

Specification
CRP Project 2e:
Deriving the costs and effectiveness of delivery mechanisms

1. Background

- 1.1 In implementing the Water Framework Directive (WFD), information on the costs of measures and delivery mechanisms and on the relative cost-effectiveness of different combinations of measures and delivery mechanisms will be important in developing programmes and setting appropriate objectives. Measures are being defined as the on the ground actions that can help water bodies achieve WFD standards. Measures are distinct from delivery mechanisms, which are the changes that are needed to ensure the measures actually take place. They will need to provide a realistic incentive to encourage the uptake of the measure. The term delivery mechanism used here refers to a wide spectrum of policy instruments including voluntary negotiations, traditional regulation, information campaigns and economic instruments including positive financial incentives etc.
- 1.2 The Directive allows considerable discretion over the measures/delivery mechanisms used to make the environmental improvements necessary to achieve its environmental objectives. To avoid unnecessary implementation costs, it is desirable that information and methods of analysis are developed that will facilitate the identification of the most cost-effective combination of measures/delivery mechanisms for delivering the necessary improvements.
- 1.3 The Directive's environmental objectives include a number of alternatives to its default objective of achieving good status by 2015. Member States can set one of these alternative objectives where, among other things, achieving good status in a water body by 2015 would be disproportionately expensive. These objective setting decisions will require information on the costs of measures/delivery mechanisms.
- 1.4 The Department for Environment, Food & Rural Affairs (Defra) and the Welsh Assembly Government (WAG) have the responsibility for leading on the economic analysis required to implement the Water Framework Directive in England and Wales, while in Scotland and Northern Ireland the economic analysis is being lead by SEPA and the Department of the Environment Northern Ireland (DOENI) respectively.
- 1.5 A UK-wide Economic Steering Group (ESG) is overseeing the economic analysis. This group includes members from Defra, the Scottish Executive, Department of the Environment Northern Ireland and relevant agencies, including the Environment Agency and SEPA. In addition Economic Advisory Stakeholder Groups (EASG) have been set up for Scotland and for England. Due to the need for a common approach across all parts of the UK this project has a UK focus.
- 1.6 Further background information on the implementation of the Water Framework Directive (WFD) is available from the Defra website

(<http://www.defra.gov.uk/environment/water/wfd/index.htm>) and, in Scotland, from the SEPA website (<http://www.sepa.org.uk/wfd/index.htm>)

- 1.7 This project is part of a Collaborative Research Programme (CRP) – UK Collaborative Research Programme on River Basin Planning Economics, which will run from April 2004 to March 2007. This Collaborative Programme involves The Department of Environment, Food and Rural Affairs (Defra), The Environment Agency (EA), Scottish Environment Protection Agency (SEPA), Scottish Executive, Welsh Assembly Government (WAG), The Scottish and Northern Ireland Forum for Environmental Research (SNIFFER), Department of Trade and Industry (DTI), English Nature, UK Water Industry Research (UKWIR), Royal Society for the Protection of Birds (RSPB), UK Major Ports Group (UKMPG) & British Ports Association, Country Landowners and Business Association (CLA), The National Farmers Union (NFU) and the Joint Environment Programme (JEP). The Programme is chaired by Defra.
- 1.8 A methodology to assess the cost effectiveness of combinations of measures and delivery mechanisms has been developed. This was done in Project 2a (Development of a Methodology to Determine the Effectiveness of Combinations of Measures for the Water Framework Directive) and in Project 2b (Developing Methodologies to Assess Costs and Economic Impacts Even Handedly for the Main Types of Measures).
- 1.9 Project 2c (Benchmark costs database and guidance on the application of the Cost-Effectiveness Methodology) is ongoing and is due to be completed by early May 2006. It will provide two main products: a) estimates of approximate benchmark costs of the main measures for reducing the pressures on the water environment from the main sectors; and b) practical guidance for non-economists on undertaking and auditing cost-effectiveness analyses. The generic costs of key measures derived in Project 2c will have two main uses: i) to be used in the Preliminary CEA in the second half of 2006 and ii) to benchmark the site specific costs received from stakeholders in the operational CEA (2007-2008).
- 1.10 Two iterations of the CEA ‘process’ are proposed. In the preliminary CEA (the first iteration) only approximate costs of measures/delivery mechanisms are to be used to appraise approximately and screen options. In the site specific cost-effectiveness analysis (the second iteration) more site-specific costs may be needed. This will require the use of proformas for the reporting of cost estimates by the industries concerned.
- 1.11 The rationale for undertaking an initial preliminary CEA is that it reduces the number of potential measures to be considered in the second more detailed iteration, which is likely to entail expensive cost data collection and scrutiny. It also provides bench marks with which to compare the costs collected from stakeholders in the second iteration.
- 1.12 A preliminary cost-effectiveness analysis is needed for several purposes:

- To give an overall indication of the magnitude of the compliance and implementation costs for the Water Framework Directive.
- To give a broad indication of possible distribution of the initial incidence of costs between the main “sectors” especially water industry and agriculture, but also to identify issues associated with final incidence given likely cost pass through.
- To give a broad indication of the possible cost-effectiveness of different phasing of the action required across the three six year planning periods to 2027 and present some analysis of affordability given the context of other environment related expenditure.
- To assist in decisions about possible new national measures/delivery mechanisms such as economic instruments.
- To identify the key uncertainties in the cost-effectiveness analysis which might lead to disproportionate costs, if risks are not adequately addressed.
- To identify general principles/rules of thumb etc. which can be agreed at a national level and assist in the local cost-effectiveness and disproportionate cost assessments.

2.3 The preliminary CEA will need generic costs of measures and delivery mechanisms.

2. **Introduction**

- 2.1 Project 2c is only collecting the costs of measures. There is a need to collect the costs of delivery mechanisms. The term delivery mechanism refers to a wide spectrum of policy instruments including: grants/subsidies/compensation payments to incentivise the measures; product control standards (statutory); limit values or quality standards (statutory); technology/technique based statutory requirements; licensing regimes including tradable permits; management plans; zoning initiatives; spatial planning, incentive taxes or charges; liability regimes; codes of practice; negative and positive labelling; voluntary agreements; education and awareness, including training etc.
- 2.2 There may be more than one mechanism able to deliver a particular measure or a mechanism may be able to deliver multiple measures. There may also be synergies/antagonisms between mechanisms. For example one mechanism may enhance the effectiveness of another.
- 2.4 Programmes of Measures (PoMs) to achieve WFD compliance will need to include a mixture of measures and delivery mechanisms. The methodology produced in project 2a/2b sets out the method for assessing the costs and effectiveness of combinations of measures and delivery mechanisms.
- 2.5 The appraisal of the cost effectiveness of packages of agricultural measures and mechanisms as part of Defra’s Catchment Sensitive Farming (CSF) initiative sets out a useful matrix identifying the links between mechanisms and measures. This could provide a useful model for this project. Their work will need to be reviewed.

- 2.6 Achieving the required environmental outcome requires both the means to deliver the measure (i.e. the administration and related costs) and a method of incentivising these individuals/organisations to adopt it.

Examples include¹:

Agriculture

- Delivery
 - Local free advice services (e.g. CSFOs)
 - Training and demonstration facilities
 - Specialist support e.g. risk mapping, cheap waste retrieval
- Incentivisation
 - Grant aid for small scale improvements
 - Environmental stewardship payments
 - Tax relief

Urban SUDs

- Delivery
 - Practical COP with developers/LAs/Water cos
 - Training and advice
 - Demonstration facilities
- Incentivisation
 - Review of RPG
 - Mechanism for long term liability insurance
 - Change in LA targets
 - Change in OFWAT rules

3. Some current sources of costs of delivery mechanisms

Possible sources of cost information include:

3.1 A report entitled “Alternative and complementary policy instruments: Tools to aid implementation of the Water Framework Directive”. This report was commissioned by the Environment Agency and provides a list of mechanisms which would be a useful starting point. Copies of this report can be obtained from the Environment Agency’s National Customer Contact Centre enquiries@environment-agency.gov.uk or tel: 08708 506506. This document was produced by: WRc plc The EA Report No is POM (04) 01, The WRc Report No.: EA6514. The Environment Agency’s Project Manager was: Peter Bailey.

3.2 The appraisal of the cost effectiveness of packages of agricultural measures and mechanisms as part of Defra’s Catchment Sensitive Farming (CSF) initiative. The appraisal work is due to be completed by the end of April 2006. They have set out a useful matrix identifying the links between mechanisms and measures. This could provide a useful model for this project. They have around 25 agriculture policy instruments. Their work will need to be reviewed. The consultants need to be aware that the approach to CSF is different in Wales. Consultation with WAG may be necessary.

¹ Bob Breach e-mail Feb06

- 3.3 Project 1c (Pricing, Economic Instruments and cost recovery mechanisms).
Project 1c is collecting some information on the costs and effectiveness of a selection of delivery mechanisms.
- 3.4 The TraC (Terrestrial and Coastal Waters) scoping study. This study is testing the cost effectiveness analysis methodology in TraC waters.
- 3.5 Various regulatory impact assessments will need to be checked for information they have about delivery mechanisms (Priority Substances, Groundwater, Bathing Water, morphology, non-agricultural diffuse pollution etc.)
- 3.6 The German cost handbook contains some information on mechanisms/instruments.

4. Objectives

- 4.1 To identify 30 key delivery mechanisms that have the potential to deliver the measures costed in project 2c. The list should include new innovative delivery mechanisms. The list should include national and local delivery mechanisms. Identify any interaction between these mechanisms. There could be greater cost effectiveness by introducing a combination of delivery mechanisms to deliver a measure. Any antagonisms and synergies between delivery mechanisms need to be identified. For some measures there could be several delivery mechanisms and a delivery mechanism may be able to deliver several measures.
- 4.2 To collect readily available information on the generic costs of the delivery mechanisms identified above. Identify any gaps. Any information on the effectiveness of these delivery mechanisms should also be collected if it is readily available. Identify other issues as well as cost that are possible barriers to implementation. Overcoming these barriers may result in extra costs. An example is SUDS where the biggest barrier could be who pays for the ongoing maintenance of the measure.
- 4.3 Review how the CEA methodology (project 2a/2b) and guidance (project 2c) deal with the assessment of the cost and effectiveness of delivery mechanisms and recommend any change if appropriate. Update the guidance/methodology if necessary and instructed by the steering group.
- 4.4 Consult with the relevant organisations to validate the information on the delivery mechanisms.

5. Products

- 5.1 A database of readily available cost and effectiveness estimates for each of the 30 delivery mechanisms. This should also include any information on other barriers to the implementation of measures apart from cost. The information could be stored in a designated part of the 2c measures database or a new database created.

- 5.2 A final report setting out the analysis undertaken including the review of the CEA methodology and guidance.

6. Method

- 6.1 Review the approach in the CEA methodology/guidance to costing delivery mechanisms. If necessary make any recommendations for improvements. If instructed by the steering group up date the CEA guidance.
- 6.2 Taking account of the outputs of project 2c, the above sources and other relevant projects allied to the Collaborative Research Programme and other projects draw up a list of both local and national delivery mechanisms. The list will need to be appropriate to the measures being costed in project 2c. In some cases measures may have more than one delivery mechanism or a delivery mechanism may be applied to more than one measure. Flag up any measures in the 2c database for which no delivery mechanism is currently available. The mechanisms considered should include where relevant mechanisms involving regulators other than the Agencies, for example in TraC waters, Defra MCEU, DfT MCA and DfT ports division, port authorities/conservancies, also Sea Fisheries Committee staff, etc.
- 6.3 Identify the appropriate information to be included in the delivery mechanism cost database. The information could be qualitative or quantitative and shall include estimates of: i) the typical range of admin (inc one off and running costs, monitoring costs, enforcement costs etc.) costs of each delivery mechanism; ii) the estimate of the effectiveness of the delivery mechanism; iii) estimates of the uncertainty in the costs and effectiveness and the reasons for that uncertainty.
- 6.4 Collate relevant existing cost and effectiveness data for the delivery mechanisms identified above and identify gaps in the data.
- 6.5 When considering new or modified mechanisms to think through how they might interact with existing mechanisms.
- 6.6 Organise the data in an appropriate electronic form that can be readily accessed and interrogated by non-specialists staff in the UK government administrations and their regulatory agencies and by water users.
- 6.7 The consultants will be expected to consult with representatives of the relevant organisations to properly validate the cost estimates.

7. Quality Assurance

- 7.1 The draft outputs will be peer reviewed by a panel selected by the Project Steering Group from the Programme's peer review pool. The Peer reviewers shall be invited to comment on:

- Key options being considered during the production of each of the draft outputs specified; and
- The draft of each of the products specified in Section 5

7.2 The comments received from the peer reviewers on the draft products shall be fed back to the Contractors for consideration prior to the delivery of each output.

8. Reporting structure

8.1 The Project Manager (PM) will be Dominic O'Neill of the Environment Agency. A steering group will be drawn from the Collaborative Research Programme and the successful tenderer will present to this group.

8.2 The consultants need to provide and maintain an issues log and a risk register throughout the project and provide updates at each steering group meeting.

8.3 The consultants will be expected to write the minutes of the SG meetings and provide fortnightly e-mail progress updates to the PM.

9. IPR and publication

9.1 The CRP shall hold the intellectual property rights of the project and all its outputs. They will have copyright and will publish as appropriate.

10. Timetable

Submission of tenders	Mid May 2006
Project start	end May 2006
Interim progress report	end June 2006
Final draft Outputs delivered	mid August 2006

11. Tendering

11.1 Tenders from consortia will be acceptable but contract negotiations will take place with the lead consultant. Tenders will include a detailed breakdown of each individual's costs and commitments in terms of days to delivering the component parts of the project. This will be presented in the form of a single matrix and such that the cost of each task and output is readily discernable.

11.2 It is anticipated that the prospective Contractor will need to deploy a team of staff that can demonstrate knowledge and experience of the following subjects:

- Recent and relevant multi-disciplinary project management experience;
- Knowledge and experience of analysing delivery mechanisms;
- Broad knowledge of the sectors involved.
- Liaison with relevant industries and businesses, and their representatives;
- A good understanding of the Water Framework Directive;
- An understanding of the water environment and water uses;
- An understanding of water management and the processes and bodies involved

12. Environmental statement

12.1 Contractors must adopt a sound proactive environmental approach, designed to minimise harm to the environment.

12.2 Environmental criteria should be considered as part of your tender submission with credit given for innovation. Factors to be considered could include areas such as:

- Paper use: All documents and reports prepared by consultants and contractors are produced wherever possible on recycled paper containing at least 80% post consumer waste and printed double sided.
- Travel: use of public transport, reduce face to face meetings by using email and videoconferencing. Meetings to be held in locations to minimise travel and close to public transport links.
- Packaging: should be kept to a minimum. Re-use and disposal issues must be considered.
- Efficient Energy and Water Use.
- Disposal of Waste: Whilst on site the contractor is responsible for the disposal of their own waste and can only use Environment Agency facilities with express permission from the on site facilities officer.
- Whilst on site, contractors should comply with the local environmental policy statement which will be made available to you in advance or on arrival.

13. Data Protection Act addendum to specification

Protection of Personal Data

13.1 In order to comply with the Data Protection Act 1998 the contractor must agree to the following:

- You must only process the personal data in strict accordance with instructions from the Environment Agency.
- You must ensure that all the personal data that we disclose to you or you collect on our behalf under this agreement are kept confidential.
- You must take reasonable steps to ensure the reliability of employees who have access to personal data.
- Only employees who may be required to assist in meeting the obligations under this agreement may have access to the personal data.
- Any disclosure of personal data must be made in confidence and extend only so far as that which is specifically necessary for the purposes of this agreement.
- You must ensure that there are appropriate security measures in place to safeguard against any unauthorised access or unlawful processing or accidental loss, destruction or damage or disclosure of the personal data.
- On termination of this agreement, for whatever reason, the personal data must be returned to us promptly and safely, together with all copies in your possession or control.

14. Further Information

Further information can be obtained from Dominic O'Neill
dominic.oneill@environment-agency.gov.uk