



R&D Technical Summary W5G-003/TS

Improving the Implementation and Adoption of R&D Results

Background to R&D project

With the setting up of the new Joint R&D Programme in Flood and Coastal Defence, a key management objective has been to focus on user needs and ensure that the intended benefits of the R&D projects are delivered. The Advisory Committee that recommended the new programme suggested that various management, organisational and cultural issues should be addressed in order to improve the implementation and adoption of research. A study (commonly referred to as the "Uptake Study") was carried out during 2001 to investigate these and other issues that might need to be addressed. The aim was to confirm and/or recommend actions that would contribute significantly to improving the uptake of results from the new programme, and help to secure the intended benefits.

Results of R&D project

The study enabled a good understanding to be developed of the factors that may constrain the effective uptake of Flood and Coastal Defence R&D, and of the actions that can help to overcome these. In summary the constraints related to (a) R&D systems and culture, (b) organisational and institutional systems and culture across the FCD industry, and (c) individual learning and personal development issues - common to many other professional areas.

A series of recommendations to DEFRA and Agency management were then developed by the research team to improve the implementation and adoption of Flood and Coastal Defence R&D results. The Recommended Actions, Outcomes and Resources are listed on page 3. Some of these actions are already being carried out (May 2002) either as a result of this study or due to other changes within DEFRA and the Environment Agency. Overall, it was recommended that, in relative terms, more resources should be allocated to R&D uptake (i.e. the passive dissemination and active implementation of R&D results as distinct from the research itself). Some actions link into the wider issue of developing an improved Flood and Coastal Defence training programme. The costs of implementing the broader institutional and organisational items should not be borne solely by the R&D Programme.

R&D Outputs and their Use

The Technical Report describes the existing organisational and management structure relating to uptake, provides details of the gaps in the current approach, and sets out the recommended actions. Its purpose is to provide as reference point for those involved in improving current practice. The report does not provide detailed advice itself.

The CD-ROM Route Map for R&D Project Managers by contrast provides step by step guidance on the actions that can be followed on any R&D project. It is available as downloadable software and will run on Windows 2000.

This R&D Technical Summary relates to R&D Project W5G-003 and the following R&D outputs:

- **R&D Technical Report W5G-003/TR - *Improving the Implementation and Adoption of R&D Results***. Published September 2002
- **R&D Publication – *Route Map for R&D Project Managers***. Published June 2002

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The above outputs are available on the Environment Agency website (www.environment-agency.gov.uk/subjects/flood). Copies are held by all EA Regional Information Centres and can be purchased from the Environment Agency's R&D Dissemination Centre, c/o WRc, Frankland Road, Blagrove, Swindon, Wiltshire SN5 8YF (Tel: (+44) 1793-865012; Fax: (+44) 1793-514562; email: publications@wrplc.co.uk).

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Recommended Action	Outcome	Resources
1: Provide specific support for uptake (dissemination, implementation and adoption) of FCD R&D	Better focus for all generic issues related to the uptake of R&D outputs. Better planning of R&D outputs and uptake.	Consolidation and enhancement of present R&D Management and Science support posts for the Joint R&D Programme. This will cost £30k per annum. Associated support costs could be £20k per annum. Details of location to be resolved by Agency and DEFRA.
2: Agree an Implementation Plan for the delivery of each R&D output	Uptake of R&D outputs linked into defined user activity or response.	Already incorporated into standard Agency and DEFRA procedures - simply reinforces what should be done anyway.
3: Prepare, involve early, and train users for delivery and use of R&D outputs	Users ready and prepared to use new R&D output	Budgeted through the R&D project, or through related business or training budgets
4: Provide R&D Project managers with easy to use guide to R&D uptake – a “Route Map”	Improved uptake of R&D outputs by clarifying the process. and enabling Project Managers to make better decisions in planning uptake.	Initial training to DEFRA/Environment Agency staff will cost £5k. Further maintenance and support will be provided by the new post
5: Enhance techniques and skills used in managing and producing FCD R&D outputs	FCD R&D outputs easier to obtain and adopt, and are produced more efficiently	Main resources used are the new uptake support post (1. above).
6: Use new information and communications technology (ICT) to assist the uptake processes.	More accessible and easier to use R&D outputs. New outputs will be available at the desk top.	Provision of FCD web site - £50k over 6-9 months. Use of new ICT and web updates should be budgeted for in every R&D project. Budget needed for site maintenance
7: Develop improved links between software, models and tools and FCD R&D	Increased efficiency in DEFRA, Operating Authorities and joint R&D Programme through use of software, models and tools.	Budgeted through the R&D project. Most relevant to Broad-scale Modelling, Engineering, Flood Forecasting & Warning, and Risk & Uncertainty Themes.
8: Use demonstration and pilot projects to enhance the R&D uptake process.	User ownership. Outputs from R&D projects will have been properly tested with users prior to general uptake. Lessons-learnt fed back into the R&D process.	“Add-on” activities should be built into existing R&D projects, other FCD projects and operations activities. Consider also a project to provide guidance on use of pilot and demonstration projects (cost £15k)
9: Provide environment and incentives to encourage mainstream staff to keep up to date with current practice	Development of a “learning culture” which will provide engagement with the R&D process and enhance uptake.	Developed jointly between users’ managers and Joint R&D Programme Co-ordinators. With Agency, carried out as part of the Human Resources “change project”. Training budgets of DEFRA, Framework Consultants and Contractors, and Operating Authorities should be asked for support
10: Develop an improved image for DEFRA and Environment Agency R&D	Higher profile and good image of R&D within FCD Industry, Users well engaged with the R&D process with good understanding of the benefits of R&D outputs.	Driven by the FCD R&D Co-ordinators in DEFRA and the Agency. Some actions by the new uptake post holder with support from with existing DEFRA / Operating Authority (e.g. Public Relations, Newsletter Publications, etc.).
11: Nurture centres of expertise to provide advice and support services in applying R&D knowledge.	Use of R&D outputs more effective by providing focus for information, training and technical support	Utilise currently recognised “lead organisations”. Further resources following development of EA and DEFRA Science Plans.