

**SNIFFER UKTAG R&D: Project 2a, Development of a Methodology to Determine the Effectiveness of Combinations of Measures for WFD  
(Terms of Reference 31 August 2004)**

**1. Objective:**

Develop a methodology to determine the effectiveness of combinations of measures, as a pre-requisite to consideration of 'cost-effective' Programmes of Measures (PoMs) for Water Framework Directive (WFD) implementation.

**2. Background/Need:**

The WFD requires identification of 'cost-effective' combinations of measures (Annex III) to deliver the objectives of the Directive (Article 4 and 7). Economic analysis is required to determine both what is cost-effective as well as to determine which objectives are to be achieved in a waterbody during a particular planning cycle (e.g. Article 4(5) 'less stringent objectives' due to 'disproportionate expense').

A Collaborative Research Programme (CRP) '*Assessing costs and benefits of options in River Basin Management for Implementing the WFD*' has been established to develop approaches for this economic analysis and involves Defra, SE, DTi, SEPA, SNIFFER, UKWIR, EN and EA. The Programme is administered by the EA and will run from April 2004 to March 2008. The Programme has the following Projects:

1. Setting out the overall decision-making context and appraisal framework so that the economic appraisal information can best aid appraisal and decisions.
2. Determining how to assess costs and economic impacts for each of the distinctly different sectors (agriculture, water industry etc) for which control options will need to be appraised in River Basin Management Plans (RBMPs). This will build on the iterative Cost Effectiveness Analysis (CEA) process recommended by RPA.
3. Scoping and characterising the potentially disproportionately costly cases in RBMPs and the main gaps in information on assessing environmental benefits so as to draw up an appropriate process for assessing them.
4. Undertaking focus group analyses to clearly specify the environmental benefits of concern in the cases identified in Project 3.
5. Developing, and trialing, guidance on assessment for RBMPs
6. Carrying out original surveys to provide new and better assessments of the major environmental benefits of RBMPs.

As a pre-requisite to developing the economic components of the decision making process (Project 2 in particular) there is a need to identify all the possible options for measures that could be applied to deliver technically effective outcomes. To ensure the most technically effective control measures are adopted, and to help demonstrate even-handedness of approach to stakeholders, there is a need to take an integrated approach to technical appraisal of the full range of measure options available.

Where the cause of a failure to achieve WFD objectives is due to a single pressure then the technical appraisal process should be relatively straightforward, as there will be a limited number of options to consider. However, where the range of possible technical options for a measure is large (e.g. where pressures act in combination to cause failure) then the integrated appraisal process will be complex.

In order to ensure consistency, transparency and even-handedness of approach in appraising complicated scenarios, there is a need to develop a methodology and framework for effective decision making to support the determination of effective combinations of measures. Project 2 (detailed above) should therefore consist of two key components: a Technical Effectiveness component (Project 2a), and a Cost Assessment component. (Project 2b).

### 3. Proposed Approach for Effectiveness Project:

SNIFFER wishes to commission a contractor to undertake the ‘Effectiveness’ Project (Project 2a). Project 2b will be funded and managed from the CRP under (Project 2b: *Developing Methodologies to Assess Costs and Economic Impacts even handedly for the main types of Measures across the main Sectors*). The ‘Effectiveness’ Project should consist of:

<b>What</b>		<b>How</b>
<b>1. Scoping</b> – define work packages, methods and proposed costs for particular phases of the project taking into consideration links with the Costs Project (partly defined in Appendix A)		Contractor
The following would be defined in detail by Part 1 (above).		
<b>2. Measures Analysis</b>	<b>a)</b> Map main measures available to address the most high profile pressures (e.g. those included in River Basin Characterisation (RBC) Stage 1 but also any pressures thought to be significant but not included in RBC 1). The list of measures should be the same as that defined in Project 2b on Costs.	Facilitated Regulator Workshop
	<b>b)</b> Specify the key attributes of a measure needed for the measure to be effective in order to allow comparison of a variety of measure options in an integrated appraisal process. An indicative list of attributes that should be considered includes: <ul style="list-style-type: none"> <li>- Confidence of a successful outcome</li> <li>- Who pays for the measure</li> <li>- Ease of cost recovery of administration (e.g. monitoring/inspection)</li> <li>- Incentive type (regulation, permit, financial, voluntary agreement, code of practice, education initiative etc.),</li> <li>- At what scale decisions are made (e.g. national policy versus local)</li> <li>- Who needs to be involved in the decision to use the measure e.g. sector, regulator etc.</li> <li>- What evidence is needed to justify the measure</li> </ul>	Facilitated Regulator Workshop
	<b>c)</b> Gap Analysis – map existing measures against the key attributes displayed by effective measures and rank measures in terms of effectiveness. This phase of the work should also identify measures out side the immediate control of the regulatory agencies.	Contractor in close collaboration with Regulators

<p><b>3. Design an integrated appraisal framework and methodology for determining effectiveness of measures.</b> - The exact nature of these outputs will be determined/defined through discussion with regulators and from preceding stages. It is likely that they will consist of procedures and ‘decision trees’ possibly linking to standard software tools (spreadsheets). Software systems must be compatible with the existing desktop systems of the funding partners. The outputs must help design technically robust options for PoMs to achieve a range of WFD objectives and build on existing policies/appraisal techniques for justifying existing measures (e.g water price review processes). To focus this work it will be necessary to take the Article 5 report to develop an initial ‘national’ view of the PoM priorities for the first RBMP.</p>	<p>Contractor In close collaboration with Regulators</p>
<p><b>4. Integration of Effectiveness with Costs</b> – The Cost Project (Project 2b) consultants shall organise a workshop to develop a ‘Cost Effectiveness’ methodology, which will bring together the effectiveness methodology (Project 2a) and the cost assessment methodology (Project 2b). Although the Project 2b consultants will lead on this component of the work the Project 2a consultants shall participate.</p>	<p>Cost Project (2b) Consultants to lead (see Project 2b ToR).</p>
<p><b>5. Testing</b> – The two sets of consultants shall jointly test the developed cost effectiveness methodology. They shall run illustrative analyses using plausible assumptions to explore and demonstrate how the methodology works in practice. The consultants shall then pilot trial applications of the methodologies in the Agency’s Ribble Catchment and in two further catchments, including one in Scotland to be specified by SEPA. The consultants for Project 2b (cost assessment) shall organise the testing, stakeholder consultation and the reporting.</p>	<p>Cost Project (2b) Consultants to lead (see Project 2b ToR).</p>
<p><b>6. Refinement</b> – The 2a Consultants shall refine the Effectiveness components of the integrated process in line with feedback from the Joint Workshop and Testing</p>	<p>Contractor</p>

#### 4. Timescales (indicative only):

Work item/Milestone	2004					2005		
	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
<b>Procurement Phase</b>								
- Invitation to tender		◆						
- Evaluation of submissions and awarding of contract			◆					
<b>1. Scoping</b>								
- Inception meeting (joint with Costs Project) including Presentation of Scoping Report (w/c 25 <sup>th</sup> Oct)			◆					
<b>2. Information Gathering</b>	<b>2a. Map Measures</b>							
	- Initial Gap Analysis Workshop			◆				
	<b>2b. Key Attributes Analysis</b>							
	- Attributes Workshop				◆			
<b>2c. Detailed Gap Analysis</b>								
<b>3. Framework/Method Development</b>								
- Presentation of 1 <sup>st</sup> Draft report to SG						◆		
<b>4. Integration to provide CEA (Workshop led by 2b Project)</b>							◆	
<b>5. Testing Phase (led by Project 2b)</b>								
<b>6. Refinement</b>								
- Presentation of 2 <sup>nd</sup> Draft report to Joint SG (with Project 2b)								◆
- Report finalised (mid/late Mar)								◆
- Peer review workshop (led by 2b, 2a Contractors to participate)								◆
	Mid April 05							

## 5. Project Management

The financial and contractual arrangements will be managed by Kirsty Irvin of SNIFFER (Tel: 0131 524 974, Email: [kirsty@sniffer.org.uk](mailto:kirsty@sniffer.org.uk)). The technical components of the contract will be co-ordinated by Paul Bryson of the Environment Agency (Tel: 07884 235 038, E-mail: [paul.bryson@environment-agency.gov.uk](mailto:paul.bryson@environment-agency.gov.uk)).

The contractor's project manager will provide the project manager with monthly progress updates.

There will be a steering group (SG) to be determined by SNIFFER and UKTAG PoM Task Team. The contractor will be required to co-ordinate inputs from SG members and partner organisations.

Given the close links of this project to the Costs Project (detailed above and in Appendix A below), the contractors must ensure effective liaison with the Costs Project. Particular attention will be paid to the quality of the management arrangements given within tenders for the Effectiveness Project. Membership of the SG will be selected to ensure good linkage with the Costs Project.

## 6. Expected Skills and Experience of Contractors

- Excellent communication/facilitation skills to work with regulatory staff at a variety of levels (Policy, Legal, Economic and Operational).
- Sound understanding of environmental regulation processes (statutory as well as partnership and education campaigns etc.)
- Knowledge and experience relevant to the sectors affected by the PoM options (in particular, industry, water industry and agriculture).
- Knowledge of water management, integrated catchment management and the approach being taken for the WFD.
- An understanding of economic appraisal processes.

**Appendix A – Inter-relationship between Project 2a (Assessment of Effectiveness) and Project 2b (Assessment of Cost).**



