the development stage, improved documentation requirements, and the need for early consideration of future custodianship, support, maintenance and user training.

The RASP family of decision support tools has been described in the report 'Scoping the development and implementation of flood and coastal RASP models' (SCO50065/SR1, 2007). The scoping report identified a range of RASP-based bespoke decision-specific tools which, although targeted at different FCERM business functions, share common data and modules. The requirements and methods for the RASP family of tools continue to be developed and currently are not sufficiently well defined to enable a

comprehensive and appropriate conceptual/logical architecture for the RASP family to be fully identified. However useful steps towards an appropriate architecture have been made in the project covering: an architectural review of ongoing RASP-related projects (NaFRA, MDSF2, RACE, PAMS and CRUE), currently identifiable common modules and appropriate enabling technologies. The review has shown that the tools are being designed to share common data and some common computational modules. Further action is required in the areas of defining requirements, analysing commonalities and further specification of software architecture to better achieve the objectives of facilitating the efficient production of sustainable and appropriate software tools and to facilitate competition. As requirements and methods continue to evolve it will be important to review architectural aspects and maintain an on-going dialogue with CIS and other Agency/Defra managers to facilitate take up of the software outputs.

Project Report to Defra

8. As a guide this report should be no longer than 20 sides of A4. This report is to provide Defra with details of the outputs of the research project for internal purposes; to meet the terms of the contract; and to allow Defra to publish details of the outputs to meet Environmental Information Regulation or Freedom of Information obligations. This short report to Defra does not preclude contractors from also seeking to publish a full, formal scientific report/paper in an appropriate scientific or other journal/publication. Indeed, Defra actively encourages such publications as part of the contract terms. The report to Defra should include:
- the scientific objectives as set out in the contract;
 - the extent to which the objectives set out in the contract have been met;
 - details of methods used and the results obtained, including statistical analysis (if appropriate);
 - a discussion of the results and their reliability;
 - the main implications of the findings;
 - possible future work; and
 - any action resulting from the research (e.g. IP, Knowledge Transfer).

Not required by the Defra project officer. The executive summary above provides the overview of the project; where further detail is required this is best provided by the two formal technical reports:

- FD2121/TR1 'Software Requirements for Joint FCERM R&D Programme Modelling Outputs and Architecture Specification for RASP Family Outputs'
- FD2121/TR2 'R&D Software Development Projects – Guidance for Research Contractors'

References to published material

9. This section should be used to record links (hypertext links where possible) or references to other published material generated by, or relating to this project.

None generated.