

Water Matters – Have Your Say!
**Digest of submissions and responses to Significant Water Management
Issues Reports**

South Western River Basin District

**In accordance with Article 14 of the European Communities (Water Policy) Regulations 2003 (S.I. No 722
2003)**

1.0 Introduction

1.1 Background

The EC Water Framework Directive (WFD) was adopted in 2000 and requires that Member States manage their waters on the basis of River Basin Districts (RBDs). There are eight RBDs on the island of Ireland. Three of these are International River Basin Districts (IRBDs) because their catchments lie partly in Ireland and partly in Northern Ireland.

As part of the process leading to the making of river basin management plans for each RBD, the WFD requires the identification of Significant Water Management Issues (SWMI) in each RBD at least two years before the beginning of the River Basin Management Plan. Significant water management issues are defined as environmental pressures that pose the greatest risk to water bodies in the River Basin District. These are the issues that could cause water bodies to fail to achieve the environmental objectives of the WFD by 2015. The significant issues were identified using the latest information available and consultation with key stakeholder groups including:

- Characterisation reports produced under WFD Article 5 for each RBD
- Further Characterisation studies
- National water quality reports
- Analysis of the sectors and activities that are putting water bodies at risk in the River Basin District
- Consultation with statutory River Basin District Advisory Councils
- Consultations with public authorities and sectoral interest groups

A significant water management issues report was published for each RBD in the form of a booklet titled *Water Matters*. The booklets were produced to inform stakeholders of the main significant water management issues that were identified as having an impact on water quality in the RBD. They also outlined proposals for what might be done to address these issues in the River Basin Management Plans. *Water Matters* was published on the 22nd June 2007 in Ireland and Northern Ireland.

Water Matters report for the South Western RBD was issued jointly by the responsible authorities for the district, namely the county councils of Cork, Kerry, Waterford, South Tipperary and Cork City Council.

The public was invited to submit comments on the contents of the booklets over a six month consultation period.

1.2 General context and layout of *Water Matters* reports

Water Matters was intended to be easily understood and read by people with differing levels of knowledge of the Water Framework Directive. The booklets were divided into eight national topics that had been identified as significant within all the River Basin Districts in Ireland and three topics on local issues in the River Basin District. Specific questions were posed about each topic seeking the readers' view about the suggested actions, whether the actions were appropriate and whether something important had been missed. See Appendix 1 for the full list of questions.

1.3 Consultation and Participation Activities

Consultation on *Water Matters* took place from 22nd June to 22nd December 2007. Stakeholders and the public were invited to submit comments by post to nominated persons, through the river basin district websites (www.swrbd.com), or by filling in questionnaires / comment sheets at the public consultation evenings (see appendix 2 for an example of the questionnaire and comment sheet).

In order to publicise *Water Matters* and provide opportunities for the public to engage in the consultation process, a series of evening meetings were hosted by the SWRBD project during November 2007. The meetings were advertised in eight local newspapers and on three local radio stations. Articles were published in two local newspapers and there was one radio interview. Five public meetings were held, as shown in Table 1.

Date of meeting	Location	Attendance
12 th November	Dunmanway, Co. Cork	25
13 th November	Mitchelstown, Co. Cork	30
14 th November	Ballincollog, Co. Cork	28
15 th November	Midleton, Co. Cork	12
27 th November	Killorglin, Co. Kerry	24

Table 1: Public Consultation Meetings

1.4 Scope of the digest

This digest is a compilation of written submissions received during the consultation period, completed questionnaires and comments made at public meetings. All submissions are responded to herein and will be considered during the development of the draft river basin management plans. These draft plans must be published by the 22nd December 2008 and are then also subject to a six month consultation period. This compendium of submissions and responses is being distributed to those who took part in the process and other interested parties, and will also be available on the South Western River Basin District website.

2.0 Summary of submissions

2.1 Written submissions

A total of 20 written submissions were received, see Table 2 below.

2.2 Comments / questionnaires received at public meetings

A total of six comment sheets were submitted arising from the public consultation evenings. The comments on the sheets and other comments made during the meetings are included in the digest, where relevant.

2.3 Topics covered

Written submissions, questionnaires and comments received were examined and were divided into:

- Issues related to the 8 national topics:
 - ◆ Wastewater and industrial discharges
 - ◆ Landfills, quarries, mines and contaminated lands
 - ◆ Agriculture
 - ◆ Wastewater from unsewered properties

- ◆ Forestry
- ◆ Usage and discharge of dangerous substances
- ◆ Physical modifications
- ◆ Abstractions

Specific local issues in the South Western River Basin District included:

- Aquatic invasive species and water quality problems arising from development pressures.
- Additional issues not identified in *Water Matters*, e.g. aquaculture.
- Issues associated with action themes such as enforcement, resources and public participation.

3.0 Detailed Comments

Written and verbal submissions / comments are outlined in this section together with a considered response. Submissions and responses are grouped where possible as described above (Section 2.3).

3.1 Referencing system

Reference codes have been assigned to the organisations and individuals that made submissions (see Table 2 below). Submission SW_SWMI_001 to SW_SWMI_010 were common submissions made to all RBDs nationally. Submissions SW_SWMI_11 to SW_SWMI_20 were made to the SWRBD project only.

National Submissions		
Name	Organisation	SWRBD Ref. No.
Nigel Russell	Waterways Ireland	SW_SWMI_001
Elizaabeth Cullen	Irish Doctors Environmental Association	SW_SWMI_002
Joanne Pender	Irish Wildlife Trust	SW_SWMI_003
Mary Stack	Faillte Ireland	SW_SWMI_004
William Symth	Irish Concrete Federation	SW_SWMI_005
Siobhan Egan	Bird Watch Ireland	SW_SWMI_006
Nathy Gilligan	Office of Public Works	SW_SWMI_007
Thomas Ryan	Irish Farmers Association	SW_SWMI_008
Sinead O'Brien	SWAN	SW_SWMI_009
Damian Allen	Department of Agriculture, Fisheries and Food	SW_SWMI_010
SWRBD Submissions		
Name	Organisation	SWRBD Ref. No.
Mary Twomey Casey	North Cork Irish Farmers Association	SW_SWMI_011
-	Irish Wildlife Trust	SW_SWMI_012
Dr Margaret Desmond	Department of Geography, University College Cork	SW_SWMI_013
Charlotte Birch	-	SW_SWMI_014
Brian O' Mahony	ESB Power Generation	SW_SWMI_015
Juliet Duff	Irish Doctors Environmental Association	SW_SWMI_016
Anonymous	-	SW_SWMI_017
Michael Harte	River Ilen Anglers' Club	SW_SWMI_018
Patricia O' Connor	South Western Regional Fisheries Board	SW_SWMI_019
-	Carrigtwohill Environmental Alliance	SW_SWMI_020

Table 2. Reference system to identify submissions in the digest.

3.2 Submissions and Responses

The following submissions relate to issues covered in the *Water Matters*.

3.2.1 Wastewater and industrial discharges

Submission Reference No.	Issues Identified	Response
SW_SWMI_009	<p>Identified the complex administrative process surrounding the roll out of the Water Services Investment Programme.</p> <p>Noted resource issues in local authorities that have contributed to a significant number of agglomerations still being non-compliant with the Urban Wastewater Treatment Directive.</p> <p>The upgrade of all existing plants that are non-compliant must be initiated immediately and there should be a roll over of the budgets for capital works.</p>	<p>As part of the preparation for the River Basin Management Plan a study on municipal and industrial discharges was carried out. An outcome of this study will be the setting of national priorities for new and up-graded waste water treatment plants. This will inform and expedite the Water Service Investment Programme.</p> <p>Furthermore, new procurement procedures have been put in place to expedite the appointment of design teams and contactors and may shorten timescales for approval of project stages.</p> <p>The Wastewater Discharge (Authorisation) Regulations 2007 require the licensing of municipal discharges by the Environmental Protection Agency. The licenses will require local authorities, inter-alia, to comply with the Dangerous Substances Directive and the Urban Wastewater Treatment Directive. Many of the newer waste water treatment plants are being procured using design-build-operate contracts. The conditions of the contracts will ensure that the plants are operated to meet the required standards.</p> <p>The study referred to above will identify plants that are non-compliant or are likely to become non-compliant. The works to bring the plants into compliance will be funded by the Water Services Investment Programme.</p>
SW_SWMI_009	<p>Where sewage treatment works are overloaded there should be a moratorium on further development in the area served by the plant until it is upgraded.</p>	<p>Where an overloaded sewage treatment plant is causing deterioration in water status or is preventing the achievement of at least good status in a receiving water, measures will be required to be taken. These measures may include a moratorium on development in the area served by the plant. However, other measures will also be considered. The Waste Water Discharge (Authorisation) Regulations 2007 (under Article 43(2)) requires the restriction on development whereby it will cause pollution.</p>
SW_SWMI_009 SW_SWMI_003	<p>All treatment plants for 200 plus populations should be upgraded to tertiary treatment levels and all new sewage treatment plants should have tertiary treatment levels.</p>	<p>Tertiary treatment is required when, due to the sensitivity of the receiving water, a higher standard of treated effluent is necessary e.g. where there is poor assimilative capacity in the receiving waters then more stringent standards than those set out in the Urban Wastewater Treatment Regulations may be required. In some cases tertiary treatment may not be necessary however extended secondary treatment may be required e.g. the exposure of secondary treated effluent to ultra violet light to inactivate microbiological pathogens. This type of treatment is used to protect bathing and shellfish waters. Another example is the use of chemicals to remove phosphate. This is used if the discharge is to waters that are eutrophic and the nutrient causing the problem is phosphate. In the case of many discharges there would be no benefit in providing tertiary treatment and /or extended secondary treatment.</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_003 SW_SWMI_009	<p>In frastructure leakage needs to be addressed. Regular monitoring systems must be established to identify, locate and repair leaks.</p> <p>Storm drainage must be disconnected from sewerage infrastructure.</p>	<p>Leaks from sewers can pollute groundwater and surface waters. It is currently a legal requirement that local authorities provide 'fit for purpose' water and waste water distribution and treatment systems. Additionally, local authorities are required to implement Performance Management Systems (PMS) for their waste water treatment plants. The PMS requires operational and maintenance programmes to be in place. This should assist in identifying any leaks in the system more efficiently. The DEHLG has water conservation programmes in place to assist local authorities in setting up District Meter Areas (DMAs) to assist in the detection of leaks in the network.</p> <p>In the design of new sewerage schemes storm water and sewage are kept separate. In old, combined schemes separation of storm water from sewage shall be considered for inclusion in the operational and maintenance programmes.</p>
SW_SWMI_009	<p>Expressed concern that the exemptions set out in Article 7.(1) & 7.(2) of the 'Waste Water Discharge (Authorisation) Regulations 2007' allow time derogations up until 2027 for discharges causing the receiving waters to fail to meet good ecological status, for reasons of "technical feasibility" or because improvements would be "disproportionately expensive".</p>	<p>These exemptions are allowed by the Water Framework Directive but must be fully justified in the River Basin Management Plans. Where exemptions are granted mitigation measures to reduce the impact of the discharges must still be put in place.</p>
SW_SWMI_009 SW_SWMI_003	<p>Prohibit the land-spreading of sludge from sewage treatment plants.</p>	<p>Land spreading of sewage sludge is an appropriate method of disposal provided that the necessary precautionary measures are taken. Current regulations require the close monitoring of soil and sludge and provide limits on heavy metals and on when and where the sludge can be spread in order to reduce risk of pollution.</p> <p>If the land spreading of sludge was prohibited there would be a greater demand for artificial fertilisers and the issue of sewage sludge disposal would need to be addressed perhaps through mechanisms other than land spreading e.g. through incineration.</p>
SW_SWMI_009 SW_SWMI_003	<p>Run a public information campaign providing details about substances, which are not effectively removed by wastewater treatment plants</p>	<p>The need for additional research in this area has been identified. The results of the research may be used to inform awareness raising programmes.</p>
SW_SWMI_003 SW_SWMI_009	<p>There is a lack of confidence in local authority policing of Section 4 (of the Water Pollution Act) licences for the discharge of effluents from smaller industries to waters..</p>	<p>Applications for licenses under the Water Pollution Acts 1977 and 1990 are advertised and members of the public can make submissions. Following the granting of a license, members of the public may appeal the license or any of its conditions. Monitoring records of licenses are available for inspection by the public.</p> <p>It is proposed that offices will be set up in each River Basin District. One of the roles of the offices will be to support and co-ordinate the issue of Section 4 licenses by the constituent local authorities.</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_008	Request that detailed studies of the vulnerability of groundwater and general water quality from licensed discharges be completed and that full consideration be given to these findings when the review of the Nitrates Action Plan takes place.	<p>The National Water Framework Directive monitoring programme commenced in January 2007. This includes monitoring of surface waters and groundwater. Using data from this and other programmes all surface waters and groundwater bodies will be classified and the classifications will be included in the River Basin Management Plans. Vulnerability is a key factor in the waterbody classification process. Following publication of the Plans there will be a review of all licensed discharges taking account of the new environmental quality standards.</p> <p>The review of the Nitrates Action Plan in 2009 will take account of the monitoring results and the new environmental quality standards.</p>
SW_SWMI_009	Increased penalties should be imposed for breach of IPPC (Integrated Pollution Prevention and Control) licences.	Penalties are set in legislation. Summary conviction in the District Court has smaller penalties than conviction on indictment in the Circuit Court where penalties can be up to €1 million.
SW_SWMI_009	Felt that the report does not adequately address the disposal of sewage sludge, cumulative effects of discharges, increased use of food macerators in domestic kitchens, problems with pharmaceutical and personal care products present in trace amounts, detergent use and discharges.	<i>Water Matters</i> did not set out to be a comprehensive report on all water issues. Its aim was to identify significant water management issues and seek the response of the public. When the River Basin Management Plans are being written the additional issues brought forward during the consultation will be considered.
SW_SWMI_016	<p>Suggest that a programme be developed that would train waste specialists in the county councils and keep them up-to-date with the latest sustainable waste / sewage treatment technologies.</p> <p>Suggest that that certification for sewerage systems be introduced to designate them as not being harmful to water system.</p>	<p>Local authorities have expert knowledge available to operate waste water treatment plants. Performance management systems have been introduced under Circular L12/02, for which includes training for operators, thereby ensuring that the best available and most up-to-date knowledge is applied. When new treatment plants are being designed consulting engineers are recruited and they avail of the best international practice.</p> <p>All municipal waste water treatment plants will be licensed or certified by the EPA under the recently introduced Wastewater Discharge (Authorisation) Regulations 2007.</p>

3.2.2 Landfills, quarries, mines and contaminated lands

Submission Reference No.	Issues Identified	Response
Landfills		
SW_SWMI_009	Felt that the grouping of activities in this section was inappropriate because of the varied impacts and different requirements for responses.	The SWMI report was primarily a non-technical public consultation document for the general public and this necessitated a simplistic approach in combining pressures. Each pressure will be treated separately in the River Basin Management Plan.
SW_SWMI_003 SW_SWMI_002 SW_SWMI_009	Specific timescales must be set for the characterisation and remediation of historic landfill sites. Closed down landfills should always be capped. Concern over the lack of response to the clean up of historic illegal landfill sites. Recommend water quality monitoring to be completed where illegal dumping has occurred.	The EPA's (Code of Practice) guidance to local authorities on identification and remediation of historical and illegal landfills covers all of these issues. It is intended that this guidance will form part of the program of measures under the River Basin Management Plan. It is a requirement under the EPA Code of Practice Guidelines that an Environmental Risk Assessment be undertaken on such sites and where a significant risk is identified it is a requirement for monitoring of the impacted media including surface and groundwaters.
SW_SWMI_009	It was felt that the focus of this section was on dangerous substances and that other issues were not adequately addressed e.g. sediment and rock dust from quarrying, impacts of temperature variations between discharge waters and receiving waters etc.	It is intended that these issues will be addressed in the River Basin Management Plans.
SW_SWMI_005	The provision of environmental awareness training to staff and management of deep dry worked excavations and wet worked gravel dredging operations should be mandated by way of planning condition as should the presence of an Environmental Management System for the site operations to include emergency response procedures as may be necessary.	These are specific "planning" issues, however it is intended to include a water education awareness program as part of the program of measures and that issues like this would be included. Both the EPA and Irish Concrete Federation have developed Best Practice Guidelines (2005) for the operation of quarries. These guidelines are used by local authorities in assessing quarry planning and registration applications.
SW_SWMI_009	Current assessments of vulnerability of groundwater to contamination from new landfills do not incorporate variations in rainfall patterns associated with climate change.	River Basin Management plans including all programs of measures will under go "Climate Proofing". The risk of impact to the groundwater as a result of increased rain fall is a function of the recharge capacity of the groundwater body.

Submission Reference No.	Issues Identified	Response
SW_SWMI_016	Waste disposal / recovery facilities must not be placed near waterways. A large landfill waste disposal site is being constructed in north County Cork on the headwaters of several rivers that feed into the Blackwater River.	The selection of sites for the disposal of solid wastes must take many factors into account, including the potential impact on the water environment. It is impossible to have an absolute prohibition on the location of such facilities in the catchments of rivers. However, it is required that all necessary steps are taken to ensure that no contamination of surface waters or groundwater occurs. This is considered in the planning stage of such facilities and also in environmental impact statements where they are required.
Quarries		
SW_SWMI_009 SW_SWMI_005	<p>Noted the significant level of demand for aggregates within Ireland and the current lack of capacity within local authorities to license and regulate quarries effectively with the consequence that significant amounts of aggregates being supplied from unlicensed sites.</p> <p>Expressed concern that demand for aggregates would be met by unauthorised facilities if legitimate industry is unnecessarily restricted in maximising extraction from permitted sites through controlled deep excavation below the water table.</p>	Local authorities have always sought to apply legislative requirements fairly to all. Programs are in place by all local authorities to identify and bring all non-compliant sites up to the required standard.
SW_SWMI_003 SW_SWMI_009	Identified the potential conflict of interest with local authorities licensing and regulating quarries and often being substantial customers as well.	Noted
SW_SWMI_005	Highlighted that <i>Water Matters</i> specified that quarries of four years or older must register with local authorities under the Planning and Development Act. They note that this process has now concluded with the exception of a small number of appeals to An Bord Pleanála.	Noted
SW_SWMI_009	A significant number of unauthorised quarries have never closed down which is felt to be a problem of lack of enforcement.	Programs are in place by all local authorities to identify and bring all non compliant sites up to the required standard.

Submission Reference No.	Issues Identified	Response
SW_SWMI_019 SW_SWMI_020	<p>Water-table drawdown is of particular relevance in quarries where excavation extends into groundwater strata and lowers the water table with dewatering of surrounding surface waters and impacting on aquatic habitats.</p> <p>An Impact Assessment of potential risk site locations should be undertaken to identify the degree of groundwater drawdown and extent of surrounding waters affected; assessment should recommend mitigation measures to eliminate / off set impacts.</p> <p>Identify areas where there is saline intrusion and to develop measures to mitigate against this.</p> <p>Concerns that the drinking water well levels have dropped over the years as a result of high levels of quarrying excavating below the water table. There is a need to determine the level of dewatering ongoing at each quarry site.</p>	<p>It is noted that there are a very small number of locations in the SWRBD where the lowering of the water table may affect groundwater status. Further investigation will be necessary to establish the position and to bring forward measures to address the problem, if required.</p> <p>Many local authorities request that water quality and level monitoring be provided as part of the quarry registration process.</p>
SW_SWMI_020	<p>Reinstatement / restoration plans for the quarries need to be assessed for future impacts on the environment</p> <p>There may be a risk of the water table rising following the closure of the quarries resulting in the flooding of areas not previously affected</p>	<p>Reinstatement and restoration measures are set down by the Planning Act through planning conditions or quarry registration conditions. Enforcement is a matter for each local authority.</p> <p>Similarly, the prevention of flooding can be addressed by conditions.</p>
Mines		
SW_SWMI_009	Felt it was an omission that only issues with historic mine sites were dealt with in the report.	Pressures not only from historical but also existing mining sites will be addressed under River Basin Management Plans.
SW_SWMI_009	There is inadequate planning for the “end of life” phase of current mining operations which can mean that potential ongoing negative effects of these operations are not anticipated.	Closure plans for existing mines are a collaborative process involving the Department of Communication and Natural Resources, the Environmental Protection Agency and the relevant Local Authority. Current environmental standards are applied to all closure plans.
SW_SWMI_009 SW_SWMI_003	Significant bonds should be required of all current mining operations for rehabilitation of old sites.	This is a requirement under current licensing.

Submission Reference No.	Issues Identified	Response
Contaminated land		
SW_SWMI_003 SW_SWMI_009	Specific timescales must be set for the characterisation and remediation of contaminated land and the process should be overseen by an independent body to ensure appropriate assessment of local authorities' own sites.	The Environmental Protection Agency is in the process of preparing Guidance for Local Authorities.

3.2.3 Agriculture

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_013	<p>The Nitrates Regulations are inadequate to address nutrient enrichment in specific areas and soil P levels are set too high in the Regulations for some regions. Account must also be taken of areas that are naturally high in nitrates .</p> <p>The development of a uniform environmental threshold P level is unreasonable as it neglects to consider the potential for P transfer. It may be more appropriate to use a phosphorus index for screening areas to determine the relative risk for P loss and to use this to allow more targeted follow-up assessments on the ground with a subsequent identification of prescriptions on agricultural activities/practices set to suit the environmental conditions.</p>	<p>The maximum fertilisation rates in the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations (commonly referred to as the Nitrates Regulations) are based on sound scientific evidence. For instance the phosphorus index system for grassland was revised when the Regulations were introduced. The rate of phosphorus that a farmer can apply to grassland depends on the grassland stocking rate, the P index of the soil, the zone the farm is located in, and the amount of concentrates fed to the livestock. Currently all soil is assumed to be phosphorous index 3 unless a soil test indicates otherwise thereby limiting the amount of phosphorous that may be applied to maintenance levels.</p> <p>The effectiveness of the National Action Programme under the Nitrates Directive is being monitored and evaluated by various means including an agricultural mini-catchment programme that has been undertaken by Teagasc. The Nitrates Action Programme will be reviewed in 2009 in line with the findings of this monitoring and evaluation.</p>
SW_SWMI_009	Felt that little, if any action will be implemented to control the impacts agricultural pollution of waters beyond the implementation of the Nitrates Regulations.	A monitoring and evaluation programme is in place to determine the effectiveness of the National Action Programme and attempts to measure how changes in farm management practices affect water quality. Investigation will also be completed into how much the current National Action Programme will contribute to meeting the objectives of protected areas such as water dependent Special Areas of Conservation, shellfish, bathing and drinking water areas. Additional more stringent measures may be needed in these areas which may include the establishment and enforcement of agricultural bye-laws. Supplementary actions may also need to be undertaken in other areas to address agricultural pollution..
SW_SWMI_003	The Nitrates Regulations must be supported through the establishment and proper enforcement of agricultural bye laws.	Work is currently progressing to develop improved farm inspection protocols to ensure inspections for the purposes of the Nitrates Regulations and other legislation are consistent among all local authorities and appropriate follow-up enforcement actions are implemented.
SW_SWMI_008	Noted that the Nitrates Regulations adequately represent farmers' contribution to the achievement of good water status by 2015.	The European Communities (Good Agricultural Practice for the Protection of Waters) Regulations will go a long way to addressing agricultural pollution, however after examination of its effectiveness modifications may be required.

Submission Reference No.	Issues Identified	Response
<p>SW_SWMI_008</p> <p>SW_SWMI_003</p> <p>SW_SWMI_009</p>	<p>Felt there were too many inspection bodies and that full inspection and enforcement responsibility should be passed to DAFF.</p> <p>Enforcement and monitoring of the Nitrates regulations should be removed from DAFF to an independent body. If this is not politically feasible enforcement should be overseen by the EPA's Office of Environmental Enforcement.</p>	<p>Local Authorities are responsible for carrying out inspections of farm holdings for the purposes of the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations. These Regulations are presently being amended requiring inter-alia that the EPA make recommendations and give directions to a Local Authority in relation to the monitoring and inspections to be carried out. Work is also currently progressing to develop a protocol ensuring consistent inspection is completed by all local authorities.</p> <p>As part of the Single Payment Scheme farmers are required to observe 19 Statutory Management Requirements (SMRs) set down in EU Directives and Regulations on the environment, public, animal and plant health and animal welfare and to maintain land in Good Agricultural and Environmental Condition. This is what is known as cross-compliance. One of the SMRs is the Nitrates Directive. The Department of Agriculture, Fisheries and Food is responsible for on-farm cross compliance checks for the purposes of the Single Payment Scheme.</p>
<p>SW_SWMI_003</p> <p>SW_SWMI_009</p>	<p>Inspections under the Nitrates Regulations should be on the spot, without notice.</p> <p>No more than 3 days notice should be provided for inspections.</p>	<p>Local Authorities are responsible for carrying out inspections of farm holdings for the purposes of the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations. Local Authorities do not, generally, give any advance notice when carrying out such inspections.</p> <p>Under current Regulations provided that the purpose of the control is not jeopardised the Department of Agriculture Fisheries and Food may give up to 14 days notice for land eligibility and cross-compliance inspections involving Statutory Management Requirements other than those related to animal identification and registration, food, feed, and animal welfare. For checks involving cattle identification and registration the maximum advance notice is 48 hours provided that the purpose of the control is not jeopardised. For SMRs dealing with feed, food and animal welfare no advance notice may be given. In practice because of a requirement, to carry out all inspections under the Regulations at the same time, all cross-compliance inspections, including those relating to Nitrates are carried out without notice. However the farmer is given the opportunity of postponing those elements of the inspection other than those relating to food, feed and animal welfare for a further 48 hours.</p>
<p>SW_SWMI_003</p> <p>SW_SWMI_009</p>	<p>Review of the Nitrates Regulations through mini catchment studies must be completed in good time, so that additional actions that are seen as necessary can be incorporated into the River Basin Management Plan.</p>	<p>The effectiveness of the current National Action Programme under the Nitrates Directive is currently being monitored and evaluated by various means including an agricultural mini-catchment programme that has been undertaken by Teagasc. As the mini-catchment programme has only recently got underway it is unlikely that there will be any significant output from the programme that could be incorporated in the forthcoming River Basin Management Plans. be</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_008	Request that mini catchment studies similar to those being completed to assess the effectiveness of the NAP be completed for other industry types.	Catchment models have been developed to quantify the input of pollution from point sources such as wastewater treatment works and industries with licenses to discharge.
SW_SWMI_009	Farmers in REPS must be encouraged to maintain a farm nutrient balance.	The Rural Environment Protection Scheme (REPS) is a scheme designed to reward farmers for carrying out their farming activities in an environmentally friendly manner and to bring about environmental improvement on farms. Farmers in REPS must comply with 11 basic measures, one of which is to follow a farm nutrient management plan prepared for the total area of the farm. Failure to comply with the conditions of the Scheme will result in penalties and a consequent loss of part or the whole payment for the year, farm holders who incur penalties will be subject to increased inspections.
SW_SWMI_003	Controls should be placed on the amount of fertiliser that can be purchased. Purchases should only be allowed when justified by nutrient management plans.	Under the European Communities (Good Agricultural Practice for the Protection of Waters) Regulations farm holders are required to prepare an estimate of the annual fertiliser requirement for the holding. In addition farm holders are required to record the quantities and types of chemical fertilisers moved on to or off the farm holding and must retain records for at least 5 years. Failure to comply could result in prosecution and reduction in the single farm payment.
SW_SWMI_003 SW_SWMI_008	Additional financial incentives must be provided to encourage and promote environmentally sensitive farming. Seek re-opening of the Farm Improvement Scheme by DAFF.	Additional financial support in the form of agri-environmental schemes, farm storage facilities or technological solutions may have to be considered in specific catchments.
SW_SWMI_008	Increase in grants available for rainwater harvesting.	An awareness-raising programme may be developed as part of the River Basin Management Plan to promote sustainable water use and encourage rainwater harvesting by all users.

Submission Reference No.	Issues Identified	Response
SW_SWMI_009	Investigation into the potential to use the Rural Development Programme (Department of Community, Rural & Gaeltacht Affairs, 2006), to introduce supplementary measures, should be completed.	<p>The Government is committed to implementing a strategy for rural development on the basis of an inclusive approach to sustainable development, the integration of policies, a regional dimension and partnership with the rural community. A number of funding streams are available under the CAP Rural Development Programme 2007-2013 including CLÁR (Ceantair Laga Árd-Riachtanais). CLÁR provides funding and co-funding to Government Departments, State Agencies and Local Authorities in accelerating investment in selected priority developments. These investments support physical, economic and social infrastructure across a variety of measures. The measures introduced under the programme reflect the priorities identified by the communities in the selected areas whom the Minister consulted at the outset. Areas targeted under the CLÁR programme includes parts of Counties: Carlow, Cavan, Clare, Cork, Donegal, Galway, Kerry, Kilkenny, Laois, Limerick, Longford, Louth, Mayo, Meath, Monaghan, Offaly, Roscommon, Sligo, Tipperary, Waterford, Westmeath, Wicklow and all of County Leitrim.</p> <p>The Farm Improvement Scheme, which was provided for in the 2007 – 2013 Rural Development Programme of Ireland, included objectives and measures that are beneficial to the environment and prevention of water pollution.</p> <p>All potential methods of resourcing measures will be investigated.</p>
SW_SWMI_003 SW_SWMI_009 NW_SWMI_015	Alternative disposal mechanisms for slurry (and municipal sludge) other than land spreading need to be provided. The use of bio-digesters for the disposal of slurry should be encouraged and funding made available.	<p>The Department of Agriculture, Fisheries and Food supported the development of new/emerging technologies by providing grant aid to farmers in 2006 for pilot projects under the Scheme of Investment Aid for Demonstration On-Farm Waste Processing Facilities.</p> <p>A bio-energy scheme from Sustainable Energy Ireland provides grants for installation of CHP plants fuelled by biogas from anaerobic digestion. The scheme includes a start-up grant and a guaranteed price of at least 12 cent per kWh. The scheme has a budget of up to €8 million and will provide up to 30% investment grant support for eligible projects. Further details can be found on www.sei.ie/bio_chpgrants.</p>
SW_SWMI_003 SW_SWMI_009	The physical disturbance to water bodies, created by agricultural activities (e.g. animal watering sites and uncontrolled access), is not addressed in the document and must be regulated. The Land Drainage Act still allows for the drainage and 'reclamation' / infilling of wetlands.	<p>The physical disturbance to water bodies from agricultural activities was addressed in the physical modifications section of <i>Water Matters</i>. Farmers in the Rural Environment Protection Scheme are required to fence off lakes and watercourses to prevent stock trampling. Supplementary measures to tackle overgrazing and stock trampling in specific areas will be considered as part of the Programme of Measures.</p> <p>The new Floods Directive will introduce a new method of assessing and controlling land drainage activities.</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_003	Clarify with the relevant statutory agencies the responsibilities for vegetation along the edge of water bodies.	Local authorities maintain Drainage Districts for flood alleviation and land drainage and the Office of Public Works maintains the Arterial Drainage Scheme. However there are large areas where there is no statutory body with a river maintenance responsibility and in this case it is the responsibility of the landowner. In accordance with Ireland's Flood Policy 2004, the Office of Public Works (OPW) will be taking a proactive role in assisting with flood risk management issues where no authority is deemed responsible. There will be a designation process where high flood risk channels can be designated by the OPW for maintenance functions to reduce flood risk. Legislative change is required for this to work fully so it will be a number of years before it is established.
SW_SWMI_008	The IFA seeks a cost benefit analysis of any further increases in buffer zones for fertilizer spreading over and above the requirements of the Nitrates Directive.	Socio-economic studies will be completed as part of the agricultural mini-catchment programme to evaluate how cost effective measures under the current National Action Programme have been. Modifications to measures will be identified where evidence indicates that water quality targets may not be achieved.
SW_SWMI_003 SW_SWMI_024	The cleaning of slurry tanks, spreader and of spreading equipment from water bodies should be prohibited. Note problems with farmers washing out slurry tanks on lake shores.	It is an offence under the Local Government Water Pollution Acts 1977 and 1990 to cause or permit any polluting matter to enter waters. This includes slurry from the washing of slurry tanks and spreading equipment. Incidences should be reported to the local authority.
SW_SWMI_011	Agriculture is presently coping with the difficulties and some unworkable element e.g. calendar farming of the Nitrates Directive. Farmers are doing everything possible to help improve the environment. Appealed that no additional measures for agriculture would be written into the Water Framework Directive other than the Nitrates Directive	As it stands there are no proposals for additional measures for agriculture. However, there may be some exceptions with regard to sensitive waters. The nitrates regulations will be reviewed in 2009. Between now and then the monitoring programmes will identify any benefits derived from the on-farm measures undertaken.
SW_SWMI_016	Strategies that encourage and support organic farming to reduce contamination of waterways through runoff from fertilized fields etc. should be developed.	The Department of Agriculture, Fisheries and Food provides extensive advice and support, including financial support for organic farming. The focus of the advice and support is on food production and quality but there will be beneficial, environmental side effects.
SW_SWMI_019	Land reclamation practices should be addressed. Where these lands are located in vulnerable river / lake catchments, soil phosphorus and sediment release can contribute to water enrichment.	Land owners are responsible for the prevention of pollution when they carry out works on their land. This applies to land reclamation and other developments.

3.2.4 Wastewater from unsewered properties

Submission Reference No.	Issues Identified	Response
SW_SWMI_003	Guidance on best practice is ineffective unless it is transposed into regulations.	Agreed. There is an overall need to tighten controls on the siting, installation and maintenance of onsite wastewater systems with national standardisation of site suitability testing and allowable practice.
SW_SWMI_003 SW_SWMI_009	A national system of licensing for proprietary systems with an inspection regime, clear responsibility for owners and effective penalties must be introduced. Percolation tests must be made mandatory and be completed by independent qualified scientists (with a charge included in the planning application fee). There should also be a system of accreditation and licensing for septic tank installation companies and sludge removal operators.	<p>Proprietary systems are currently certified under the Agreement System. Their suitability will often be site specific and they will normally be assessed on this basis. Recommendations included in the measures for onsite wastewater systems may include:</p> <ul style="list-style-type: none"> • Approval system for proprietary units. • Establishment of a National / Local Register of approved, qualified site assessors. • Standardisation of site investigation requirements across all Local Authorities, based on the EPA updated guidance document for single house treatment systems. • Certification of onsite wastewater treatment system installation. <p>The measures may include recommendations for Bye Laws relating to duties of owners of on-site wastewater systems to ensure maintenance and regular de-sludging.</p> <p>Sludge removers already come under the control of the Waste Management Act and must hold a current licence to remove septic tank sludge for disposal from systems.</p>
SW_SWMI_003 SW_SWMI_009	Highlighted the importance of planning controls that restrict the building of unsewered properties in areas where the geology and soil are unsuitable for percolation-based treatment systems. There should be improved and more integrated planning for the siting of septic tanks.	<p>Pathway risk mapping combining the geology, subsoil permeability and aquifer bedrock type with regard to suitability of general location for on site wastewater treatment systems will be provided to each Local Authority. This will indicate generally high risk areas for the location of such systems. However, even where risk mapping indicates a lower risk category, detailed site investigation by qualified assessors, in accordance with the requirements of the updated EPA Guidance document for single house systems, will still be required as part of the planning process to confirm site suitability. The pathway risk mapping will be combined with a pressure layer map of existing system locations to identify high risk areas which should be targeted for inspections by the Local Authorities and necessary upgrading as appropriate.</p>
SW_SWMI_009	Seek clarity and elaboration on the statement that “Legislation will be amended to clarify and elaborate the statutory basis for the licensing of discharges to soil”.	At the time <i>Water Matters</i> was drafted it was anticipated that amended legislation would be necessary to address waste water disposal from unsewered sites and it was expected that the Programme of Measures study would make specific recommendations. However, it is now expected that new or amended legislation will not be required but that improved guidance and better enforcement, via the Planning Acts, will address the problem.

Submission Reference No.	Issues Identified	Response
SW_SWMI_008	Opposed to excessive restriction on the siting of new housing for farming families where appropriate systems are installed. Recommend that funding is made available for rural dwellers to upgrade their septic tanks.	Where detailed site investigation for an onsite wastewater system indicates that the location fully complies with the planning requirement and meets the requirements of the EPA updated Guidance for Single House Systems then this would not form the basis for a restriction on development. The provision of financial incentives to upgrade existing septic tanks where required is supported by RBD Advisory Councils. This is a policy decision for National Government.
SW_SWMI_003 SW_SWMI_009	All proprietary treatment systems should deliver tertiary treatment.	<p>Research undertaken through the EPA Environmental Research Technical Development Initiative (ERTDI) Programme has indicated that a correctly installed septic tank or proprietary treatment system with a correctly installed percolation area on a suitable site will adequately treat wastewater to the required standard without the need for tertiary treatment.</p> <p>However, where proprietary treatment systems result in a discharge to surface waters or where the area is particularly sensitive, such as a groundwater dependent ecosystem for example, then extended secondary treatment and/or tertiary treatment may be appropriate. The requirement for such treatment will be site specific.</p>
SW_SWMI_003 SW_SWMI_009	If sewage infrastructure is installed near an unsewered property connection should be offered at a reduced rate or should be free. New properties near existing infrastructure should be required to connect to it.	<p>The requirement for properties adjacent to existing sewer networks to connect is included in the measures for onsite wastewater treatment systems. The provision of financial incentives is supported by the RBD Advisory Councils. This is a policy decision for National Government.</p> <p>The Water Services Act, 2007 addresses the connection of properties to existing sewer systems.</p>
SW_SWMI_003 SW_SWMI_009	Noted the difficulties with biocycle units, some of which are unsuited to use in irregular habitation situations (i.e. holiday homes), as they are subject to “shock loading” when used.	All proprietary treatment systems are biological systems and will reduce in efficiency through long periods of disuse. Large scale systems are subject to control by licence under the Local Government (Water Pollution) Acts 1977 and 1990. Single house systems are generally controlled under the planning requirement for maintenance contracts for such systems. Stricter enforcements of the maintenance contracts is required and will be recommended in the measures programme.
SW_SWMI_003 SW_SWMI_009	Awareness raising is required on the effects of household chemicals on septic tank functioning e.g. bleach. Phosphates should be banned from domestic cleaning products.	<p>This issue together with all water matters issues will be the subject of National and Local Awareness campaigns. Voluntary agreements exist to have phosphate free detergents with major suppliers for certain applications. The public awareness programme will highlight this and other issues.</p> <p>In a well designed, well located and well sited percolation area phosphorous will be largely removed by the percolation process.</p>
SW_SWMI_003 SW_SWMI_009	Local Authorities should encourage alternative wastewater treatment systems for unsewered properties, such as wetlands and reed beds.	Much research has been undertaken on the use of alternative systems such as wetlands and reed beds. Some limitations have been identified such as reduced uptake of nutrients during dormant plant growth periods and not all sites may be suitable for such systems. The use of such systems will be site specific and will be assessed on a case by case basis and approved as appropriate.

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_003	Strict control on land spreading of septic tank contents.	<p>An operator involved in the removal of septic tank sludges must be an approved Waste Contractor under the Waste Management Act. Septic tank sludges must be treated before disposal and are generally treated in Urban Waste Water Treatment Plants. Local Authorities are including septic tank sludge into their Waste Management Plans.</p> <p>Spreading of sewage sludge on agricultural land is controlled by the Waste Management (Use of Sewage Sludge in Agriculture) (Amendment) Regulations 2001 and also under Local Authority Sludge Management plans.</p>
SW_SWMI_019	<p>Where surface ponding or leachate from waste water systems becomes an issue, peripheral site drainage acts as a direct conduit for pollutants to enter waters. To prevent this, the criteria for site approval should be based on a site's natural soil type and percolation characteristics. There should be a presumption against the use of imported media and site drainage to facilitate waste water disposal.</p> <p>Sustainable drainage systems dealing with site surface waters for all rural development should be introduced as increases in runoff can contribute significantly to changing surface water flow regimes.</p>	<p>It is agreed that the criteria for site approval should be based, <i>inter alia</i>, on the site's natural soil type and percolation characteristics. There are circumstances where imported media may be used to facilitate treatment of waste water.</p> <p>Sustainable drainage systems will be considered in the context of flood management and prevention strategies where developments are likely to have an impact outside the site boundaries. In the case of small developments in rural areas it would not generally be necessary to address this issue if runoff can be disposed of to groundwater within the site.</p>

3.2.5 Forestry

Submission Reference No.	Issues Identified	Response
SW_SWMI_010	<p>Felt the report was too negatively focused. Noted the positive impacts of forestry:</p> <ul style="list-style-type: none"> • Riparian zone planting provides stability, shelter and food for aquatic life • Planting of buffer zones protects against sources of pollution 	<p>The National Forest Estate covers a substantial surface (10%) of the country. It is generally located in the upland areas of catchments where the smaller feeder streams which are important salmonid spawning and nursery habitat locations. Whereas there are many positive benefits from forests there may be a potential to impact on water quality if forest operations are not carried out in a sustainable manner. This is done by the implementation of the Forest Service regulations which are mainly contained in its Code of Best Forest Practice, its Suite of Guidelines and the conditions attached to its various schemes and the licences which it issues.</p> <p>Much of the commercial forest estate in Ireland was planted in the early 1960s prior to the introduction of the current Codes of Practice. Buffer zones and silt control measures would generally not have been installed resulting in planting to stream banks. It is these forests which are now being felled to provide wood material. Their management is a potential source of pressure on receiving waters, While guidelines exist for the harvesting of these areas, their restocking is not subject to specific guidance but it must meet the current afforestation standards. Forestry measures for the River Basin Management Plans (RBMPs) include a recommendation for specific guidance for the management of these older forest stands which will include a suite of measures to be used on a case by case basis.</p>
SW_SWMI_010	<p>Noted concern about the issue of proportionality in the reports. The same space is allocated to forestry as wastewater and industrial discharges which are considerably more detrimental to water quality. This should be addressed in the RBMP.</p>	<p>The Forest Estate comprises 10% of the land area of the country and is sometimes located in sensitive areas of catchments. The potential for impact on water quality may be significant if not managed in a sustainable manner.</p>
SW_SWMI_009 SW_SWMI_003 SW_SWMI_017	<p>Called for a revision the 1946 Forestry Act to remove the requirement to replant in all felled areas, so that sensitive areas and those unsuitable for Forestry are not replanted on.</p>	<p>The Programme of Measures for forestry includes a recommendation to revise the relevant sections of the 1946 Act to exclude the requirement to replant on certain sites (low yield class) or in sensitive areas (such as Freshwater Pearl Mussel catchments). Under the existing act a limited felling license may be issued under which the obligation to replant may be waived by the Minister. Consideration must be given to any beneficial effect of restocking such as the uptake of nutrients from previous crops. The issue of alien species invasion (such as Rhododendron) must also be considered. Deforestation will also have a significant negative bearing on the national Carbon Sequestration balance, generate soil erosion and reduce future timber supplies to the wood industry.</p>

Submission Reference No.	Issues Identified	Response
<p>SW_SWMI_009</p> <p>SW_SWMI_003</p> <p>SW_SWMI_017</p>	<p>Identified the need to comply with recent ruling from the European Court of Justice by implementing Environmental Impact Assessment to all sub-threshold afforestation in or near protected sites or species.</p> <p>Proposed the nitrates regulations should be amended to include forestry activities.</p> <p>Restrictions governing clearfelling must be introduced with strict controls of coup sizes in sensitive areas.</p> <p>Move away from over-reliance on conifers and increase diversity in planting with an increased broadleaf component.</p> <p>Low impact silvicultural systems should be implemented and there should be a shift away from over reliance on planting on marginal wet land.</p> <p>Increased use of effective buffer zones should be required.</p>	<p>European Communities (Environmental Impact Assessment) (Amendment) Regulations, 2001. (S.I. No. 538 of 2001) introduced the Forestry Consent Scheme. This allows for sub-threshold afforestation to be subject to Environmental Impact Assessment for specific proposals at the discretion of the Minister. All protected sites and their catchments would need to be identified (using the Environmental Protection Agency Register of Protected Areas with continuous updates by National Parks and Wildlife Service for habitats).</p> <p>All applications to the Forest Service (FS) are checked for proximity or inclusion in designated areas by the FS and all afforestation applications are checked for subthreshold EIAs (documented on the Forest Service IFORIS system). If they are included, the application is referred to the relevant statutory body for consultation. Updates of these areas are also updated on FS databases.</p> <p>Fertilisation in relation to forestry is a separate issue and is regulated by the Forest and Water Guidelines, the Forestry Schemes Manual, Codes of Good Practice and by the European Communities (Aerial Fertilisation) (Forestry) Regulations 2006, S.I. No. 592 of 2006.</p> <p>Control of clearfelling is managed through licensing by the Forest Service under the 1946 Forestry Act. Either Limited or General Felling Licenses are issued with conditions. Consultation between Forest Service and National Parks and Wildlife Service, relevant Fisheries Boards and other Statutory Stakeholders takes place where sensitive areas are concerned. In general smaller coup sizes are being felled and felling plans take account of the sensitivity of the catchment receptors in their design. The FS harvesting guidelines specify area limits for clearfelling.</p> <p>Coillte Teoranta follow the principles of Sustainable Forest Management. The long term effect of this policy is to produce uneven aged, multi-storey forest stands with considerable species diversity.</p> <p>Presently the national forest estate comprises over 24% broadleaf species and their planting is supported through Forest Service initiatives and grant aid. However, planting is a commercial enterprise and market driven, and this together with site characteristics often dictates species mix. Low yield class sites will not attract grant assistance or yield commercial crops. This will result in a move to better lands downstream and away from marginal soils in the more exposed upstream locations.. In 2006 broadleaf planting was 31.4% of all planting. The grant structure also favours planting of broadleaves (higher grant support).</p> <p>Buffer zones are required to be established under the Forestry Schemes Manual and Forest Service Guidance documents. As older plantations are felled buffer zones are being introduced as part of the overall management of the site. The minimum buffer zone requirement is 10m and may vary up to 25 m depending on slope conditions.</p>

Submission Reference No.	Issues Identified	Response
	<p>The use of high mycorrhizally active species in the vegetation of engineered buffer zones to ensure their long-term efficiency (such as salix, alder and aspen) should be promoted.</p>	<p>Consideration has been given to the use of different species in buffer zone areas. However, the selection is often site specific as many plantations are at high elevations where broadleaf species may not establish. The Forest Service together with Woodlands of Ireland have published an information note entitled Native Riparian Woodlands - A Guide to Identification, Design, Establishment and Management. It addresses practical issues such as the management of existing native riparian woodland, restoring native riparian woodland on conifer plantation sites and the establishment of new native riparian woodlands on green field sites.</p>
<p>SW_SWMI_009 SW_SWMI_003</p>	<p>Identified that the <i>Water Matters</i> was inaccurate where it referred to acidification being a result of what is normally known as ‘scrubbing’, without referring to the acidic nature of the needles of Sitka Spruce which cause the more significant portion of the acidification problems associated with forestry.</p> <p>The report also omits the issue of habitat loss as a major problem.</p>	<p>Studies on acidification of waters in Ireland have generally identified coniferous stands with closed canopies (generally greater than 14 years) on poorly buffered sites as being a primary conduit for acidification impact. This arises from scavenging of both anthropogenic pollutants from the air and also sea salts from storm events. The presence of forests per se and the associated forest litter on such poorly buffered sites is being considered in the context of acidification impacts. Broadleaf species also have potential to cause acidification on poorly buffered sites although to a lesser extent and this is also being considered in the measures for forestry.</p> <p>The wood derived from Sitka Spruce is known as White Deal and is the wood type in most demand by the market (up to 90% of timber used in modern house building is White Deal or derived from it).</p> <p>The point about habitat loss is noted and will be referred to in the RBMP. Some work has been undertaken on the feasibility of restoring blanket bogs post clearfelling of the forest and this will be considered where feasible as a measure. Forest Service also consults with NPWS and no planting occurs in a designated area without agreement of NPWS.</p>
<p>SW_SWMI_009 SW_SWMI_003</p>	<p>Reference in the reports to forestry problems being historic is misleading. The recently published Coford “Bioforest” Project Report raises concern that adequate attention is not being paid within current forest policy and practice to the threats and pressures being posed by current forestry practices on biodiversity and water quality.</p>	<p>It is recognised that forestry issues are ongoing. However, many of the issues do relate to older forest plantations, now at harvest stage, which were established prior to the introduction of the current suite of Forest Service Guidelines, the Code of Good Forestry Practice and the Forestry Schemes Manual. These publications resulted from progressive ongoing research into forests and associated water quality issues. A recommendation has been made to update these documents to reflect recent research work and cross referencing and also to introduce new guidance specifically for the management of older plantations. Forest Service Policy since the 1980s has been to move forestry away from the more difficult peat based sites to more mineral soils and this is reflected in the change in forest soil type locations since that time (National Forest Inventory). Forest Service guidelines are updated based on best available knowledge at the particular time.</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_003	'Tunneling' where tree growth on a river bank blocks light to the river must be prevented.	Tunneling is largely a phenomena of older plantations planted prior to Forest Service Guidelines. Newer plantations, post 1980s', have established buffer zone widths. As part of felling licenses issued by the Forest Service riparian zones and buffer zones are required to be introduced under any restocking plan. Some shading of streams is desirable to provide refuge for fish species and planting of buffer zones will include selected planting with suitable species. Installation of buffer zones in both afforestation and restocking of sites is now mandatory, which will eliminate the tunneling effect over time.
SW_SWMI_009 SW_SWMI_003	The use of forestry land for the spreading of sewage sludge is a serious concern.	The application of sewage sludge to forests is not common practice as there are significant issues with access, nutrient contents and impacts on water quality associated with its use. The Forest Service have requirements specifying the use of slow release fertilizer, rates of application and concentrations in their Guidance documents. Sewage sludge does not meet any of these requirements. However, it has been used in experimental coppice willow plots but its use as a general purpose forest fertilizer would require significant study and evaluation before it would receive general approval from the Forest Service. <i>Note for comment:</i> <i>Spreading of sewage sludge is controlled by the Waste Management (Use of Sewage Sludge in Agriculture) (Amendment) Regulations 2001 and also under Local Authority Sludge Management plans. However, the Regulation specifically refers to "agriculture" in the context of growing commercial food crops and not to forestry. A revision to include for forestry application could be considered.</i>
SW_SWMI_012	Why is it that the Forest Sensitive Areas map of County Cork produced by Cork County Council is not referred to in the Report, and developed and maximised as a useful tool?	This map was a draft document which was drawn up by the Planning Department of Cork County Council in consultation with a number of stakeholder groups. It was not formally adopted by the Council as a policy. Its primary focus was landscape impact.
SW_SWMI_017	There is also a problem of leaching of phosphate into the waterbodies as a result of fertilization of the crop at the early stages when there is little active growth.	Fertilisation in forestry is addressed by the Forest and Water Guidelines, the Forestry Schemes Manual, Codes of Good Practice and by the European Communities (Aerial Fertilisation) (Forestry) Regulations 2006, S.I. No. 592 of 2006.
SW_SWMI_018	Noted siltation of the spawning beds in the shallower headwaters as being a real problem throughout the country.	The implementation of the Forest Service Guidelines, the Code of Good Forestry Practice and the Forestry Schemes Manual should ensure that silt is prevented from discharging to headwaters used as spawning grounds. Additional measures may be required to protect high status sites and freshwater pearl mussel habitats.

3.2.6 Usage and discharge of dangerous substances

Submission Reference No.	Issues Identified	Response
SW_SWMI_003 SW_SWMI_009	When an IPPC license is suspended or revoked the business must cease to operate and this must be enforced through a straightforward legal process.	There is a process set out in the IPPC legislation for the revoking of a license. It is illegal for a business to operate without a license if its operations determine that it requires one.
SW_SWMI_003 SW_SWMI_009	Details of all licences for use and discharge of dangerous substances should be made easily accessible on-line	All licences are currently available for viewing by the general public on the Environmental Protection Agency website http://www.epa.ie/whatwedo/licensing/ .
SW_SWMI_009 SW_SWMI_003	Prohibit the use of phosphates in detergents.	The approach to this matter in Ireland has been to work with industry to voluntarily reduce the amount of phosphate in detergents. Studies for the River Basin Management Plans indicate that detergents account for only a very small proportion of the phosphates discharged to surface water or groundwater bodies.
SW_SWMI_003 SW_SWMI_009	National awareness campaign for the public on prevention of use / misuse / improper disposal of dangerous substances including pesticides.	In any awareness campaign on this matter the impact of dangerous substances on the water environment would be only one of several aspects to be addressed. At present, the Health and Safety Authority carries out awareness raising work under the remit of REACH (Registration, Evaluation and Authorisation of Chemicals). The Department of Agriculture, Fisheries and Food meets regularly with farmers and growers in relation to pesticides usage. On an international level the Global Harmonisation System for Classification and labelling of chemicals is improving chemical labels to make them more easily understood.
SW_SWMI_003 SW_SWMI_009 SW_SWMI_011	Synthetic pyrethroid in sheep dip should be suspended or banned.	This matter is being kept under review by the Irish Medicines Board. Targeted monitoring is taking place to investigate its impact.
SW_SWMI_003 SW_SWMI_009 SW_SWMI_002	Concerned about the addition of fluoride to water supplies.	This matter was reviewed recently by the Department of Health and it was decided that the current policy should be retained subject to some changes, the most significant of which was the reduction in the concentration of fluoride.
SW_SWMI_016	Record, monitor and dispose of all medical and pharmaceutical waste in the safest manner.	The disposal of medical and pharmaceutical waste is controlled by the REACH (Registration, Evaluation and Authorisation of Chemicals) Regulations.

3.2.7 Physical modifications

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_003	<p>Called for the introduction of a comprehensive registration and authorisation system to control the impact of physical modifications.</p> <p>Noted that the Office of Public Works should not be the statutory authority to administer new regulations.</p>	<p>A registration and authorisation system to control the impact of physical modifications is required by WFD. Measures and controls to ensure that hydromorphological conditions are consistent with the achievement of the required ecological status have to be established in response to Article 11(3) of the Water Framework Directive.</p> <p>The competent authority for administering the necessary measures and controls has yet to be determined.</p>
SW_SWMI_007	<p>Any measures in relation to physical modifications have the potential to impact significantly on OPW Programme of Flood Relief Schemes and statutory maintenance of these schemes and arterial drainage works.</p> <p>Note that some regulation of physical modifications may be necessary but are of the strong view that OPW as a Statutory Undertaker executing works in pursuance of government policy or statutory duties should be exempt from the licensing regime.</p> <p>It is envisaged that the OPW will make the Annual Drainage Maintenance Work Programmes available to the RBDs and will work closely with these forums in relation to water management issues.</p>	<p>Comments are noted and will be considered in the development of measures and controls in relation to physical modifications.</p>
SW_SWMI_008	<p>Worried about the increased frequency of flash flood events and called for the introduction of national river maintenance programme.</p>	<p>Flood risk management plans have to be prepared as part of the Floods Directive, and measures prepared to deal with areas identified as being at risk of flooding.</p>
SW_SWMI_003 SW_SWMI_009	<p>Headwater habitats need to be maintained and protected to act as 'sponges' to reduce the likelihood of flooding downstream.</p>	<p>There is an obligation under the WFD to prevent deterioration of status in all waters.</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_003 SW_SWMI_009 SW_SWMI_011	<p>Expressed concern about building pressures on floodplains and how this would be addressed.</p> <p>The implementation of the Floods Directive (specifically the preparation of Flood Management Plans by the OPW) should be fully integrated with the implementation of the WFD and the development of river basin management plans.</p> <p>Call for a complete embargo on development in floodplain areas.</p>	<p>An objective of the Floods Directive is to establish a framework for the management of flood risks, aimed at reducing the negative impacts of floods on the environment (including water). Similarly, an objective of the Water Framework Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater that, contributes to mitigating the effects of floods.</p> <p>The River Basin Districts established for the administration of the Water Framework Directive are likely to be used for the Floods Directive. The implementation cycles and reporting mechanisms of both directives are synchronised. For example, flood risk management plans are to be completed and published by 22nd December 2015, corresponding with the first review and update of river basin management plans and their programmes of measures. Also, the public participation aspects of the Floods Directive must be coordinated with those of the Water Framework Directive.</p>
SW_SWMI_003 SW_SWMI_009	<p>Called for Environmental Impact Assessment to be carried out before flood prevention measures are considered.</p>	<p>Current practice is for flood alleviation projects to fully comply with Environmental Impact Assessment (EIA) legislation. Accordingly, all large scale flood relief projects conduct an EIA and smaller scale projects while below the threshold for EIA, typically carry out other forms of ecological assessments particularly where works could affect a Special Area of Conservation or a Special Protection Area.</p>
SW_SWMI_003 SW_SWMI_009	<p>Arterial drainage to improve agricultural productivity which is encouraged by the Land Drainage Act has an impact on hydrology and flow patterns.</p>	<p>Arterial drainage may impact on hydrology and flow patterns. However, arterial drainage schemes were traditionally carried out on a catchment basis to allow for the fact that the whole catchment acts as a unit. As required by the Arterial Drainage Acts 1945 to 1995, no flood alleviation or land drainage works are carried out without due regard to the downstream effect of the proposal.</p>
SW_SWMI_009	<p>Recommend that the principle of urban Total Impervious Areas (TIA) be accepted as another aspect of physical modifications. Local authority planners should be required to look at new development proposals with a view to minimising the TIA values by the incorporation of greenbelts, parks, sod roofs and other measures which have the capacity to buffer peak flood run-offs and their associated silt and toxin loads.</p>	<p>Sustainable Drainage solutions continue to be developed and integrated by local authorities as part of their planning policies.</p>
SW_SWMI_003 SW_SWMI_009	<p>A structured programme to address the 'rehabilitation' of previously drained rivers is needed.</p>	<p>Restoration measures are being considered as part of the measures and controls required by Article 11(3) of the Water Framework Directive to ensure that hydromorphological conditions are consistent with the achievement of the required ecological status.</p>

Submission Reference No.	Issues Identified	Response
SW_SWMI_015	The ESB's dams on the River Lee are operated in accordance with the ESB's "Regulations and Guidelines for the Control of the River Lee". The top priority of these regulations and guidelines is the proper management of water in the River Lee so as to avoid any risk to dam safety. The ESB is available as required to discuss the issue of water management at the dams on the River Lee with the RBD Project during the development of the Management Plan.	Noted.
SW_SWMI_018	Gravel extraction and drainage impact on the physical make-up of rivers and are often overlooked, particularly, with regard to their impact on spawning grounds.	The proposed system to control the impact of physical modifications which is required by WFD may be used to regulate gravel extraction and drainage of rivers.

Submission Reference No.	Issues Identified	Response
SW_SWMI_019	<p>An inventory of all weir, bridge and other in-stream structures, abstraction intake structures and culverts should be conducted with an impact risk assessment undertaken to determine existing and potential impacts on aquatic habitat, communities, river continuity, fragmentation etc.</p> <p>Disused intakes or in-stream structures with the potential to impact on ecological status and river continuity should be removed.</p> <p>Existing river culverting in urban areas which has caused aquatic habitat loss and fragmentation should be addressed with mitigation measures to restore habitats.</p> <p>There should be a general prohibition on interference, alteration or culverting of water systems in both rural and urban areas with limited exceptions e.g. to provide access. A permitting system should be required where exceptions are proposed.</p> <p>Changes in land use and associated river channel modifications have impacted on river flow dynamics, channel stability and aquatic habitats. Areas affected should be identified and the impacts of these changes should be assessed and remediation measures should be introduced.</p> <p>Implementation of Sustainable Drainage Systems (SUDS) in their entirety for residential, commercial and public infrastructural development.</p>	<p>The preparation of an inventory would be a good first step towards a comprehensive assessment of the impact of weirs, bridges and other structures on river ecology. The next step would be the selection of a representative number of sites at which detailed assessments of the ecology would be carried out over a number of years.</p> <p>Where there are disused structures which have no other beneficial use and whose removal would have a beneficial effect on the ecology of the river their removal should be undertaken, subject to funding being available. If there are other beneficial uses a cost benefit analysis should be carried out in advance of any decision.</p> <p>A similar approach should be taken with respect to culverts.</p> <p>The proposed system to control the impact of physical modifications which is required by WFD may be used to regulate the provision of new culverts and the mitigation measures if culverts are permitted. Similarly, changes to land use which would cause river channel modifications may be addressed using the proposed system.</p> <p>A section 50 license is required under the Arterial Drainage Act, 1945 for the construction of or alteration of an existing culvert or bridge.</p> <p>Sustainable drainage systems will be considered in the context of flood management and prevention strategies. Flood management plans will be prepared for River Basin Districts.</p>

3.2.8 Abstractions

Submission Reference No.	Issues Identified	Response
SW_SWMI_003 SW_SWMI_009	Noted that the bar for defining 'significant abstraction' in new regulations must be set to accommodate projected ecological impacts and predicted recharge rates.	A registration and authorisation system to control the impact of abstractions is required by WFD. Licensing regulations for groundwater abstractions are currently being considered by DEHLG. Draft technical guidance has been prepared to support the new regulations. The technical guidance includes consideration of both issues raised in this comment.
SW_SWMI_003 SW_SWMI_009	Leakage from existing infrastructure must be addressed. Measures must be introduced to rapidly trace and stop leaks from water in infrastructure.	Measures and controls to ensure that abstractions conditions are consistent with the achievement of the required ecological status have to be established in response to Article 11(3) of the Water Framework Directive. Reducing leakage is one potential measure to be considered. The DEHLG has rolled out a sub-programme for water conservation which aims to assist local authorities in the identification of leaks within the network.
SW_SWMI_003 SW_SWMI_009	Questioned whether the cumulative impact of abstractions will be addressed and noted that low flows must be used to determine acceptable abstraction limits.	The registration and authorisation system to control the impact of abstractions has to be established. Previous work on the Initial Characterisation of risk from abstraction impacts prepared in response to Article 5 of the Water Framework Directive used the concept of 'net abstractions' in a water body, accounting for cumulative impacts. Net abstractions are the sum of the all abstractions minus all discharge.
SW_SWMI_003 SW_SWMI_009	Rain water harvesting needs more focus. Requirements for harvesting should be included in new planning consents and grants should be provided for retrofitting of harvesting equipment.	Measures and controls to ensure that abstractions conditions are consistent with the achievement of the required ecological status have to be established in response to Article 11(3) of the Water Framework Directive. Rainwater harvesting is one potential measure to be considered.
SW_SWMI_003	Noted that water charging for all abstraction is necessary.	A registration and authorisation system to control the impact of abstractions is required by WFD. Licensing regulations for groundwater abstractions are currently being considered by DEHLG.
SW_SWMI_003 SW_SWMI_009	The impact of harvesting of deep water (>3km) reserves for geothermal energy must be considered.	A registration and authorisation system to control the impact of abstractions is required by WFD. Licensing regulations for groundwater abstractions are currently being considered by DEHLG. Draft technical guidance has been prepared to support the new regulations. The technical guidance includes consideration of abstractions for geothermal energy uses similarly to other abstractions unless the system is a closed-loop application where the quantity of water and the location of abstraction/discharge are the same.
SWMI_008	The IFA seeks a cost benefit analysis of any further increases in buffer zones for fertilizer spreading over and above the requirements of the Nitrates Directive.	The circumstances in which any increase in buffer zones are likely to arise are the protection of drinking water supplies and the protection of high status sites. Any increases would be dictated by statutory requirements and if cost benefit analyses are required by statute, they will be carried out.

Submission Reference No.	Issues Identified	Response
<p>SW_SWMI_018</p> <p>SW_SWMI_019</p>	<p>The development of a water supply scheme on the Ilen was prioritised due to the demand imposed by tourism and population growth in the area. However, it is felt that more regard to the consequences needs to be taken, and in particular to the capacity of the River Ilen to meet this ever expanding demand.</p> <p>Where a source is insufficient to satisfy demand without compromising aquatic systems, source supply should be increased by introduction of manmade storage or by augmentation from additional non risk sources. Each river catchment should be allocated a water abstraction budget based on the flow requirement of the biological component present.</p> <p>In relation to fisheries protection the recent publication “Guidelines on the Planning, Design, Construction and Operation of Small-scale Hydro Electric Schemes and Fisheries” provides information on the flow requirements for the protection of different categories of fisheries.</p> <p>All chemicals and wastes from water treatment plants should be very carefully monitored.</p>	<p>Public water supply abstractions are subject to control through abstraction orders issued by the Minister for the Environment. Amongst the criteria considered by the Minister are the ecological status of the water body and the low flow, if a river, or the water level, if a lake. The consequences of the abstraction are fully considered before an order is made. Additional sources in the area are being considered and a number of water scheme preliminary reports have been produced.</p> <p>Full account must be taken of the potential impact on fish and other habitats in decisions on the selection of sources for drinking water supplies. The design of intake structures must include mitigation measures to reduce or eliminate any impact on fish or other habitats.</p> <p>The disposal of wastes from water treatment plants shall not cause adverse impacts on fish or other habitats.</p>

3.2.9 Invasive alien species

Submission Reference No.	Issues Identified	Response
SW_SWMI_003	Questioned how a waterbody would be deemed to reach good ecological status if an alien species was present in it that could not be removed	A water body will not achieve high ecological status if an invasive alien species is present. However, good ecological status may be achieved if an alien species is present but is not causing any detrimental ecological impact.
SW_SWMI_009 SW_SWMI_003	Called for regulation of the ornamental plant and animal trade.	Regulations will be introduced under the Wildlife Act 1976 to prohibit the possession or introduction of species of bird, animal or flora that may be detrimental to native species.
SW_SWMI_003	Noted that recommendations from the Quercus invasive species report should be implemented and resourced on an all island basis.	The National Parks and Wildlife Service and the Environment and Heritage Service in Northern Ireland jointly commissioned the 'Invasive Species in Ireland Project' in 2006. The project developed a risk assessment process to identify non-native invasive species currently in Ireland that pose the highest risk, and those species which have the potential to arrive here. Management and contingency plans have been produced for the most high risk species. Recommendations, management plans and codes of practice from the invasive species study will be incorporated into the river basin management plan action programme.
SW_SWMI_012 SW_SWMI_019	<p>How are the highest risk species to be prioritised? And since these are likely to be different in different areas, how will this variation be handled?</p> <p>The Zebra Mussel, African Pond Weed and Giant Hog Weed must be prioritised.</p> <p>Suggest the introduction of inspection and certification for boat transfers into inland waters in the South Western Region, e.g. Lee Reservoirs and Lough Leane.</p> <p>Introduction of penalties under the Habitats / Fisheries Acts for the movement of invasive species by design or omission.</p>	The advice of the National Parks and Wildlife Service will guide the measures to protect water against invasive aquatic species.

3.2.10 High quality areas

Submission Reference No.	Issues Identified	Response
SW_SWMI_009	Alternative objectives must not be applied to protected areas.	The mechanism for alternative objectives is clearly set out in the Water Framework Directive and must be adhered to.
SW_SWMI_009 SW_SWMI_003	The possibility of a 'High Quality Area' protective designation should be explored.	Sites at "high status" within water bodies, for example Q4-5, Q5, habitat designated areas etc. are being identified and will be included in the RBMPs as special areas requiring stricter control to ensure no deterioration in status. The location and protection of these sites will be integrated into Local Authority Plans and Programmes. It should be noted that not all sites have been identified and mapped by NPWS and a recommendation is being made that NPWS develop an online database of these sites, regularly update it and provide such updates to Public Authorities and other statutory bodies.
SW_SWMI_002 SW_SWMI_006	Emphasised the importance of wetlands and the need for their incorporation into the catchment management process.	The importance of wetlands is recognized in the WFD. They are assessed as part of the groundwater risk to groundwater dependent terrestrial ecosystems. Designated wetlands have also been identified for inclusion as high status sites in need of protection although the NPWS database is not fully up to date (see above).
SW_SWMI_014	The Dromoughty river was once a Sea Trout river - it should be an objective and indeed a marker of success to reintroduce Sea Trout in to the Dromoughty River. Wildlife should be given more prominence in the management plans particularly reintroduction of kingfishers and otters.	The presence, numbers of or absence of particular species from a river will be one of the factors determining its status. Therefore, if a river which once supported a particular species and no longer does so may be found to be of lesser status as a result. The reintroduction of any species to a river will have to happen naturally. One of the effects of the WFD may be that the conditions favourable to a particular species will be restored. This may facilitate their return to a river.
SW_SWMI_018	In recent years the Ilen angler's club has seen a downturn in the stocks and catches of salmon and sea trout.	The reduction in salmon and sea trout has been caused by many factors amongst them over fishing, poor water quality and loss of habitat.
SW_SWMI_019	Fish bearing waters and their riparian zones should be included as high quality areas for their function in <ul style="list-style-type: none"> • the environmental and hydrological management of the water resource • Protection of a diverse range of fauna, fish and bird life and their habitat. • Providing an opportunity for future amenity development <p>This could be achieved by introducing provision for Aquatic Protection Orders.</p>	Noted

Submission Reference No.	Issues Identified	Response
SW_SWMI_019	Prevent further loss of flood lands and re-establish the hydrologic functions of wetlands and bogs to regulate the water cycle and reduce direct runoff.	It will be important to co-ordinate the implementation of the Flood Management Plans with the River Basin District Management Plans.

3.2.11 Climate change

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_002 SW_SWMI_003 SW_SWMI_004	Felt climate change was not dealt with adequately in the reports.	Consideration of climate change within the Water Framework Directive programme was at a very early stage at European level when the <i>Water Matters</i> was prepared. An approach has now been agreed and this issue will be addressed in the River Basin Management Plans.
SW_SWMI_009 SW_SWMI_002	Noted some of the potential effects of climate change: <ul style="list-style-type: none"> • Reductions in rain fall will result in less water being available to dilute organic effluent. • Increased temperatures will affect water oxygen levels. • Increased vulnerability of groundwater to pollution from increased runoff and also from incursion by sea water resulting from increased sea levels. • Impacts on wetland ecosystems that are sensitive to changes in water balance. 	Comment noted.
SW_SWMI_009 SW_SWMI_003 SW_SWMI_006	Proposed that the draft river basin management plan is climate change ‘proofed.’	The European level recommendation is that the 2009 RBMPs will be climate ‘checked’, i.e. issues will be assessed based on broad climate change information, while later plans will be climate ‘proofed.’

Submission Reference No.	Issues Identified	Response
SW_SWMI_004	<p>Recommend findings from studies on catchment based changes due to climate change, produced for the EPA, be included in the River Basin Management Plans e.g. Murphy, C and Charlton, R (2006) "Climate change impact on catchment hydrology and water resources for selected catchments in Ireland".</p> <p>Murphy, C. and Charlton, R. (2007) "Climate Change and Water Resources in Ireland" In Sweeney, J. (ed) Climate Change: Refining the Impacts, Environmental Protection Agency, Ireland, Government Publications, in press.</p>	Agree.
SW_SWMI_009	Expressed concern for the potential for climate change to be used a 'catch-all' excuse for not achieving good ecological status.	Climate change will not be used as a 'catch-all' excuse for achieving good ecological status but its consideration may lead to more stringent future limits.

3.2.12 Aquaculture

Submission Reference No.	Issues Identified	Response
SWMI_009 SWMI_003 SWMI_002	Called for aquaculture to be considered as a national significant water management issue.	From the recent public consultation on <i>Water Matters</i> a number of participants identified that aquaculture should be considered as a national significant water management issue. Although aquaculture was included in the booklet as part of the diffuse and morphology activities, aquaculture was not considered as a separate significant water management issue. As a result of this we will ensure that aquaculture is dealt with as a separate topic in the River Basin Plan.
SWMI_009 SWMI_002	<p>Expressed concern over the range of impacts of aquaculture. They noted impacts from salmon farming such as:</p> <ul style="list-style-type: none"> • Increased nutrient loading and organic pollution around cages • Unauthorised disposal of waste • Breaches of sea lice limits/infection of wild fish • Decline of wild salmon and sea trout numbers • Use of dangerous substances <p>Poor maintenance of inter-tidal oyster trestles. Mussel bed cultivation and associated dredging activities can affect biodiversity and indigenous species.</p>	<p>Shellfish cultivation and harvesting activities can result in morphological impacts. Finfish aquaculture has a number of potential impacts such as increased nutrient loading and organic pollution around cages. There are also a range of substances used in fin fish aquaculture including veterinary medicines (primarily antibiotics, and sea lice treatments), disinfectants, feed additives and antifoulants. Work is underway to develop a national approach for regulating chemical use and discharge for finfish aquaculture in Ireland. A new sea lice control strategy has also been launched, the strategy is available from: http://www.agriculture.gov.ie/publicat/publications2008/SeaLiceControlStrategy.doc</p>

3.2.13 Coastal and Estuarine Issues

Submission Reference No.	Issues Identified	Response
SWMI_009 SWMI_003 SWMI_006	Felt limited attention was given to pressures on the coastal zone. Regulation of the coastal zone is poorly enforced and Ireland must implement a coherent Integrated Coastal Zone Management Strategy for the area covered by the WFD (1 nautical mile from shore).	<i>Water Matters</i> drew attention to the various pressures on estuarine and coastal waters, particularly with respect to physical changes. It drew attention to the absence of comprehensive system of control of physical modifications. In preparation for the River Basin Management Plan measures are being investigated for application in Ireland's transitional and coastal waters, one of which is Integrated Coastal Zone Management. Recommendations for a more structured national framework for the regulation of coastal activities are being outlined for consideration. A review of national coastal regulation and integration is identified under the 'Sea Change' programme published by the Marine Institute.
SWMI_009	Queried the support of departments regulating the marine environment to the implementation of the Water Framework Directive.	River Basin Management Plans will help ensure appropriate consideration of the marine environment during regulation. All Departments will be required to comply with programmes of measures defined to meet the WFD objectives. Responsibilities relating to the regulation of coastal developments / activities are currently being re-organised at Government level. A structured national regulatory framework should clearly define the responsibilities of each Department.

3.2.14 Economics

Submission Reference No.	Issues Identified	Response
SWMI_009 SWMI_003	Felt that economics should have been dealt with more thoroughly in the reports and that there was no provision of estimates of the costs of meeting the objectives of the WFD, or how the authorities intend to recover those costs.	An economic analysis of water use was completed for Article 5 of the Water Framework Directive. <i>Water Matter</i> was written to inform the public of the significant water management issues in the River Basin District and seek their response. It was premature to deal with issues surrounding economics and assessment of cost effectiveness of measures in these initial <i>Water Matters</i> , these issues will be dealt with the draft river basin management plan. The Water Services National Training Group has commissioned the development of guidance and training for local authorities in the use of economics in the objective setting and decision making processes to determine the most appropriate and cost effective combination of measures to be implemented. This technical guidance and training will be rolled out in late 2008 and will be available as a background document to the draft river basin management plan. Substantial resources are committed going forward to ensure local authorities have the resources to implement the requirements of the Water Framework Directive.
SWMI_009	The application of disproportionate cost analysis to justify alternative objectives to the achievement of Good Status by 2015 should be applied taking into account Common Implementation Strategy guidance on Economics and the Environment (Common Implementation Strategy for the Water Framework Directive (2000/60/EC), Guidance Document no. 1, Economics and the Environment – The Implementation Challenge of the Water Framework Directive).	The issue of disproportional cost analysis is currently being actively debated at EU level. The methodology for the application of disproportionate cost assessments will be clear and transparent and based on Common Implementation Strategy guidance on Economics and the Environment.
SWMI_006	A truly sustainable approach is required. Social and economic requirements need to be set within environmental limits in order for development to be truly sustainable.	A wide range of social, economic and environmental costs and benefits are associated with the achievement of good status and will be considered.

Submission Reference No.	Issues Identified	Response
<p>SW_SWMI_003</p> <p>SW_SWMI_008</p>	<p>Felt water charging is necessary for all users.</p> <p>Stated it was inappropriate for farmers to pay for water leakage outside the farm gate, much of which is due to historical under investment by local authorities in infrastructure</p> <p>Proposed the introduction of a livestock water rate that reflects the water requirements of livestock as opposed to humans.</p>	<p>The Government's National Water Pricing Policy Framework, 1998 requires all non-domestic customers to be charged for water and wastewater services. This is in line with national and EU policy on the 'polluter pays' principle. The Framework also provides for the recovery of domestic capital costs through the Exchequer and domestic operational costs through the Local Government Fund. This is permitted under the Water Framework Directive, as it is an established practice that does not compromise the objectives of the Directive.</p> <p>It is currently a legal requirement that local authorities provide 'fit for purpose' water distribution systems and ensure leakage detection programmes are implemented. The universal installation of water meters for non-domestic customers is required to ensure that users are charged fairly and is due to be completed by the end of 2008.</p> <p>The introduction of a livestock water rate is a matter for the Department of Environment, Heritage and Local Government and individual county councils to consider and is outside of the remit of the River Basin District projects.</p>

3.2.15 Development Pressures

Submission Reference No.	Issues Identified	Response
<p>SW_SWMI_009</p> <p>SW_SWMI_008</p> <p>SW_SWMI_005</p>	<p>Development and planning is the most serious threat to water quality and lack of integration of planning is core to this.</p> <p>Note the lack of coherent town planning.</p> <p>Strong enforcement policy is required by all planning authorities, who in turn must be sufficiently resourced, both financially and in terms of personnel, to ensure developments of all kinds comply with planning and development legislation.</p>	<p>Following the adoption of the River Basin Management Plan by Local Authorities in 2009 it will be a legal requirement that County Development Plans, Regional Development Plans and Local Area Plans be integrated with the River Basin Management Plan, i.e. the preparation and implementation of land use policies will have to take account of their potential impact on water quality. Guidance on this issue for planning authorities is being prepared by DEHLG and will be available in 2009.</p> <p>Development Management Guidelines have been drafted by the Department of Environment, Heritage and Local Government (DEHLG) and are available from: http://www.environ.ie/en/Publications/DevelopmentandHousing/Planning/FileDownload,14467,en.pdf</p>
<p>SW_SWMI_012</p>	<p>The extensive building/development taking place in the South West has also had a big impact on water quality, but this is not adequately addressed in the report.</p>	<p>Following the adoption of the River Basin Management Plan by Local Authorities in 2009 it will be a legal requirement that County Development Plans, Regional Development Plans and Local Area Plans be integrated with the River Basin Management Plan, i.e. the preparation and implementation of land use policies will have to take account of their potential impact on water quality. Guidance on this issue for planning authorities is being prepared by DEHLG and will be available in 2009.</p>

3.2.16 Resources

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_003 SW_SWMI_020	There was concern about the current capacity of local authorities and their ability to act as the competent authority for the implementation of the WFD.	The philosophy of the Water Framework Directive is to have a holistic approach to the maintenance and improvement, where necessary, of the water environment. Local authorities have a very significant involvement in this work at present, e.g. the collection and treatment of sewage, the abstraction and treatment of water for drinking supplies, the investigation and elimination of water pollution by the industrial and agricultural sectors and looking after aquatic amenities such as beaches. Therefore, it is logical that local authorities would be given the central role in implementing the directive. While there are many staff and considerable money devoted to these tasks there will always be a desire of improved performance and additional resources would help in this regard.
SW_SWMI_009 SW_SWMI_002 SW_SWMI_003	Acknowledge the resource limitations under which local authorities operate. There is a recognised deficit of biologists and ecologists in Environment Sections in local authorities. There should be a full review of the current public sector staffing policy.	The balancing of sufficient financial resources to tasks is an on-going challenge for both central and local government
SW_SWMI_018	The slow remediation of the polluted Caol Stream is an example of too many groups being involved in the planning process without a decision maker.	It is acknowledged that major water services schemes take a long time to bring to fruition. However, the absence of modern sewerage system in Skibbereen will be addressed in the near future. The elimination of waste water discharges to the Caol Stream is currently being addressed under a Water Services Investment Programme project which is currently at construction stage.

3.2.17 Public Participation and Awareness Raising

Submission Reference No.	Issues Identified	Response
SW_SWMI_009	Public participation is not a direct management issue but a significant horizontal issue. Effective public participation is key to the success of the WFD and should be treated with the same gravity as the other issues identified.	Public participation has been a significant part of the implementation of the Water Framework Directive in the South Western River Basin District. The SWRBD Advisory Council is providing valuable guidance during the preparation of the River Basin Management Plan. Two series of public meetings were held. The libraries have been used extensively to display information and distribute booklets on the SWRBD project. Public participation has been a significant part of the implementation of the Water Framework Directive. Provision to allow for effective and structured public participation was enshrined in the legislation (Water Policy Regulations, SI 722 of 2003) transposing the WFD into Irish law by requiring the establishment of Advisory Councils in each RBD, membership of which is open to any member/group and is publicly advertised. In addition literature is produced as required and made freely available through the network of local authority offices and libraries, and other public authorities such as the Regional Fisheries Boards. Websites were set up for each RBD and are regularly updated. Two series of public meetings have been held to date, while a third series will be held for consultation on the draft RBMP. Also RBD and local authority staff regularly participate in events organized by NGOs and other agencies.
SW_SWMI_009	No connection is made between the general public and members of the Advisory Councils in the reports. Names of members and contact details should be clearly presented in reports. There is no transparency or public awareness of what the Advisory Councils do.	Irish legislation (Water Policy Regulations, SI 722 of 2003) required the relevant local authorities to prepare and publish an overview of the significant water management issues identified in the river basin district. The function and make-up of the Advisory Council is explained under the heading "Using local expertise." <i>Water Matters</i> included the names and nominating organizations of each of the SWRBD Advisory Council members. The Advisory Council provides an effective forum for the exchange of information and opinions between elected representatives, nominees of sectoral interests and project staff. It is acknowledged that there is not widespread knowledge of the role or activities of the Advisory Council.
SW_SWMI_009	Feedback from Advisory Council members recommended that more time should be given to active dialogue amongst members instead of presentation based meetings. Members also feel that since their advice to management committees is non-binding it renders them ineffective and powerless.	The early meetings of the SWRBD Advisory Council were weighted towards dissemination of information to members. It was necessary to ensure that members were made aware of the extent and detail of the work being carried out. Latterly, meetings have been more balanced with ample opportunities for members to raise issues and to interrogate the information being provided.

Submission Reference No.	Issues Identified	Response
SW_SWMI_009	There has been no facilitation of cross border sectors in WFD participation to date, with Advisory Councils and the National Stakeholder Forum in NI operating independently.	Members of the Northern Ireland National Stakeholder Forum attended the second national conference for River Basin District Advisory Council members. Officials from Environment and Heritage Service Northern Ireland attended both the first and second conference. Further liaison would be beneficial.
SW_SWMI_009	Advertising needs to be done extensively and effectively in the relevant local areas before WFD public participation meetings.	Two series of public meetings have been held in the past three years. In each case several methods of encouraging members of the public to the meetings were used including direct mail, media advertisement, interviews on radio and articles in newspapers. None the less, attendances have been relatively low. The cost versus the benefit of public meetings as a means of raising public awareness is being examined.
SW_SWMI_002 SW_SWMI_009	There is a lack of awareness of the value of water by the general public. Called for a national TV campaign on water and its importance, and the prohibition of phosphorous in detergent could be used as a 'carrier' for wider public relations relating to the WFD.	It is acknowledged that a national campaign could contribute to the raising of awareness of the value of water. Consideration is being given to the merits of such a campaign. Work will be required to determine the scope of such a campaign, the audiences to be reached, the messages to be conveyed, and the most appropriate timing.
SW_SWMI_002	Local activism should be fostered and there should be reference to community engagement in catchment management initiatives.	Support for local groups can be best provided by local authorities though their environmental awareness officers.
SW_SWMI_003 SW_SWMI_013 SW_SWMI_009	Felt that the report does not make sufficiently clear the link between feedback on the SWMI and the process of drafting the draft River Basin Management Plan.	The purpose of <i>Water Matters</i> was to set out what the main water issues are in the RBD and how it is proposed to address them in the River Basin Management Plan. It is a public consultation document to raise awareness among the general public of the whole river basin planning process and provide opportunity for comment from the public on the suggested actions. There will be a further opportunity to shape the River Basin Management Plan during the six month consultation period on the plan from December 2008. If stakeholders feel that their submission have not been adequately dealt with in this digest or in the draft plan, further representations can be made.
SW_SWMI_018	It is essential that all of the stakeholders be kept fully informed of what the situation is [with regards to results of monitoring] at any one time and to allow for feedback.	It is intended that the RBD website will be used to provide comprehensive information on the water bodies. Comments or queries can be addressed to the website, or by direct contact with the RBD office or Environment Section in the nearest local authority.

3.2.18 Comments on Presentation and Clarity of *Water Matters*

Submission Reference No.	Issues Identified	Response
SW_SWMI_009 SW_SWMI_003	Ambiguous language in sections relating to actions that will be implemented to address water management issues. Feel that in many of the chapters no concrete actions have been proposed.	The purpose of <i>Water Matters</i> was to raise awareness and provide an early overview to the general public of the main water issues to be addressed in the River Basin Management Plan. It was never intended to set out concrete actions to address these issues, which will be the main purpose of the draft River Basin Management Plan. This will include a programme of measures to address specific water management issues in the RBD. The measures proposed are being informed by studies that are only now coming to completion. It would have been premature to provide details of measures in <i>Water Matters</i> . The draft River Basin Management Plan will detail the programme of measures and a web mapping tool will allow users to identify objectives and measures for individual water bodies.
SW_SWMI_009	It is felt that recent improvements in water quality have been overstated in the report. Additionally it is felt that failings to meet the current measures were not highlighted adequately.	<i>Water Matters</i> referred to improvements which had been noted by the EPA in the 'Water Quality in Ireland 2006 – Key Indicators of the Aquatic Environment' report. See http://www.epa.ie/downloads/pubs/water/indicators/name.23540.en.html for the full report. With regard to historical failures the emphasis was put on achieving the new water quality standards rather than looking back.
SW_SWMI_009 SW_SWMI_003	Some of the measures that were put forward were accompanied by qualifiers and vague language.	<i>Water Matters</i> did not set out to provide a comprehensive list of measures. More specific measures will be included in the River Basin Management Plan.
SW_SWMI_003 SW_SWMI_009	Noted that a number of the references to background documents within <i>Water Matters</i> were difficult to find on the RBD websites.	The SWRBD website has been up-dated and it should now be possible to access the documents referred to in <i>Water Matters</i> .
SW_SWMI_009	Concern about the access to geographical data because of the limitations of current Ordnance Survey Licensing procedures.	The RBD project teams have been working with the County and City Managers' Association and Ordnance Survey Ireland to provide a full geographical database which will make it easy for members of the public to obtain data. Information on water bodies, risk assessments, water quality etc. can be currently accessed through the Environmental Protection Agency's ENVision system at http://maps.epa.ie .
SW_SWMI_013	A more localised version of the SWMI report is necessary as it is impossible to understand where the generic issues are impacting locally.	The function of <i>Water Matters</i> was to identify the issues rather than address how they were impacting locally. The River Basin Management Plan will deal with the local impacts and include measures to mitigate the impacts.

3.2.18 Miscellaneous Issues

Submission Reference No.	Issues Identified	Response
SW_SWMI_013	<p>Are there plans to conduct a Strategic Environmental Assessment (SEA) of the plans?</p> <p>No mention was made of interim targets or of appropriate indicators to track progress.</p> <p>It would be appropriate to include social indicators in your plan making.</p>	<p>SEA is underway</p> <p>A comprehensive monitoring programme is underway (since 2007) and is coordinated by the EPA. Indicators are to be set by the EPA in the form of EQS values which will relate to the water 'status'.</p> <p>The plan will address social indicators only in so far as it they will have an impact on the exemption of some water bodies from the target of "good status"</p>
SW_SWMI_014	<p>Land owners living adjacent to the rivers should have a stake in the successful management of the river, their co-operation is critical to the success of any management plan.</p> <p>In some cases fishing rights are owned by other than the riparian land owner who may not then have the incentive to participate in the management of the river.</p> <p>The management plan should include access for walkers and cyclists.</p>	<p>Noted.</p> <p>Access to river banks, lake edges and coastal walks promotes awareness of the value of water, apart from providing excellent recreation. However, the River Basin Management Plan will not deal with access issues which are complex and must be addressed at a local level with stakeholders, particularly land owners.</p>
SW_SWMI_012	<p>Investigate the use of Daubenton Bat surveys as it is an indicator of the insect life on the nearby rivers. This monitoring should be fed into the national system.</p>	<p>The National Water Framework Directive monitoring programme has been devised by the EPA. It is using well established techniques which are endorsed by our European partners and allow comparability between water bodies across the Community. Bat surveys are not included in the programme but may provide additional valuable information.</p>
SW_SWMI_016	<p>Clean-up strategies should be developed for waterways which are already polluted.</p>	<p>The River Basin Management Plan will include measures to improve waters which are polluted.</p>
SW_SWMI_016	<p>Provide training for county council members in domestic water recycling methods.</p>	<p>Water conservation is an important measure in reducing the impact of abstractions from rivers, lakes and groundwater. Various programmes are in place to promote water conservation.</p>

4.0 Record of Public Consultation Events

Consultation on the *Water Matters* report took place from 22nd June to 22nd December 2007 at various locations within the SWRBD. The comments and views of the public were invited throughout each of the consultation meetings. The meetings were designed to provide the public with relevant information on the issues related to the eight national topics as identified in the *Water Matters* report and to present a general overview of the Water Framework Directive and the river basin planning process. Open discussion of the issues presented at the meetings was encouraged, as was the discussion of any other relevant local issues. The issues raised during the public participation were recorded and, where possible, responses were given on the day.

Approximately 119 people attended the 5 public meetings held between 22nd June and 22nd December 2007. Feedback from the attendees showed an overall support for the Water Framework Directive and in general the public were encouraged by the work that the RBDs are doing. Additionally the importance of public participation was recognised at all the meetings.

Each meeting followed the same format:

- Welcome (by SWRBD Project Co-ordinator)
- Presentation – Overview of the Water Framework Directive and the river basin planning process
- Brief Q and A session
- Two Round Table Presentations and Q&A – Public participation through round table top presentations on the Significant Water Management Issues followed by discussion. Each table addressed a number of water management issues which were believed to be the most significant to the area at which the meeting was being held.
- Geographical Information Systems (GIS) – A demonstration was provided to the public of how GIS is used by the RBD in the identification of water management issues.

Generally the attendees were happy with the manner in which the meetings were held. However, some felt that it was somewhat distracting to have two round table presentations going on in the same room at the one time.

4.1 Issues Raised

The following is a synopsis of issues raised by members of the audience at the public consultation events. The issues are not placed in order of importance. Of note is that one particular issue arose at all of the meetings i.e. the pressure that the implementation of the RBMPs would place on existing resources which are already working to full capabilities.

General

- Concern that measures in the RBMPs will be ‘watered down’ as a result of political pressure.
- How will current local management plans such as those for SACs and spawning grounds be incorporated into the River Basin Management Plan?

- Concern was raised that because of the size of the RBDs and the lack of local authority resources, the RBDs will be difficult to manage.
- It was noted that the WFD sampling programme could be seen to potentially have some bias if the locations are in areas of known pressures.
- Concern that the RBMPs will be mainly concerned with river water quality and will neglect lake / coastal / groundwater quality.
- Concern was raised that input from amenity users was not being sought in developing the RBMPs.
- Concern that a lot of ground work has been undertaken to date in the Killarney area, however immediate action has not been taken based on the findings of this work.
- Need to consider climate change

Forestry

- Concern that acid rain will not be addressed by the RBMP
- The specifics of forestry planning, such as species and location are important to consider, for example the impacts of planting in poor agricultural land.
- Questioned the significance of acidification on water quality and does it mostly affect higher quality / cleaner waters?
- Concern was raised about proposals for coniferous afforestation in the headwaters of an SAC on the River Awnaskirtaun. Similar plantations on wet bogs have wiped out Freshwater Pearl Mussel populations. Why would these schemes continue to be funded under REPS? Why are local stakeholders not consulted until they see a notice in the paper? Who can local people speak to about their concerns?

On-Site Wastewater Treatment Systems

- Felt it unfair that in urban areas the sewage is dealt with by the council whereas in the country areas the public have to maintain the sewage treatment system (i.e. their septic tanks) themselves and pay the price for pollution incidents.
- Future requirement to license septic tanks?
- Suggested upgrading all septic tanks to Biocycle units as a measure to prevent water pollution by septic tank systems.
- Concern that when conducting the percolation tests for septic tanks, many engineers aim to pass the test. This then becomes problematic for the homeowner in the future when they are found to be polluting the environment. Also planning is often permitted without verifying the results of the T-tests which are submitted as part of a planning application.

- Concern that the planning authority may impose more stringent treatment than a septic tank as a precautionary measure in order to ensure that the WFD requirements are met.
- Suggested that in the future septic tanks should have to be emptied by licensed companies that hold permits for removal / transport of sewage or that the tanks will need to be certified and liable to inspection.

Agriculture

- Concern that as a result of stricter farming regulations such as the nitrates directive, the scope for increasing stocking rates would be limited.
- How will the results / actions resulting from farm inspections be communicated?
- Farmers are already complying with existing regulations and are improving practices, for example through uptake of Farm Waste Management schemes.
- Farmers raised concerns about the exclusion periods outlined in the Nitrates Regulations. They are seen as inflexible and difficult to comply with especially in light of recent weather patterns. It's felt that the exclusion period is not coinciding with poor spreading conditions.
- It was commented that authorities need to promote the correct use of slurries. If farmers are over-restricted on storing and spreading slurries then they will resort to the purchasing of nitrogen.
- It was noted that the requirement not to spread close to wells can be made difficult by planning decisions to allow houses to be constructed adjacent to farmland.
- Where a farm is in an SAC and, therefore, certain activities are not permitted would there be compensation?
- Will a study be undertaken to investigate the improvements (or otherwise) resulting from the implementation of the Nitrates Directive.

Abstractions

- The issue of leaks in the public water supply systems across the country and the large volumes of unaccounted for water were highlighted.
- Concern was raised regarding the control of abstractions.
- Concern was raised regarding the quality of drinking water in Kerry. A number of boil notices have been put in place.

Municipal & Industrial Discharges

- Concern that development growth is impacting on small rivers with limited flow capacity to dilute effluents.
- Concern that there is a lack of capital investment for the treatment of wastewater.

- There are fears that there may be a risk that in the future the water will be clean but there will be no opportunity for industry to develop as a result of the standards that need to be met under the WFD.
- Need for further research relating to reed bed technology.
- It was suggested that all discharges should be licensed by one independent body. “Too many people are dealing with the one problem”.
- Concern that the embargo on public service staffing will result in the inability of the local authorities and EPA to enforce measures introduced under the RBMP.
- The need for public education regarding the importance of water as a resource and regarding water pollution was highlighted as being key to the reduction in water pollution.
- Concern was raised regarding the maintenance of wastewater treatment plants, in particular odours from plants.
- Need for studies into best practices for the disposal of sewage sludge.

Physical Modifications

- It was queried why flooding was not specifically addressed in the Water Framework Directive (WFD) and it was asked whether dams such as those on the River Lee are permitted under the WFD
- It was felt that the local authorities need to be more proactive in removing physical pollution from rivers e.g. shopping trolleys and rubbish.

Quarries

- Concern about the present lack of regulation relating to quarries and of their impact on wells.

Local Issues

- Local pollution problems in the Ilen River and the Caol Stream believed to be as a result of effluent discharges.
- Public noted that the sewage treatment plant upstream of the Owenacurra River water supply intake is operating at over capacity and yet the local authority is granting planning permissions in this area. There was concern too that planning permission is given for developments to locate close to surface waters. Restrictions need to be imposed. Concern that in the past there hasn't been a strong link or co-ordination between the local authority planning and environmental sectors.
- It was noted that the need for a wastewater treatment plant in Skibbereen has been identified under the local authority needs study. However, Department funding is required in order to proceed with construction of a treatment plant. It was felt that funding for small plants in Ireland has not been a priority on the water services investment programme in the past and it is only in recent years that small schemes are being addressed.

- It was highlighted that many small towns in West Cork do not have sewerage schemes which can result in the pollution of waterbodies e.g. Baltimore, Castle Haven Harbour, Ilen River. Algal bloom noted at Inchydoney.
- Concern that the Aghada wastewater treatment plant is being backwatered by the tide. It is thought that this problem was identified a number of years ago however works have not been carried out to rectify the problem. Thus sewage continues to enter the bay.
- Noted that there is evidence of contamination of fish in Cork Harbour (what look like sores on the fish).
- Evidence of pollution was noted in a stream near to the Ballincollig by-pass.
- Pollution of shellfish waters in Bantry Bay was of concern and it was of further concern that the new treatment plant proposed for Bantry is believed to have secondary treatment only and that it should have tertiary treatment as it will be discharging to shellfish waters.
- Contamination of well water noted in the Lisbealad area in Dunmanway believed to be caused by over-development of nearby quarry.
- Eutrophication of beaches in and around Clonakilty.
- Some old wells in the Carrigtwohill area are now unuseable due to de-watering of nearby quarries.

4.2 National Conference for River Basin District Advisory Council Members

The second National Conference for River Basin District Advisory Council members was held in County Hall, Cork on 28th September 2007. 144 people attended the conference. The theme of the conference was *Water Matters* and the presentations addressed each of the eight national issues. Workshops were held on each of the issues and a summary is attached, see Appendix 3.

Appendix 1

Water Matters Questions

Name (optional):

Organisation (if any):

Question 1

Background: The WFD Story So Far

Do you agree that these are the key causes of water problems within the South Western district?

Comment:

Question 2

Background: The WFD Story So Far

Have we missed something that would be helpful with the South Western district?

Comment:

Question 3

Wastewater and Industrial Discharges

What is your view about the suggested actions to control wastewater and industrial discharge problems within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 4

Landfills, Quarries, Mines and Contaminated Lands

What is your view about the suggested actions to control problems related to landfills, quarries, mines and contaminated lands within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 5
Agriculture

What is your view about the suggested actions to control problems related to agriculture within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 6
Wastewater from Unsewered Properties

What is your view about the suggested actions to control problems related to unsewered properties within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 7
Forestry

What is your view about the suggested actions to control problems related to forestry within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 8
Usage and Discharge of Dangerous Substances

What is your view about the suggested actions to control problems related to dangerous substances within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 9
Physical Modifications

What is your view about the suggested actions to control problems related to physical modifications within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 10
Abstractions

What is your view about the suggested actions to control problems related to abstractions within the South Western district?

Are these actions appropriate?

Have we missed something important?

Comment:

Question 11
Local Issues

What is your view about the suggested actions to tackle eutrophication within the waters of the South Western district?

Comment:

Question 12
Local Issues

What is your view about the suggested actions to address alien species problems within the South Western district?

Comment:

Question 13
Local Issues

What is your view about the suggested actions to address sensitive area problems within the South Western district?

Comment:

Question 14
Local Issues

What is your view about the suggested actions on public participation within the South Western district?

Comment:

Any Additional Comments

Have you any additional comments which may be helpful within the South Western district?

Comment:

Appendix 2

Public Consultation Questionnaire / Comment Sheet



CORK COUNTY COUNCIL
Comhairle Chontae Chorcaí

SWRBD project Office,
5 eastgate Ave.,
Littleisland,
Cork

Tel: 021 4310467
Fax: 021 4809867
info@swrbd.ie

south
western
river basin district



Contact Details (Optional):

Name	
Address	<hr/> <hr/>
Phone No.	
E-mail Addresss	
Organisation (If Any)	

Comments:

Appendix 3

**National Conference for River Basin District Advisory
Council Members**

County Hall, Cork - 28th September, 2007

Water Matters – The Significant Water Matters Report

REPORT ON WORKSHOPS

National Conference for River Basin District Advisory Council Members

County Hall, Cork - 28th September, 2007

Water Matters – The Significant Water Matters Report

REPORT ON WORKSHOPS

Note:

The following document sets out the points raised in the Conference Workshops. Where issues were brought up that related to a different subject area, they are included under the points in the relevant Workshop section. Similarly, the contributions to the Talking Wall and the plenary session at the conference are included under the appropriate Workshop section. Where matters raised did not fit under the eight Workshop topics, these are included in the final “Other Issues” section.

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Note 1 AGRICULTURE WORKSHOP FEEDBACK

Additional threats and pressures posed by agriculture that are not included in the SWMI Reports:

- Physical modifications
Physical modifications to water bodies on farms (such as drainage and channelisation). A point was also made here that a link needs to be recognised between the necessary maintenance of farm drainage to ensure that surrounding septic tanks can function.
- Recreational activities:
Impacts of increasingly widespread recreational activities such as hill walking on farm environments and water, which will be blamed on farmers
- Abstraction:
 - a) The risk of contamination of water bodies posed by abstraction from streams for use in sprayers.
 - b) The impact of abstraction on river flows.
- Stock management issues:
 - a) Direct access to water courses by livestock, specifically on farms outside of REPS.
 - b) Overgrazing by sheep, particularly in the Western Region.

- c) Problems of undergrazing, resulting in environmental change and potential risks such as fire that may cause contamination of waterways.
- Unregulated cross-border movement of farm waste.

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by agriculture:

- Drainage:
Drainage is not adequately dealt with, and this will also affect what is available for abstraction.
- Gains for farmers:
There is a need to highlight the gains for farmers from the implementation of actions, where at their own expense they are now correcting the mistakes of the past. An example was given in relation to fisheries, where farmers need to be remunerated. Transfer of ownership or use rights to the fisheries would act as a source of potential source of income and incentive to maintain good water quality. Benefits should go to individual farmers so that actors benefit directly and proportionately.
- Farm waste storage facilities:
Concern was expressed over the standards of farm waste storage facilities. Dept. of Agriculture staff present strongly refuted that there is any inadequacy in the grant aided facilities installed, which are required to be designed to given standards and inspected.
- It was felt that historical problems have been or are currently being addressed.
- The recent fall in fertiliser use demonstrates that farmers don't choose to use this unnecessarily.

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by agriculture:

- See impacts of the Nitrates Directive:
It is necessary to allow time for the enormous amount of work being carried out under Nitrates Directive and farm waste management investments to work, in order to assess them and see the results.
- Profitability:
Agriculture must be profitable in order for investment in the Water Framework Directive –related measures to be possible.
- Strengthen proposals:
Is “encouraging voluntary action” as proposed in the SWMI Reports adequate? This needs to be more robust and spelt out in more detail.
- Nutrient management priority:
It is important to distinguish that it is the management of nutrients that affects water quality and not livestock numbers per se. It is still possible to have high value habitat on relatively intensive farm units if these are managed correctly.

- REPS:
There needs to be coordination between WFD and REPs

Additional measures identified to address the threats and pressures posed by agriculture:

- Pilot monitoring projects:
Immediately initiate pilot projects now to look at the effectiveness of proposed measures, particularly to identify the effects of the Nitrates Directive, which is to be reviewed in 2009. This is also when the WFD Plans are to be put in place and results could inform both the RBD Plans as well as the review of the Nitrates Directive. (Dept. of Agriculture staff present indicated that this type of study is already scheduled to take place.)
- Riparian zones:
 - a) There should be a greater encouragement of positive action in riparian zones, beyond farmers involved in REPS.
 - b) Greater promotion and encouragement of REPS and IFA / NPWS schemes for river edges.
- Anaerobic digestors:
Anaerobic digestors for the treatment of sewage sludge need to be pursued, rather than total reliance on land spreading.
- Drinking water protection measures:
Drinking water source protection measures needs to be included (this clearly links to abstraction) (Dept. of Agriculture staff intimated that this is built in to the Nitrates directive.)
- Excessive cost to agriculture:
 - a) Agriculture cannot carry the cost of treated water for livestock because they are price-constrained, so farmers need free access to abstraction (from ground or surface water) to mitigate this.
 - b) The costs of slurry tank upgrading must be fully covered.
 - c) There should be an income supplement for farmers in catchment areas used for domestic supply (abstraction) – to support appropriate farming practices on the basis that it is be more effective to get clean water this way than treat contaminated water to bring it up to standards for consumption.
- REPS:
Should REPS be made compulsory? (Given that the Nitrates Directive affects all farmers.)
- Conservation measures:
Conservation measures are needed in agriculture. For example the harvesting of rainwater for yard washing rather than using public [treated] water.
- Stock access to water:
Water driven pumps in rivers should be used to give bank side water

rather than permitting direct access of animals to water bodies, with the associated risks.

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Note 2 DANGEROUS SUBSTANCES - WORKSHOP FEEDBACK

Additional threats and pressures posed by dangerous substances that are not included in the SWMI Reports:

- Dredge spoil:
 - a) There is a risk of release of dangerous substances to the environment from dredge spoil. Contaminants can be released from the sediment during dredging and enter waterbodies, both at the dredging site, or where spoil is deposited.
- Pharmaceutical industries:
 - a) There is difficulty in identifying what parameters to monitor and how to monitor them. For example, analytical techniques for the measurement of some water soluble substances have not been adequately developed. (It is however noted that the EPA are currently running a project on mobile organics and this may assist in the development of measurement techniques.)
 - b) It was noted that there is a lack of information regarding intermediate products developed at facilities, whereas there is a much greater level of information on the raw materials and the end product. A “Catch All” toxicity test is used for the purpose of IPPC licensing; perhaps this should be made more specific to the facility?
- Pesticide use
 - a) There are difficulties in finding out the exact amount of pesticides used in Ireland, in order to explore the effects, what controls are necessary and how to make these effective.

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by dangerous substances:

- Synergistic Effects:
 - a) Synergistic effects of substances are not taken into account at present when setting the EQS limits (with the exception of Endocrine Disrupting Compounds whose cumulative effects are considered due to their low levels in isolation).
 - b) It is feared that the synergistic effects of substances will have a much greater impact on the vulnerable groups (sick, young / unborn and old).
 - c) It is suggested that the question of synergy be addressed by those setting the standards for dangerous substances.
 - d) There is a need to be vigilant and deal with potential priority substances by monitoring and investigating the impacts of new products.

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by dangerous substances:

- Licensing:
 - a) There needs to be improved management of the licensing of small / medium-sized facilities. It was noted that facilities below a certain threshold are to be licensed by the Local Authority and above that threshold the EPA are to license the facilities.
 - b) Draft licenses should not be allowed to stay in place for prolonged periods of time, an up to date license should be imposed upon a facility within a given timeframe.
 - c) There is a lack of knowledge regarding dangerous substances from small industry and this will create difficulty in licensing / regulating these facilities.
 - d) It is acknowledged that there is a large volume of work to do in relation to license review. However, it is hoped that the REACH Regulations will assist in this process.

(Note: under the Dangerous Substances Measures & Implementation Reports, Local Authorities are to undertake catchment studies identifying discharges within their functional area.)

- Reporting:
 - a) While the concentration of a substance present per volume is reported, the volume of product released to the environment is not detailed. So, for example, the required report may detail that there is 20mg/l of substance X present in solution but it does NOT detail whether 1litre or 1000 litres of this solution is released to the environment. There needs to be more transparency in the reporting of such information to the public in order that information on volume, concentration, loading, assimilative capacity of receiving environment etc. is made available.

- b) All factors need to be assessed and reported upon when applying 'risk' to a dangerous substance.
- c) Reporting of averages rather than individual figures can cause elevated concentrations to be missed.
- d) The EPA is responsible for classifying waters and they use averages. Therefore an entire waterbody may receive good status while the background data may provide information that demonstrates pockets of poor quality. Access to background data needs to be provided. There should be transparency in the reporting of data.

Additional measures identified to address the threats and pressures posed by dangerous substances:

- Product ban:
 - a) There should be a general ban (cross society / products) on use of ammonia based detergents.
- IPPC:
 - a) The EPA has mapped all IPPC licensed facilities and this is made available to the public on their website. It was suggested that the public be consulted with in order to identify any gaps that may exist in this network.
- Public Awareness:
 - a) The lack of public knowledge and the difficulty in communicating technical information to the public was highlighted.
 - b) The information held needs to be made more transparent to the public.
 - c) It is suggested that we move away from using the word "Dangerous Substances" as it can give the public the wrong impression. The EPA has moved towards the phrase "Priority Substances".
 - d) A full register of dangerous substances should be made available (apart from the list of substances being monitored for), both to inform and / or educate the wider public, or for more informed users, etc. as none exists at present. Information should be available that is relevant to the types of daily products used.
 - e) The public need to be educated about dangerous substances and facilities need to be put in place to allow the public to safely dispose of left-over substances e.g. paints, weed killer etc.
 - f) It was suggested that the "ChemCar" facility (collection facility for dangerous domestic waste products) might be linked into the WFD management plan.
 - g) The public need to be made more aware of the fact that there are dangerous substances present in every day products e.g. paint. Sales staff should be trained to inform the public of what products contain dangerous substances.
 - h) The public are not aware of the presence of dangerous substances in some products e.g. the mercury in long lasting light bulbs, and thus

these products are not disposed of in an environmentally friendly manner.

- i) The public should be provided with free education regarding dangerous substances / toxins and the information needs to be made relevant to the public.
- j) Perhaps a rating system could be used on products in order to identify those that contain the most and least dangerous substances thus giving the public the choice to use the least hazardous product.

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Note 3 WASTEWATER AND INDUSTRIAL DISCHARGES - WORKSHOP FEEDBACK

Additional threats and pressures posed by wastewater and industrial discharges that are not included in the SWMI Reports:

- Development pressures:
 - a) There is pressure (political and economic) to allow development to take place in areas that may not have the facilities / capabilities to adequately deal with the increase in loading to the area. How can this be dealt with adequately?
- Climate Change:
 - a) The increased incidence of flooding and storms resulting from climate change may compromise the functioning of wastewater treatment plants in terms of runoff.

(It was noted that the new licensing of wastewater treatment plants should help to reduce the pressures placed on the environment by these facilities.)

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by wastewater and industrial discharges:

(It was noted that the requirement for tertiary treatment facilities at existing / future facilities is currently under review. Tertiary facilities are currently in place where required.)

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by wastewater and industrial discharges:

- Licensing of waste water plants:
 - a) Licensing of wastewater plants must encompass storm overflows. Will limits be placed on flows and will priority substance monitoring and permitted levels be based on flows, kg/yr, etc.?

- Integration with Waste Management Plans:
 - a) The WFD needs to be properly integrated into each Local Authority's waste management plan in accordance with section 36.2 of the Water Services Act.

Additional measures identified to address the threats and pressures posed by wastewater and industrial discharges:

- Administrative co-ordination:
 - a) There is a need to improve communication between Local Authority departments.
 - b) Can the Local Authority introduce systems in order to assist in the coordination between the Local Authority sectors and the WFD?
- Planning:
 - a) There needs to be integration between the WFD and planning & development functions of Local Authorities and other agencies involved in this area.
 - b) The Water Framework Directive should be given high status and integrated into development plans, waste management plans, water services plans etc. The timelines for the development of these plans will need to be adjusted in order to allow for the integration of the WFD.
 - c) It is important to provide specialist input to the planning process [about WFD requirements]. There are fears that development applications are not exposed for comment to the appropriate personnel within the planning or other departments, and with adequate time for them to be fully considered.
- Control / Management:
 - a) Should elected members be taken out of the planning process?
 - b) There needs to be a change in the system for the re-zoning of lands in order that environmental pressures are adequately taken account of, and in order to reduce political pressure in planning.
 - c) Land speculation needs to be controlled and profits removed.
 - d) Planning grants need to take account of the WFD.
- Education:
 - a) A facility / process to provide public education about planning needs to be introduced and managed in order to improve awareness of the necessary consideration that must be given to all possible impacts on water [and in other areas].
 - b) There seems to be a difference in knowledge between the public and the professionals. How can public awareness be improved?
 - c) There is a need to bring the information [about the WFD] to the public rather than expecting the public to request the information themselves. The information needs to be brought out into the community.

- d) The media should be utilised more in order to make the public more aware of the water framework directive. A TV programme similar to Eco-Eye could be developed, the WFD is a 'good news story' and should be publicised appropriately.
- e) Get the public involved in cleaning waterways etc. in order to improve public awareness and appreciation.
- f) The BREF energy note, which is due for publication shortly, will cover some issues on water usage, but might be used to initiate a system for rating dwellings on their ability to conserve water.

(It was noted that it is more difficult to make the public aware of water issues in a "wet" country such as Ireland.)

- Incentives:

- a) It is necessary to make the public aware of schemes that are in place to reuse / recycle water and reduce water usage, and to make the public aware of the savings that can be made.
- b) Couple the installation of a water meter with an incentive e.g. a grant for a water harvester.

- Service Charges:

- a) Local Authorities need to have greater involvement in building management and should impose service charges.
- b) The introduction of water charges would improve public awareness of water issues.
- c) Introduce water charges for consumption above a standard allowance.

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Note 4 WASTEWATER FROM UNSEWERED PROPERTIES - WORKSHOP FEEDBACK

Additional threats and pressures posed by wastewater from unsewered properties that are not included in the SWMI Reports:

- Possibly unaccounted for properties / problems:
Account must be taken of properties with sewers but where the capacity of the infrastructure is inadequate.
- Efficacy of septic tanks:
There was some difference of opinion over how effective septic tanks could be at managing sewage. It was clear that incorrect installation, use and maintenance of septic tanks poses a serious problem and related lack of public awareness around this is an issue that must be addressed.
- Sewage sludge:
The ultimate disposal of sewage sludge was also contentious. Concerns were raised that if all septic tanks were actually emptied regularly the existing infrastructure would be overloaded. The desirability of disposal

of sewage sludge on land was also contested. Public antipathy to this practice is likely to create difficulties for managing total volumes of sludge in the future.

- **Information deficit:**
There is no evaluation of the cumulative effect of legitimate discharges and septic tanks.
- **Polluter Pays principle:**
Fears were expressed that the 'Polluter Pays' principle may have a negative effect on provision of adequate infrastructure. In some areas (Co. Mayo was cited) where Local Authorities want to put in sewage treatment systems they are restricted by the economics of the 'Polluter Pays' principle, as the necessary infrastructure would be too expensive. This will result in sub-optimal designs being put in place. A similar difficulty of cost arises with group sewerage schemes, if these are ultimately to be taken over by Local Authorities.
- **Public perception:**
Negative public reaction to having to pay for water supply and pay for treatment of wastewater was highlighted as a problem to being able to implement the WFD objectives in the future.
- **Flooding risks:**
 - a) Increased rainfall levels recorded recently have given rise to concerns about septic tanks sited below flood levels (an example was given of recent experiences in Galway).
 - b) The likely decrease in relief and maintenance draining resulting from implementation of the WFD may ultimately create flooding problems and associated pollution.
 - c) New road building programmes raise water levels in some rural areas, in some cases causing flooding of septic tanks.

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by wastewater from unsewered properties :

- **Sewage sludge:**
The SMWI Reports fail to address the contentiousness of possible land spreading of sewage sludge.
- **Research:**
Research into refining the operation of septic tanks to reduce the associated risks, and the correct operation of these deserves greater attention.
- **Recreational boating sewage handling:**
More attention needs to be focused on sewage treatment and handling from recreational boats, both on the Shannon and other inland water bodies, but also in estuaries.

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by wastewater from unsewered properties :

- **County Cavan model:**
The County Cavan example offers a model, systematic and measurable approach to tackling treatment of wastewater on unsewered properties.

However, proposed legislation doesn't go as far – for example EPA licensing requirements do not cover developers' systems that are signed over to Local Authority management at a later point.

- **Need for greater public awareness:**
Education and awareness about the difficulties associated with ineffectual wastewater treatment on unsewered properties needs to be taken to a new level, involving the national media. The awareness programme needs to happen now, not after measures are implemented.
- **Improved planning:**
There is a clear need for integrated forward planning, involving all the various relevant bodies, with adequate risk assessment built in. For example, there is a need for awareness of all discharges within an area, including septic tanks in estimating total loads and carrying capacity of waterbodies, which in turn should influence future development permissions and infrastructural requirements.
- **Necessary drainage:**
An important link has not been recognised in that maintenance of farm drainage is necessary to ensure that surrounding septic tanks to function.
- **Building regulations:**
New building regulations requiring the installation of dual flush toilets in new developments were welcomed. Similar initiatives should be possible in other areas of domestic and commercial water use.
- **DoEHLG grant:**
There was a proposal that the cap of €10,000 per house on the Dept. of Environment, Heritage & Local Government grant towards sewage schemes where there are none presently should be lifted. At present this acts as a restriction on new infrastructure being developed.
- **Increased infrastructure capacity:**
Greater capacity for forward planning needs to be built into treatment plants, all of which should operate to at least tertiary standard. This would allow inclusion of previously unsewered properties as the network reaches them, as well as providing for future growth and demands for higher standards of treatment.

Additional measures identified to address the threats and pressures posed by wastewater from unsewered properties:

- **Connection to mains sewerage infrastructure:**
It was proposed that properties that are not currently connected to mains sewer infrastructure, but where this is now locally available, should be required to link into the mains sewer system. This particularly applied to properties passed by with the expansion of village and towns.
- **Grants for upgrading:**
As the EPA has supported the position that properly constructed and maintained septic tanks are a cheap and effective way of handling wastewater on unsewered properties, it was proposed that a grant should be made available to upgrade systems say of over 20 years old. It was suggested that this might be linked to the existing grant systems for new wells, where funds can be sought if a house is more than 7 years old.

- **Parallel DBO schemes:**
It was proposed that the existing system of DBO (Design Build Operate) used to upgrade rural water schemes should be examined as a model for upgrading sewage treatment plants. There is a need to support group sewage schemes, and a financial incentive would encourage people to upgrade older systems. (Funding is there for Local Authorities to upgrade wastewater treatment plans-WWTP, and the same should be available to individuals not served by such WWTP.)
- **Group sewage treatment schemes:**
Following from the above, the STEADS project, looking at providing a central treatment facility for rural ‘clusters’ of houses should be pursued.
- **Improved installation:**
Builders installing septic tanks should be better informed about how they work, and should be installed, and about the risks and damage that result when they are incorrectly fitted. Penalties might also be considered for incorrect fitting – as with certification for electrical fitters, etc.
- **Planning permission:**
At present planning permission is required in the Republic (not in Northern Ireland) to relocate defective septic tank systems. This acts as an impediment and could be amended.
- **Zoning:**
There was strong difference of opinion over a proposal that local authorities zone areas to indicate where one-off housing is unsuitable because of the risk to water bodies associated with possibly defective septic tanks and other treatment systems.
- **Alternatives to septic tanks:**
Information should be made available about alternative water treatment systems, such as constructed or reconstructed wetlands, etc. Effective use of these alternative systems should be supported by the planning system.
- **Adequate resources:**
Resources must be committed. At present these are insufficient to put the County Cavan model into effect nationally and within Cavan to operate the model comprehensively. Recent resource allocations do not make up for years of neglect. Resources have not gone far enough to upgrade existing treatment plants, and are insufficient to enforce maintenance and emptying of septic tanks.
- **Re-use and re-cycling measures:**
Further ways to collect and re-use grey water from households need to be identified.

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**Note 5 LANDFILLS, QUARRIES, MINES AND CONTAMINATED LANDS -
WORKSHOP FEEDBACK**

Additional threats and pressures posed by landfills, quarries, mines and contaminated lands that are not included in the SWMI Reports:

- Impacts of remediation:
Are there threats from the long term effects of remediation measures, and what are the implications of these for the long-term (30yrs +) re-development of affected areas?
- Integration of responsible agencies:
Lack of integration between the various responsible bodies (local planning authorities, An Bord Pleanála, EPA, etc.) involved in granting planning permissions, waste management licences, discharge licenses, and so forth is a cause for concern. It was suggested that the distinct roles of the different agencies is a strength as decisions should then be reached on the merits of the particular application, whether that is for planning permission, waste management or discharge licenses. However, better interaction between the agencies was seen as necessary.
- Unequal ability to participate:
The ability to participate in the process of applying for or challenging an application (for planning permission, discharge license, etc.) is very variable and often determined by access to funding. The WFD emphasises public participation in processes concerning water management, but measures need to be taken in order to ensure that they can participate on a more equal basis (as individuals, community groups, etc.).
- Illegal cross-border waste movements:
Illegal cross-border trafficking of waste from distances as far away as Cork, and associated intimidation of Local Authority staff working in this area.
- Drainage Boards:
The work of Local Authority drainage boards needs to be examined.

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by landfills, quarries, mines and contaminated lands:

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Views on the measures proposed in SWMI Reports to address the threats and pressures posed by landfills, quarries, mines and contaminated lands:

- Local Authorities role a conflict of interest:
Local Authorities do much business for their materials with quarries and should therefore be removed from a licensing or enforcement role in relation to these to avoid potential conflicts of interest. All enforcement, licensing or compliance monitoring should be done by the EPA.
- Resource deficit:
 - a) While the quarry registration system is now in place to deal with unlicensed landfills and quarries, and EPA guidance is available, there are serious resource deficits in the EPA and Local Authorities to deal with these sites. Clear commitment to adequate additional resources was considered necessary.
 - b) Overall lack of resources and available Local Authority staff to implement present and proposed measures
- Enforcement:
Why are some quarries allowed to continue to operate without any compliance monitoring?

- Inadequate measures:
The proposed measures contained in the SWMI Reports were not considered to go far enough, they lack technical detail, and the wording needs to be strengthened.

Additional measures identified to address the threats and pressures posed by landfills, quarries, mines and contaminated lands:

- Legislation:
Legislation needs to be updated, consolidated and strengthened.
- Enforcement:
Increased enforcement is required.

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Note 6 ABSTRACTIONS - WORKSHOP FEEDBACK

Additional threats and pressures posed by abstractions that are not included in the SWMI Reports:

- Growing number of boreholes:
The increasing number of groundwater bores being made as an alternative water supply in response to increased charges for water, particularly relating to agricultural use, increases the pressure on groundwater abstractions.
- Wastage:
Abstraction demands are exacerbated by wastage in distribution networks and in how water is used.
- Negative impacts of rainwater harvesting:
Promotion of rainwater harvesting may have a negative downstream impact on water levels in rivers (and groundwater recharge). Knowledge of re-charge rates, and public understanding of these, is important before this approach is further encouraged.
- Knowledge of re-charge rates of water bodies is vital for proper management of abstraction.
- Location of infrastructure:
Inappropriate location of infrastructure. (For example the location of the proposed ‘super dump’ in North Dublin directly on top of an aquifer.)
- Abstraction limits:
How far is it appropriate to go to abstract required water supplies. (The discussion here centred on the proposed abstraction from Lough Ree to serve Dublin City, and on the potential downstream impacts on the Shannon. Is there a limit to appropriate investment in massive water infrastructure projects? Should development be restricted in certain areas instead? Should other initiatives such as rainwater harvesting be further explored as alternatives? The counter balance to this argument is that there should be restrictions on single rural housing development and the associated individual wells.)

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by abstractions:

- Ecological measures:
Difficulties were identified in how appropriate ecological levels may be set against which to assess abstraction impacts.

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by abstractions:

- Domestic water charges:
There was a consensus that domestic water charges will have to be introduced. The existing variation in commercial water charges between Local Authorities was highlighted. A tiered system of water charges was proposed, that would need to be innovative, provide incentives, and actively managed, in order to optimise water use efficiency. Suggestions included:
 - a) League tables
 - b) Progressive charging according to usage
 - c) A pre-charge volume
 - d) Charges linked to numbers of bathrooms
 - e) Bye-laws
- Comprehensive regulation of abstractions:
A system of limitation, and consents, for abstractions from both ground and surface water are necessary.

Additional measures identified to address the threats and pressures posed by abstractions:

- Use of untreated water sources:
Greater incentives / grants should be made available to promote harvesting of rainwater for non-potable uses. (Reference was made to Teagasc projects looking at the potential of such initiatives in Meath and Kilkenny. Similar studies are looking at the impact of metering and water loss / waste.)
- Metering facility:
There should be a requirement that all new developments be metered. In this way you introduce the possibility for choice later on between a metered supply or payment of a flat rate.
- Scale of solutions:
Local solutions may be preferable to large scale ones. For example the expansion of the local DBO projects currently underway.
- Storage facilities:
Increased storage / impoundment facilities to mitigate the effects of increased water demand due to development and climate change may be necessary, but these have their own ecological side effects, which must be understood and appropriately managed.

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Note 7 PHYSICAL MODIFICATIONS - WORKSHOP FEEDBACK

Additional threats and pressures posed by physical modifications that are not included in the SWMI Reports:

- Regulatory structures:
There are uncertainties about the relevant regulating bodies (compounded by recent Ministerial changes) and the regulation itself. This is particularly relevant to understanding how competing interests will be managed where there are multiple users (industrial, recreational) and the need to retain ecological quality.
- Competing interests:
For example where a weir might be removed for the benefit of ecology but is not because of some human (social) demand for it – possibly irrespective of merit, or simply because costs would be involved.
- Arterial drainage:
Concern was raised that Local Authorities had the authority under the arterial drainage act to straighten any length of river as they saw fit regardless of the upstream or downstream consequences – without public consultation.

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by physical modifications:

- Information deficits:
These are a problem in this new area for legislation where morphological changes to ecology are to be addressed. Threshold interfaces (for example between “High” and “Good”, and “Good” and “Moderate”) need to be defined before threats and pressures can be categorised properly.
- Absence of base-line information:
There is currently no base-line of information, and subsequently there is a lack of quantification of a qualitative problem, lack of dissemination and validation of research, and of quantitative data overall. (Surface water data will be available in 2-3years, but it will be 8-10 years before marine data is obtained.)

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by physical modifications:

- Implementation systems:
Successful implementation of the WFD will require comprehensive regulation, administration and registration of water use / users.

Additional measures identified to address the threats and pressures posed by physical modifications:

- Improved knowledge of remedial measures:
More investigation is needed into remediation and restoration measures. For example the restoration of natural flooding regimes, natural flow and meanders, restoring wetlands and floodplains, and the potential conflicts of interest that arise.

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Note 8 FORESTRY - WORKSHOP FEEDBACK

Additional threats and pressures posed by forestry that are not included in the SWMI Reports:

- Habitat loss associated with afforestation.
- Fertiliser use:
 - a) Aerial spreading of fertiliser.
 - b) Spreading of sewage sludge in forestry. (It was stated that this is only being practised at one site on a trial basis, and that findings will be carefully assessed.)
- Tree species that can cause pollution, such as Sitka spruce alongside rivers.
- Use of the toxic pesticide Psytomethrum, which Coillte objected to having banned because of its use in forestry.

Inadequacies identified in how the SWMI Reports have dealt with the threats and pressures posed by forestry:

- Implementation of guidelines:
Difficulties of ensuring the implementation of Forest Service Guidelines that harvesting takes place in appropriate weather, in order to minimise contribution of nutrients.
- Species balance:
There was discussion about the balance between coniferous and non-coniferous species to be planted, with the implication that fewer coniferous trees would be beneficial. All plantations must include 15-20% of non-coniferous trees, but the point was made that most timber used in construction is white deal and that it would be more sustainable to produce this ourselves than import it, so changing the mix of species planted is a complex matter. (Planting of any area of over 0.1ha requires permission, irrespective of whether grant aid is sought.)
- Quality of land planted & control of negative planting:
It was stated that a lot of problems of water quality associated with forestry resulted from practices in place during the 1960s when regulations were weaker, and that increased knowledge is improving the situation. Similarly the target of 17% of land area planted to forestry by 2020 will involve planting of good quality land, and this is unlikely to be as much of a threat to water quality as the type of land that has been planted in the past. The EPA have a protocol for planting on acid soils, and if in the opinion of the EPA a plantation would lead to pollution then the EPA would oppose grant aid, and the Forest Service will support the EPA position.
- Buffer zones:
In discussion over the use of buffer zones, there was a difference of opinion on the effectiveness of these in protecting water bodies, as eventually nutrients that have built up in these areas will leach out. However, they are seen as beneficial to water quality and temperature regulation. A question was raised about the possibility of identifying vegetation types that might deal with the pollutants / nutrients built up in buffer zones

Views on the measures proposed in SWMI Reports to address the threats and pressures posed by forestry:

- Enforcement:
Existing guidelines are not effectively enforced.
- Inadequate controls:
Existing controls are inadequate.
- Brash management:
The difficulties involved in effective management of brash were discussed. If a method for total removal of brash without producing silt were available, it was stated that the Forest Service would support this. It was proposed that a different planting regime might be successful where brash is a useful source of nutrients. However, it was also pointed out that it could have damaging effects on vulnerable (and protected) organisms. There is presently a moratorium on brash harvesting at sites where the pearl mussel is located.
- Machinery operation:
While Coillte provides training for all its machinery operators, to minimise the threats posed by hydraulic oils and fuels, it was felt that the risks posed by other operators should be addressed through education and training initiatives.

Additional measures identified to address the threats and pressures posed by forestry:

- Amendment of Forestry Act 1946:
Recommendations contained in the Lough Lein Report should be implemented, and the Forestry Act 1946 amended in order that the compulsion to re-plant clear-felled forest where this is on peat lands is removed. It is now well known that plantations in these locations damage the environment and action should be taken to avoid perpetuating and re-creating these problems into the future.
- Application of Precautionary Principle:
The Precautionary Principle is not fully applied in the Forestry Sector. For example while the relationship between the effects of forestry and the demise of the Pearl Mussel may not have been discovered until it was too late, the nutrient enrichment and other changes were well known, and action should have been taken earlier to put a check on these.

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Note 9 OTHER ISSUES – WORKSHOP FEEDBACK

- Recreational pollution sources.
- Roles & responsibilities:
 - a) Work to date has been preparatory however we are now nearing a point in time where action can be taken. Proper planning needs to go into the allocation of roles and responsibilities in order to ensure that the designated actions are undertaken.
 - b) A suggestion was made that major institutional reforms needed to take place as the Local Authorities were custodians for the environment on the one hand and responsible for infrastructural development on the other hand.

- c) To what extent are the Dept. of Agriculture and the Dept. of the Marine supporting the WFD?
- Marine Licensing:
 - a) Water quality needs to be considered when issuing aquaculture licenses
 - b) There needs to be better coordination between the various departments involved in foreshore licensing, and a clear system put in place for ensuring compliance with WFD requirements..
 - c) It was noted that the EPA will be introduced as the primary authority responsible for foreshore licensing under the new foreshore legislation which is due for publication shortly. Offshore licenses will still be required.
 - d) It is difficult to discover the exact amount of pesticides used, particularly in aquaculture, and this should be monitored and controlled.

- Harbours / Coastal areas:
 - a) Port authorities should manage and develop our ports to allow multiple uses while maintaining environmental quality. However, it is not clear that this is an accepted function of port authorities. Multifunctional port authorities are required.
 - b) Integrated Coastal Zone Management should be developed and implemented.

(It was noted that large ships have their own environmental officers.)
- Climate Change:
 - b) The pressure of climate change should be taken into account when planning. A reduction in rainfall will result in a reduction in dilution and assimilative capacity of our water bodies.
 - c) Flooding and climate change considerations would have to be included in the proposed measures derived from the Water Framework Directive.