

WORKSHOPS REPORT

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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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 of 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 digesters 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 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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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 licences should not be allowed to stay in place for prolonged periods of time, an up to date licence 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 licence 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 present 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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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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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 sewage 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 plants-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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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 licence, 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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ABSTRACTIONS - WORKSHOP FEEDBACK

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

- Growing number of bore holes:
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.

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:**
Competing interests in relation to physically modified water bodies. An example of this is the weir in Fermoy, Co. Cork which anglers wanted removed to restore the movement of fish up the river, but which recreational interest – particularly of the very successful rowing club – wished to retain in order to benefit from the impounded water. A further example would be the Lagan weir in Belfast, built as one of the first stages in the Laganside initiative, to impound the river and cover up the mud in the city centre at low tide to encourage the building of apartments. In such instances ecological interests in relation to physical modifications may run counter to those of other sectors.
- 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:**
The problem of a lack of information was strongly made. “Physical modifications” is a term incorporating a rag-bag of features, and the numbers of any single category of feature in the country are unknown. A lack of base-line information on what features there are, and where, makes it difficult to know what the effects of such features maybe – subsequently there is a lack of quantification of a qualitative problem, lack of dissemination and validation of research, and of quantitative data overall. Of all the issues addressed in the Significant Water Matters Reports, it was felt that this was least well developed. (It was stated that surface water data will be available in 2-3years, but it will be 8-10 years before marine data is obtained.)
- 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.

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.
- Further comment was difficult given the lack of information noted under the previous section.

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.

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 **Cypermethrin**, which was banned by the FSC International but which Coillte obtained a derogation for, in order to continue its use.

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 leech 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 Leane 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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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.