

Sustainable Water Network (SWAN)

Review of

'Water Matters – Our Plan!'

River Basin Management Plans
for Ireland's River Basin Districts
2009-2015

June 11th 2010



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TABLE OF CONTENTS

Executive Summary	3
1. Background and Context to this Review	9
2. The River Basin Management Plans & Water Framework Directive - A Digest: Requirements, Timeline, Inadequacies & Implications	11
2.1 The Water Framework Directive	11
2.2 Objectives and Timetable of the Water Framework Directive	11
2.3 Limited Exemptions	11
2.4 River Basin Management Timetable and Process Clearly Set Out	12
2.5 River Basin Management Plans as Adopted are Inadequate.	12
2.6 The Implications of the Approach that is adopted in the Final Plans	13
3. Implementation of River Basin Management Plans	14
4. Key Overarching Issues	17
4.1 Lack of Ambition: Excessive and Inappropriate Use of Exemptions	17
4.2 Inadequate Coastal Monitoring & Measures to Protect the Coastal Zone	19
4.3 Lack of Clarity Regarding Proposed Measures for Each Water Body or Water Management Unit	28
4.4 Sites of High Conservation Value	29
4.5 Integration with Land Use Planning	30
4.6 Public Participation	32
4.7 Climate Change	34
4.8 Economics	36
4.9 Classification of Water Bodies – ‘Defining’ Good Status	39

5. Key Vertical Water Management Issues	40
5.1 Agriculture	40
5.2 Waste Water and Industrial Discharges	42
5.3 Waste Water From Unsewered Properties	44
5.4 Forestry	45
5.5 Landfills Quarries Mines and Contaminated Land	47
5.6 Physical Modifications	48
5.7 Abstractions	49
5.8 Peat Extraction	50
5.9 Invasive Alien Species	52
5.10 Cruising and Boating	52
5.11 Dangerous Substances	53

Appendices	54
I. SWAN Partner Groups	55
II. SWAN Board of Directors	55
III. Extract From: Common Implementation Strategy for the Water Framework Directive (2000/60/EC), Guidance Document no. 20, Guidance Document on Exemptions to the Environmental Objectives	56
IV. Extract From SWAN Submission On The Draft RBD Plans outlining the Process by which SWAN submission to the Draft RBM plans was developed	59
V. SWAN 'Water Matters' Focus Meetings on Draft River Basin Management Plans, May – June 2009	60
VI. SWAN Nominee Selection Meetings to select Environmental Representatives on the Advisory Councils, January–February 2010	61

EXECUTIVE SUMMARY

Important note: The Executive Summary provides an overview of the key content of this review of the Plans. However it also contains specific SWAN proposals regarding how the shortcomings of the Plans may be redressed. The reader is referred to the boxed text '**SWAN Proposals**' in each section for this important component of the review.

- The headline objective of the **Water Framework Directive** is revolutionary, focused not just on particular pollution levels or standards of water use, but also on sustainable water use and the health of populations of aquatic flora and fauna.
- The failure of the Irish government to implement the Water Framework Directive would be hugely damaging because of the centrality of the Directive to all efforts **to address pressures on our water environment**.
- The final River Basin Management Plans due to be signed off by the Minister this month should set out in the Plans **a coherent policy and set of actions** for dealing with long-standing and well recognised pressures on our water environment. It is SWAN's view that they fail to do this.
- The key decisions as to how we will address these long-standing concerns have been postponed resulting in a **low level of ambition** set out in the Plans, which anticipate that the percentage of surface water bodies at good status will rise from 38% at present to just 53% by the Directive's target date of 2015.
- The Plans rely on **excessive and inappropriate use of exemptions** in the form of extended timelines for the achievement of WFD targets in ways that are not compliant with the tightly defined provisions for exemptions contained in the Directive. In a high proportion of cases, the Plans base an extended deadline on lack of 'Certainty of Cause' or due to 'practical constraints' whilst the Directive requires justifications based on detailed analysis of technical feasibility, disproportionate cost and over-riding public interest.
- The Plans do not set out what specific actions need to be carried out by public authorities in order to comply with the Directive and reach the objectives set for each waterbody. They are almost 'silent' on **implementation**.
- Current fragmented water management structures are inadequate to implement the requirements of the Directive. Unless these structures are subject to a radical restructuring, Ireland will suffer severe failures in WFD compliance. A commitment to a swift and well resourced **review and restructuring of water governance** in Ireland must be included in the Plans
- SWAN's position is that the establishment of either a national **Water Authority or seven River Basin District Authorities** is essential for successfully delivering WFD targets. These must be well resourced with specialist staff and given sufficient power to secure cooperation and compliance from all relevant public bodies

- However, this process must not result in a hiatus in implementation and **interim implementation arrangements** must be put in place and set out (or a commitment to do so) in the Plan.
- There has been a profound **failure to implement the Water Framework Directive Monitoring Programme for Ireland's coastal and transitional waters**, leaving the state of the majority of these waters as "*yet to be determined*". This should have been operational by 2007 and represents clear non-compliance with the Directive.
- Measures to address the disparate **pressures on the coastal zone** and the cumulative impacts of these are omitted from the Plans. Inshore fisheries; recreational pressures; marine-related wastes; dredging & dumping at sea and extraction of marine aggregates are omitted.
- It is unacceptable that no measures to address the significant impacts of finfish and shellfish **aquaculture** are proposed
- The **Plans** as they apply to **transitional and coastal waters are meaningless** in their current form
- It is unacceptable that the Plans do not commit to measures to prevent loss of our **sites of highest conservation value**. These sites cannot meet WFD objectives without specific measures being put in place. The Plans only propose specific measures in Special Areas of Conservation (SACs) containing Freshwater Pearl Mussel (FWPM).
- A **sub-catchment management plan** in the form of a dedicated targeted individual Programme of supplementary measures should be drawn up and implemented for each Natura 2000 Protected Area (SAC and SPA).
- The lack of identification of a clear package of measures for the **integration of the statutory planning system** with the requirements of the WFD is a key shortcoming of the Plans
- This must be done urgently by incorporating mandatory consideration of WFD objectives into the **Planning Bill**, now at an advanced stage in the Oireachtas, including a statutory obligation on all planning authorities to 'implement' the provisions of the relevant RBMPs for their functional area
- With the regional planning guidelines and many development plans due to be adopted shortly, the DEHLG published guidance referred to in the Plans is required urgently
- An amendment to the Planning & Development Regulations should be introduced to **de-exempt arterial drainage, agricultural infill and initial forestry** from the need to apply for planning permission.
- **Public Participation** in the RBD Planning process to date has been inadequate and there is no provision for a programme of public participation set out in the draft Plans. A commitment for a programme for encouraging active involvement and participation of the public in the implementation of the Plans must be included in the text of the Plans. This must include as a basis, improved access to monitoring and pressure data and a public awareness campaign.

- It is vital that **climate change** projections are built into the assessment of pressures on water bodies and also into the design of measures to address them.
- The Plans must also highlight, as a priority, the importance of **sustainable flood management**, especially floodplain protection and restoration in mitigating the effects of climate change and thus include proposals/provisions to increase natural water retention and cleaning capacities; increase ecosystem resilience and managing invasive species; Integration of water, climate and energy policy objectives should also be included.
- The Plans do not include a summary of the **economic analysis** of water use, as required by the Directive. This renders the Plans clearly non compliant and also means that the necessary information is not available to provide an estimate of the costs of meeting the objectives of the WFD, or how, or from whom, the authorities intend to recover those costs.
- In applying time exemptions, the Plans completely ignore any consideration of **environmental or resource benefits or costs**. Key to conducting either a cost effective analysis of a disproportionate cost assessment is a baseline valuation of the Irish aquatic resource, including non-quantifiable benefits. This work must be proposed in the Plans and should be initiated as soon as possible
- The water **classification** is the basis on which the Plans are founded; telling us what state our waters are in at present and thus what action we need to take. Since the current classification is of an extremely interim nature, SWAN proposes an annual review of the classification based on increasingly accurate WFD monitoring data, and an associated review, if necessary, of the programmes of measures
- SWAN rejects the proposal in the Plans that the Good Agricultural Practices for the Protection of Water Regulations (GAPP or 'Nitrates Regulations') alone will deal with the impacts of intensive **agriculture** on aquatic ecosystems
- They allow for the application of fertiliser consistent with retention of soil P levels at Index 3, which is in excess of what is necessary for maximum production in most areas. In order to improve protection of waters from agricultural nutrient enrichment, a **soil P index** of 2 should be specified
- New mechanisms for the **disposal of slurry** other than land spreading (especially when it includes "imported" nutrients) must be introduced e.g. biodigester technology
- The restrictions on the **spreading of slurry and chemical fertilisers** at various distances from water bodies are too lax.
- The GAPP regulations, and thus the Plans do not place a mandatory requirement on farms to preventing or minimising the application to land of **fertilisers** in excess of crop requirement
- The RBDM Plan recognises that nearly one third of farms nationally are known to be failing to comply. There is nothing in the Plan to indicate how this failure in enforcement will be addressed. The inspection regime proposed is likely to leave approximately 38,000 **non-compliant farms** uninspected in the first year.

- Waiting for the results of the **Teagasc mini-catchment studies**, as the Plan proposes, entails an unacceptable delay, especially for sites of high conservation status, which require more stringent measures implemented immediately to prevent further deterioration
- Synthetic pyrethroids (Cypermethrin) in **sheep dip** have been shown to cause significant damage, especially in sites of high conservation value. These must be prohibited and the product permanently withdrawn from sale in Ireland. A measure to this effect should be included in the Plan.
- In relation to **Waste Water Discharges**, SWAN welcomes the risk-based prioritisation of the recent Water Services Investment Programme and the fact that it was developed on an RBD basis, in line with the WFD.
- The emission limits set in the Wastewater Discharge Authorisation Regulations are not in line with the Surface Water regulations standards and therefore all Wastewater Discharge Licenses need to be reviewed
- The Plans must include actions to make ensure robust enforcement of **discharge licences to water and sewer** under the Water Pollution Act, with strict adherence to the Recommendation of the European Parliament and the Council for Minimum Criteria for Environmental Inspections in Member States (RMCEI.) required of all public bodies
- SWAN welcomes the planned regulations to control **onsite waste water systems**. All future proposals for unsewered developments must be subject to rigorous independent appraisal (Best Practice Guidance/Part H Regulations). Water quality must be the over-riding consideration in all planning applications for development and in the case of proposed new building, where conditions are found not to support use of septic tanks, installation of an alternative treatment system must be required, or planning permission for housing denied.
- **Site assessments** for must be carried out by independent accredited professionals according to strict guidelines
- For existing unsewered properties, stringent regulations should be introduced. Bye-laws requiring **certified annual de-sludging of septic tanks** should be mandatory.
- The Plans do not propose specific measures to address the impacts of **Forestry** rather refer primarily to the review of the 1946 Forestry Act and the Forestry and Water Quality Guidelines published in 2000
- The Guidelines are over-dependent on aquatic buffer zones to prevent nutrient enrichment and siltation of waterways from forest operations, but do not give sufficient detail about the capacity or maintenance of buffer zones.
- Neither are there specific measures in the Plans to address the problem of sediment runoff from forestry felling operations. Vague references in the Guidelines to regular maintenance of silt traps provide no specification as to what exactly comprises a silt trap or its 'regular' maintenance
- Similarly, forest road building is often not sensitive to the surrounding environment leading to sedimentation in many cases. This problem is covered minimally in the Guidelines. The most specific measure of the

guidelines in relation to forest road building recommends that “roads should be located at least 50 metres from an aquatic zone, where possible” and “If there is no other option but to cross an aquatic zone, construct an appropriate bridge or culvert”. This represents an unacceptably low level of protection for aquatic systems. In addition, the impacts of culverting a stream can be devastating to aquatic life, ‘smothering’ of benthic habitats downstream with silt and forming a barrier which many species will not traverse

- It is unacceptable that the Plans contain no measures to address the threats from both licensed and illegal **Landfills, Quarries & Contaminated Land**. The Plans must include an inventory of all quarries, landfills, mines and contaminated sites in each RBD, along with a management plan to address threats from each one. These must include measures to ensure compliance with current licenses and an action plan to deal with unlicensed operations.
- The development of new regulations providing for the prior authorisation of physical modifications must be progressed as a matter of priority and a definite commitment to the development of new regulations on physical modifications, and a timeline for this, should be included in the Plans. There should be provision for public consultation on these regulations.
- Likewise there is concern that the final Plans do not definitely commit to a system of prior authorisation of **abstractions**, as the draft Plans did. A definite commitment to the development of new regulations on abstraction, and a timeline for this, should be included in the Plans
- Measures to reduce **abstractive pressure** by reducing consumer demand, such as supporting and promoting rainwater harvesting; grey water use and other water conservation measures in the home must also be implemented, as required by the Directive
- The Plans do not place enough emphasis on the impacts on water quality from discharges of effluents from **peat extraction**, especially peat silt, high concentrations of which can kill fish by clogging up gills and clog up river beds making spawning impossible and destroying the habitat of benthic invertebrates.
- **Private peat producers** (i.e. producers other than Bord na Móna) with excavation of peat in areas >50 hectares should be brought into the IPPC licensing system by the EPA
- Discharges from **smaller private enterprises**, in catchments with less than good water status or with an associated Natura 2000 site, and with quantities of peat extraction less than the IPPC license threshold, should be licensed under the Water Pollution Acts by the relevant Local Authority.
- Lists of known **invasive alien species** must be included in Plans with a timeline for the development and putting into operation of an invasive alien species control action plan and clear identification of responsible agencies. The sale of all known invasive alien species should be banned immediately
- SWAN welcomes the proposal in the Plans to “Introduce new regulations under the Wildlife Act to control introduction or possession of any species of flora or fauna which may be detrimental to native species”. These regulations must be introduced as a matter of urgency

- In relation to **Cruising and Boating**, there is insufficient focus in the Plans on identifying and regulating inappropriate recreational use of waters, especially in sensitive areas. Also the role of boat users in the transference of alien species is not addressed.
- In addition to enforcing pump out control, as proposed in the Plans, a full suite a measures should be developed and should include provision of an adequate number of regularly maintained and emptied pump out stations, in addition to an awareness campaign for leisure boat owner and effective inspection regime for commercial operators
- SWAN welcomes the review of all industrial and wastewater permits to bring them in line with the Surface Water Regulations and the resulting revised limits for certain **dangerous substances**. This will not however address many sources of pollution from a wide variety of non-licensed sources. An information campaign is required to prevent inappropriate dumping of many dangerous household chemicals down drains. Leakage of fuel oils and run off from roads and urban areas also needs to be addressed.

1. Background & Context to this Review

The Sustainable Water Network (SWAN) is an umbrella network of [24-25](#) Irish environmental NGOs, national and regional, working together to protect and enhance Ireland's aquatic resources through coordinated participation in the implementation of the Water Framework Directive (WFD). SWAN member groups are listed in Appendix 1.

SWAN has been actively engaged in WFD implementation at both national and River Basin District (RBD) level since 2004, responding to WFD-related public consultations and representing the environmental sector on all seven RBD Advisory Councils.

Since submitting our response on the draft Plans SWAN has engaged in a series of follow-up communications with DEHLG initiated by us:

- A letter was sent to the Minister for the Environment, Heritage and Local Government on August 25th 2009 expressing dissatisfaction with the draft River Basin Management Plans and requesting a meeting with the Minister. Also enclosed was a document "*SWAN Key Concerns based on SWAN Submissions on draft Plans*"
- A meeting with the Minister was held in Dublin on October 12th 2009 where SWAN's concerns put forward.
- A Workshop with the departmental officials was held in Dublin on November 11th 2009, as directed by the Minister. SWAN concerns in relation to the draft RBM plans and "*SWAN Highest priority Issues for Urgent Inclusion*" document were discussed.
- A letter was issued to the Minister on December 8th 2009 requesting a meeting. "*SWAN Highest priority Issues for Urgent Inclusion*" document was again enclosed. No response apart from an acknowledgement on December 14th 2009 was received.
- Another letter was sent to the Minister on March 22nd 2010 requesting a meeting. "*SWAN Highest priority Issues for Urgent Inclusion*" document was enclosed. No response apart from an acknowledgement on March 24th 2010, was received
- A third letter was sent to the Minister on April 27th 2010 requesting a meeting. "*SWAN Highest priority Issues for Urgent Inclusion*" document was enclosed for a third time. No response apart from an acknowledgement on May 5th 2010 was received
- A 'Digest of Submissions and Responses' to the Draft RBM Plans for each RBD was in April 2010.

This review of the final Plans contained in this document is based on:

- The original SWAN submission on the draft RBD Plans¹
- Further feedback during Advisory Council meetings²
- Further detailed SWAN analysis of the Plans as adopted by Local Authorities since then.

This review does not revisit in detail the impacts of various known pressures / activities (e.g. agriculture) on water quality and aquatic ecology. These have been well documented in previous SWAN submissions and in most cases are well known to DEHLG.

¹ See Appendix 4 for extract from SWAN submission outlining the process by which this was developed

² See appendix 6 for details of these meetings. Whilst these were held for the purpose of selecting SWAN nominees for the Advisory Councils, delegates' contributions equally dealt with their concerns regarding the draft Plans

2. The River Basin Management Plans and Water Framework Directive: A Digest - Requirements, Timeline, Inadequacies and Implications

2.1. The Water Framework Directive

The Water Framework Directive (WFD) was adopted in 2000 with the intention of bringing coherence to an increasing range of Directives³ aimed at addressing the threats to our aquatic environment and imposing firm timetables for reversing the long-term decline in Europe's freshwater and marine environment. The headline objective of the Directive is the achievement of good ecological health of the aquatic environment by 2015, requiring action on pollution, water use and ecological restoration. Because of its scope and ambition, the Water Framework Directive has been recognised as one of the most important pieces of European environmental legislation ever passed.

2.2. Objectives and Timetable of the Water Framework Directive

The headline objective of the Water Framework Directive is revolutionary, focused not just on particular pollution levels or standards of water use, but also the health of populations of aquatic flora and fauna. The Directive requires that these ecosystems achieve good status by 2015, defined as biological conditions deviating only 'slightly' from those found under undisturbed conditions.

The focus on ecosystem health under the Water Framework Directive has also required the development of a more comprehensive picture of the health of our freshwater ecosystems than we have had before. Data presented in the RBMPs indicates that only 38% (by number) of the surface water bodies in Ireland are currently achieving good status, illustrating the scale of activity that will be required in order to meet the objectives of the Directive. The status of 62% (by number) of our coastal waters has yet to be determined.

2.3 Limited Exemptions

In recognition of the scale of the challenge, the Directive recognises that some – limited and tightly defined – exemptions to the achievement of good status by 2015 may be necessary. These permit, under certain circumstances, the extension of the achievement of good status to later deadlines of 2021 or 2027. With the possibility of establishing less stringent objectives than good status; and, some exemptions for the achievement of objectives for some biological quality elements in the context of water bodies that have been heavily modified for purposes such as flood defence or harbours.

³ A series of European Directives were introduced between the 1970s and 1990s. The most important of these included the Urban Waste Water Treatment Directive (91/271/EEC), the Freshwater Fish Directive 2006/44/EC (adopted in 1978 but consolidated in 2006), the Nitrates Directive (91/676/EEC), the Bathing Waters Directive (76/160/EC), the Groundwater Directive (80/68/EEC), and the Shellfish Waters Directive (79/923/EEC).

2.4 River Basin Management Timetable and Process clearly set out

The process by which countries are to develop the actions necessary to reach good status is set out in clear detail in the Directive, with a series of steps leading up to the publication in 2009 of the River Basin Management Plans. Ireland has been divided up into 8 'River Basin Districts' (RBDs)⁴ to act as administrative units for the implementation of the Directive. Within each River Basin District, the key steps in this process include:

- **2004:** Completion of preliminary identification of the main characteristics of freshwater systems and human impacts on the water environment;
- **2006:** Introduction into operation of the monitoring programme for the Directive, to provide the information necessary to develop the River Basin Management Plans;
- **2007:** Publication of summaries of significant water management issues;
- **2008:** Publication of draft River Basin Management Plans; and,
- **2009:** Publication of final River Basin Management Plans, setting out the measures that will be introduced to meet the objectives of the Directive.

2.5. River Basin Management Plans as adopted are Inadequate

The final River Basin Management Plans to be signed off by the Minister this month should form the centrepiece of implementation of the Directive. They are intended to provide a clear set of actions to address long-standing and well recognised problems in our aquatic environment. They represent the culmination of nearly a decade's work and preparation, and are designed to respond to a need that had been identified over two decades before.

However, it is SWAN's view that, the government has failed to develop and set out in the Plans, a coherent policy and accompanying set of actions for dealing with the key pressures on our freshwater, groundwater and coastal environment, including, agricultural and wastewater pollution, and diffuse rural and urban pollution. Despite the requirements of the Directive, the key decisions as to how we will address these long-standing concerns have been postponed. This lack of direction has been accompanied by an implementation process that has been biased at all stages in favour of business as usual and sectoral interests rather than any new action.

This lack of action is intrinsically linked to the low level of ambition set out in the Plans. These anticipate that the percentage of surface water bodies at good status will rise from 38% at present to just 53% by 2015, the WFD deadline.⁵

⁴ One RBD is wholly in Northern Ireland; four wholly in the Republic and 3 are cross border RBDs

⁵ This % is calculated for numbers of waterbodies. By surface area, the Plans propose an improvement from 28% to just 44%. Cumulative data for surface water bodies that will reach good status by 2015 for Eastern RBD was not readily available in the correct format therefore the current figure is an average of the other 6 RBDs

SWAN believes that this failure to implement the Directive has been justified by an incorrect and wholly inappropriate interpretation and use of the tightly defined provisions for exemptions that are contained in the Directive⁶.

2.6. The Implications of the Approach that is adopted in the Final Plans

It is difficult to overstate the importance of the Water Framework Directive to the aquatic environment. Not only does the Directive require us to look at, and seek to improve, the ecological conditions of our waters for the first time, it also encourages sustainable approaches to water uses. If implemented correctly the Directive would help to ensure that the way in which water is used and managed is sustainable and secured for future generations.

On the other hand, the failure of the Irish government to implement the Water Framework Directive would be hugely damaging because of the centrality of the Directive to all efforts to address pressures on our water environment. The Directive has been identified by the government for many years as the centre-piece of efforts to address these issues, and it is likely to remain so for years to come.

The Water Framework Directive is one of the early examples of ambitious pieces of framework environmental legislation that seek to secure protection and restoration of the environment in the context of broader social requirements, and involving the public. It would set a bad precedent for future similar ambitious environmental legislation such as the Marine Strategy Framework Directive, if the government were to adopt the minimalist approach to the implementation of the Directive which the Plans in their current form suggest.

⁶ Section 4 deals with this in more detail

3. Implementation of River Basin Management Plans

The Plans as they stand are not considered by SWAN to be proper plans or to comply with the Directive⁷ since they do not set out specifically what measures will be carried out and how these will result in each water body achieving good status by 2015 (or an alternative objective, if applied)⁸. It is entirely unclear from the Plans what specific actions need to be carried out by public authorities in order to comply with the Directive and reach the objectives set for each waterbody. The current Plans leave us in a vacuum. This makes it all the more important the proper implementation structures are put in place to address these gaps with comprehensive Implementation Plans as soon as possible.

Development of transparent Implementation Plans in consultation with stakeholders

According to the Plan, Water Management Unit Action Plans⁹ will “be the basis for detailed implementation programmes”. However SWAN understands that the procedure for progressing from the adoption of the Plans to actual implementation has yet to be developed. It is vitally important that an immediate strategy is put in place to address this significant shortcoming and that a commitment to do this be enshrined in the final text of the Plan. This must include as a matter of highest priority the development of detailed Implementation Plans for each water body in a process that is fully transparent with an opportunity for public consultation in their development. These Plans must set out *inter alia* the status of the water body, all the point source and diffuse pressures in the sub catchment; the location and results of the monitoring programme and a detailed set of water-body specific measures to prevent deterioration and meet the objectives for the waterbody. The Implementation Plans should also outline measures to facilitate public participation and set out the value, monetary and non monetary of the relevant waterbody. Interim Implementation arrangements must be set out if the Implementation Plans are going to be delayed.

SWAN Proposals: Implementation Plans

- Implementation Plans must be developed as a matter of priority, setting out status, monitoring results, all pressures; detailed measures, value of the water body and provisions for public participation. If this is to be delayed interim implementation arrangements must be provided for in the Plans.

Implementation Structures / Water Governance

SWAN understands that the implementation process is under review but that at present the funding for the RBD Project Offices expires at the end of this year. It is SWAN’s firm position that current structures are unable to effectively implement the challenging requirements of the Directive and that unless these structures are subject to a radical restructuring Ireland will suffer severe failures in WFD compliance. This reflects the general view expressed at

⁷Article 4 of the WFD requires that the Plans set out the objectives for each water body and Annex V11 requires a summary of how these objectives are to be achieved by the proposed measures

⁸ Section 4.3 deals with this in more detail

⁹ These are 4-6 page summary documents mapping the Water Management Unit, showing the status, listing some of the pressures in the area and some of the Basic Measures that will apply. They contain inadequate detail to know what exactly is being proposed for a given water body

SWAN Proposals: Implementation Structures / Water Governance

Either a National Water Authority with RBD-level offices or seven River Basin District Authorities¹⁰ is absolutely essential for successfully delivering on DEHLG investment to date and for reaching WFD targets.

- This is necessary to oversee and co-ordinate the activities of the Local and other Public Authorities, a significant number of whom do not yet appreciate the implications of the Directive and its objectives to their work and responsibilities.
- To be effective they must be:
 - Given sufficient power to demand compliance of all relevant bodies and be provided with mechanisms to ensure this is achieved (e.g. penalties, etc.).
 - Well resourced with specialist staff trained in public administration; Catchment Management; GIS; Aquatic ecology and public awareness / participation.
- This Authority or Authorities should *inter alia* be charged with:
 - Coordinate the production of detailed Implementation Plans setting out the actions necessary to be taken by all public authorities so as to reach WFD obligations. E.g. review of discharge licenses by Local Authorities; review of forestry practice by the Forestry Service etc.
 - Auditing implementation and identifying instances of non-compliance.
 - Investigating and addressing concerned citizens queries
 - Developing and delivering a public awareness and public participation programme.

It has come to SWAN's attention that there is a level of resistance from a significant number of Local Authorities and other statutory authorities / bodies to cooperating with WFD implementation. The European Communities Environmental Objectives (Surface Water) Regulations require that all relevant public authorities must "consult cooperate and liase with other public authorities within the river basin district... in such a manner and to such extent as is necessary to coordinate compliance with [the] regulations"

SWAN Proposal

- Robust leadership is needed from the Minister's office to ensure that all relevant bodies understand their obligations and responsibilities with regard to meeting WFD objectives and review and amend their activities accordingly.

¹⁰ Whilst the EU Commission recommended as part of the Common Implementation Strategy, a statutory authority for each RBD, the actual Directive stops short of making it mandatory.

Integrating Plans and Programmes

In order to ensure integration of the RBM Plans into the other plans listed in Section 6 of the Plan, cooperation between public authorities and sections within Local authorities will be key. Robust direction from DEHLG in conjunction with significant powers for a new Water Authority or similar body will be needed to develop methods of integrating Plans successfully, but also in ensuring that public bodies cooperate in making this integration happen on the ground. (Integration with Land Use planning is discussed in Section 4.5. including the Floods Directive).

Enforcement

One of the greatest challenges for any new authority will be ensuring compliance with current legislation and with any new legislation. The basis of the Plans is that the objectives of the WFD will be met primarily by implementing current legislation in addition to some additional stipulated measures (Basic Measures). However, there is no detailed strategy or action plan presented in the Plans as to how legislation, ineffectually enforced to date in many cases¹¹, is going to be enforced effectively from now on.

SWAN Proposals

- A clear commitment to improved enforcement of current legislation must be stated as a matter of utmost priority in the Plans.
- The Water Authority or similar body must be given the power to oversee enforcement and issues sanctions against authorities not carrying out their enforcement duties. The Unit should liaise with the EPA Office of Environmental Enforcement and the Environmental Enforcement Network to this end
- The Unit should also ensure consistent and correct adherence of public bodies to the EU Minimum Criteria for Environmental Inspections (RCMEI) ¹²

¹¹ Lack of enforcement is evidenced by the fact that there are currently more than 30 actions pending against Ireland with regard to environmental legislation with a large proportion related to water.

¹² Recommendation of the European Parliament and the Council for Minimum Criteria for Environmental Inspections in Member States (2001/221/EEC).

4. Key Overarching Issues

4.1. Lack of Ambition: Excessive & Inappropriate use of Exemptions

It is SWAN's view that the Plans rely excessively on extended deadlines for the achievement of the objectives of water bodies in a manner which is non compliant with the conditions set out in the Directive. The target of the Directive is good status for all waterbodies by 2015. It does permit some – limited and tightly defined – exemptions to the achievement of good status by 2015. Article 4 of the Directive sets out a set of these strict criteria whereby, for a given water body, this target can be relaxed in a number of ways:

- the **extension of the deadline**, in other words, good status must be achieved by 2021 or 2027 at the latest (Article 4.4);
- the achievement of **less stringent objectives** under certain conditions (Article 4.5);
- the **temporary deterioration** of the status in case of natural causes or "force majeure" (Article 4.6);
- **new modifications** to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or failure to prevent status deterioration of a body of surface water (including from high status to good status) as a result of new sustainable human development activities (Article 4.7).

Common to these exemptions are strict conditions to be met and a clear justification to be "set out and explained in the River Basin Management Plan". These conditions, as clarified in the EU Guidance Document on Exemptions¹³, are outlined in full in Appendix 3. In summary:

- Member States are only allowed to apply **extended deadlines** on the condition that there is no further deterioration in the status of the water body and if they can demonstrate that the improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility; or that completing the improvements within the timescale would be disproportionately expensive;
- Member States may aim to achieve **less stringent environmental objectives** for specific bodies of water provided that there is no further status deterioration and when they are so affected by human activity or their natural condition is such that the achievement of objectives would be infeasible or disproportionately expensive.
- Member States will not be in breach of this Directive when:
 - failure to achieve good status, or to prevent deterioration in status is the result of new modifications to the physical characteristics of a surface water body or when
 - failure to prevent deterioration from high status to good status of a body of surface water is the result of new sustainable human development activities and:

¹³ Common Implementation Strategy for the Water Framework Directive (2000/60/EC), Guidance Document No. 20, Guidance Document on Exemptions to the Environmental Objectives, Technical Report - 2009 - 027

- (a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
- (b) the reasons for those modifications or alterations are of overriding public interest
- (c) the beneficial objectives served by those modifications of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means

The Plans rely extensively on extended deadlines for the achievement of the objectives of water bodies in ways which are not in line with these criteria and thus are not permitted by the Directive. In a high proportion of cases, the River Basin Management Plans base an extended deadline on constraints related to 'Certainty of Cause' or due to 'practical constraints', without demonstrating the conditions set out by the WFD. Recital 30 of the Directive describes the basis on which derogations can be given, and states that *"In order to ensure a full and consistent application of this Directive any extensions of timescale should be made on the basis of **appropriate, evident and transparent criteria** and be justified by the Member States in the river basin management plans."* (SWAN's emphasis). The current Plans clearly do not comply with this requirement.

At the core of the approach taken by the Government in claiming exemptions from the default objective of the Directive is the claim that there is not yet sufficient information on the causes of problems or recovery times to enable measures to be introduced. We recognise that there will be a limited number of occasions on which it is genuinely not possible to identify the causes of failure of good status (at least not yet), meaning that it indeed may not be possible in these cases to achieve good status by 2015. In some cases, uncertainty may be such that it is not even possible to set out the envisaged measures by which good status will ultimately be achieved. However, the conditions under which this is permitted are defined restrictively and tightly in both the Directive, and the accompanying European guidance. In contrast, in the River Basin Management Plans, lack of certainty has been used not restrictively but very broadly, in ways that are not in compliance with the definitions in the Directive. Because there are some narrow circumstances under which uncertainty may permit extended deadlines and an inability to set out timeframes for the introduction of measures, it does not follow that such approaches are acceptable in any circumstances.

In relation to new modifications or sustainable development, the Plans list a number of future developments which 'may require alternative objectives'. This approach is not permissible. SWAN notes that half of these (7 out of 14) are flood alleviation schemes for which the Article 4 condition which states that the benefits *"...served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option"* Such an analysis of these schemes has not been conducted. In this case SWAN proposed that a cost effectiveness analysis of upstream flood plain reclamation should be investigated, taking into account biodiversity and other non-monetary benefits, before engineered flood prevention schemes are put in place.

Furthermore the all-encompassing self-designated ‘get-out clause’, which states that, the “absence from the plan of possible future developments does not preclude them from progressing” is wholly inappropriate and must be removed. Any such future potential developments must be subjected to a rigorous analysis as per Article 4.

SWAN notes the drop in ambition in the final Plan as compared with the draft Plans. SWAN also notes that this was based on issues of public finance and affordability, as evidenced in correspondence from some lead authorities and justifications for this are not presented in the Plans.

SWAN Proposals

- The Plans must contain a list of all water bodies for which an extended deadline is being applied and a clear justification “set out and explained” following strict Article 4 criteria
- If this now unfeasible, then a commitment to do this, and to conduct a correct Article 4 analysis, including the reviewing of all exemptions listed in the Plans must be included in the final text
- It must be made clear that the future developments listed will be subject to a full Article 4 analysis at water body level before the nature or permissibility of the development is decided
- The cost effectiveness and feasibility of upstream flood plain reclamation as “a significantly better environmental option” should be investigated before any engineered flood protection scheme is put in place.
- All disproportionate cost assessment must take into account non-monetary benefits of the aquatic resource

4.2. Inadequate Coastal Monitoring & Measures to Protect the Coastal Zone

Coastal Monitoring

The Water Framework Directive (WFD) applies to all surface water, groundwater and coastal waters to one nautical mile, yet the Plan ignores 62% (by area) of these coastal waters. There has been a profound failure to implement the Water Framework Directive (WFD) Monitoring Programme for Ireland’s coastal and transitional waters, which should have been operational by 2007. This has left the state of the majority of transitional and coastal waterbodies as “*yet to be determined*”. This is a profound shortcoming in the adherence to the WFD and represents clear non-compliance with the Directive.

SWAN Proposals

- SWAN recommends that at an absolute minimum each Plan must set out clearly:
 1. The % of the coastal and transitional waterbodies in the RBD which do not yet have a WFD Monitoring Programme (and the reasons for this)
 2. A commitment to address this deficit as a matter of priority and
 3. A timed action plan to do this
 4. A target date for having a full transitional and coastal WFD Monitoring Programme operational and any interim measures to fill the gap before this happens
- SWAN recommends that DEHLG must address this issue at the highest level with DAFF, the Marine Institute and any other appropriate bodies if they are to avoid the initiation of non-compliance proceedings by the Commission.

Measures to Protect the Coastal Zone

An analysis of the disparate pressures on the coastal zone and the cumulative impacts of these are beyond the scope of this review. However since none of these issues are addressed or in some cases even mentioned in the Plans, SWAN believes that it is appropriate to outline some of these, before highlighting the inadequacies in the Plans regarding proposed measures and then putting forward some proposals as to how the Plans need to be improved in order to address the issues.

Aquaculture - Finfish

Aquaculture production is a source of a range of significant pressures in the coastal and estuarine environment and these need to be identified much more definitely in the Plans, which are rather circumspect: “Aquaculture activities (including harvesting) unless appropriately managed and controlled, can affect water quality.....” Finfish aquaculture in Irish waters, which mainly involves production of Atlantic salmon, is associated with a number of negative impacts on the aquatic environment¹⁴. These include:

Waste inputs and nutrient enrichment

Waste inputs in the form of faecal or other excretory wastes and uneaten fish feed that commonly contains carbon-based organic matter, nitrogen and phosphorus. This results in nutrient enrichment that may stimulate or exacerbate algal blooms resulting in deaths of fish and other aquatic organisms.

Parasite introduction

It is well established that finfish production can represent a source of pathogens, parasites and other contaminants for wild fish populations. In Ireland the most significant of these relates to sea lice transfer from farmed fish to wild stocks,

¹⁴ Silvert, 1992

particularly to smolts journeying to sea. While a Sea Lice Monitoring Programme was established by the then Department of the Marine in 1991, the Marine Institute, Bord Iascaigh Mhara and the Dept. of Agriculture, Fisheries and Food now undertake a (not-uncontroversial) sea lice control and management strategy to limit sea lice amongst farmed fish. However, there is still no universal acknowledgement, or public recognition, amongst state agencies involved in the regulation and development of aquaculture in Ireland of the causal link between fish farms and increased incidence of lice amongst wild Atlantic salmon stocks. This link has been well document internationally.¹⁵

Chemical Inputs

Chemical inputs, such as antibiotics used for disease control amongst farmed fish, and pesticides to control algae, weeds and parasites, have significant damaging impacts on non-target species¹⁶.

Escapees

Escapees present several problems for native wild Atlantic salmon populations; competing for food, spawning areas and space, they dilute and may ultimately replace the genetic and locally specific gene pool of wild salmon and may also increase the risks of disease communication to wild stocks¹⁷.

Aquaculture - Shellfish

Since shellfish production less commonly involves feed inputs, fewer negative impacts tend to be associated with this form of aquaculture. However these may be nonetheless significant¹⁸ and include:

- Increased volumes of production may reduce nutrients in the water body available for other aquatic organisms, thus altering the ecology of the water body. Overstocking may also mean that young spat of other organisms are filtered out and so levels of other non-target species are also affected.
- Aggressive harvesting damages inter-tidal habitats and encroaches on wild oyster and other indigenous fisheries.
- Physical concentration of large volumes of production – such as mussel and oyster trestles, may displace other organisms.
- Where non-indigenous species are farmed, there is a significant danger of introducing invasive species that may ultimately out-compete indigenous ones (as the introduction of Pacific oysters (*Crassostrea gigas*) threatens to take over the indigenous oyster and mussel habitats).
- The introduction of imported seed also poses the risk of introducing non-native species. An example of this is *Bonamia ostrea*, that devastated the native oyster population in the 1970s.

¹⁵ Gargan *et al*, 2002, McKibben & Hay 2002, Penstan *et al*, 2002, Ford & Myers, 2008

¹⁶ Burridge, 2003

¹⁷ Heggberget *et al*, 1993, Mills (ed) 2003, Ford & Myers, 2008

¹⁸ Cranford *et al*, 2003

Informed critics demonstrate that while aquaculture is the only possible means to significantly expand aquatic food production, many elements of its current practice are ecologically unsustainable¹⁹. The EPA (2008) recognises that there are opportunities for future development of aquaculture, as promoted by Bord Iascaigh Mhara (BIM – the Irish Sea Fisheries Board), but states that this is only possible if it is sustainably managed, so that environmental impacts are addressed and managed such that they remain within acceptable levels.

Sea fisheries – Inshore

Sea fisheries (primarily concerning inshore fishing activities within the one nautical mile offshore covered by the WFD) can pose a number of challenges for good ecological status of coastal waters. Keys amongst these are unintentional catch of non-target species, and trawling and dredging activities that can cause injury or mortality to benthic organisms and damage to marine habitats. Almost all species of fish landed by the Irish fishing fleet, both inside and outside one nautical mile are harvested at levels beyond safe biological limits²⁰. Efforts to limit catches and return these fisheries to sustainable levels have been largely unsuccessful to date.

Traditional inshore fishing methods involving small vessels, with limited engine capacity and small dredges may create some pressures on certain species. However, while past measures such as closed seasons, minimum sizes, etc. used to redress the balance when stocks declined may reduce by-catch and disruption to habitats; they are not adequate to counter the technological developments, increased sophistication and numbers, involved in fishing now.

Extraction of marine aggregates

Marine aggregates consist of sands, gravel and maërl (multiple species of very slow-growing coralline red algae on the seabed). Dredging of marine sands and gravels, not previously commercially extracted, was licensed in 2000/2001 when 234,767m³ of gravel was extracted from the Codling Bank in the Irish Sea. Extraction, usually through suction dredging causes physical and biological disruption of the benthic environment. Existing marine life is disturbed or destroyed, increased suspended sediment particles generated by the dredging may smother organisms, interfere with feeding and light availability etc. There is at present no policy to regulate this sector.

Dredging and dumping at sea

Dredging in Irish waters is primarily undertaken for navigational purposes for example in harbours and marina sites. In 2006, over 900,000 tonnes (dry weight) of material was removed from two harbours and seven estuaries to facilitate shipping. As part of the licensing process for dredging operations operated by DEHLG, sediment analysis is carried out. This is ostensibly to minimise the release of harmful contaminants during the dredging process or in disposal of

¹⁹ Davenport *et al*, 2003

²⁰ ICES, 2001

the dredge spoil. Ireland has poorly developed procedures for rehabilitation of polluted marine sediment sites, and disposal and treatment of dredged material.

The hazards of unauthorised dumping at sea to marine organisms include collision and entanglement, contamination and spread of pathogens.

Coastal development and physical engineering

Recent decades have seen an immense and rapid increase in the development of coastal areas. During the 1990s most of the coast experienced increases in population of between 10 and 50%²¹. Hard infrastructure has also been put in place along with coastal protection structures, port and harbour facilities (requiring Foreshore licenses administered by the DEHLG), marine construction, as well as other tourism and urban related developments. There are often association activities such as dredging and land reclamation associated with these developments.

These, in addition to pressure for offshore installations associated with oil and gas exploration/exploitation have considerable impacts on fragile coastal ecosystems. They disrupt natural environmental processes, and have unknown impacts further offshore. The negative effects of such developments are not adequately understood nor addressed in present planning or foreshore licensing regulatory systems²².

Direct & diffuse discharges to water

These are addressed in Sections 5.2 and 5.3.

Recreational pressures

Recreational pressures associated with water sports include disruption to habitats and species, various pollutants, and often widespread litter. Efforts to address these problems through regulation (such as bye-laws for control of jet-skis and engine speeds) and public education (on oil spills, collection of aquatic organisms) have had variable results.

Marine-related wastes

Management of marine-related wastes, for example dumping of on-board waste and oils spills is poor in Ireland. Most ports and harbours do not have adequate facilities for receiving and handling on-board waste from vessels, often because of difficulties in securing operating costs for this service. While dumping at sea is regulated by OSPAR, it is known to occur and is hard to police. It is most likely to be through provision of onshore facilities for alternative disposal at reasonable cost that this practice will be reduced.

²¹ EEA, 2006

²² The EUROSION study (2004) has demonstrated that where coasts become increasingly built up, there is effectively reduced space for the operation of natural processes, with environmental impacts becoming increasingly complex and difficult to manage.

The Irish Coastguard investigates reported oil spill incidents and while these have fallen according to the most recent available statistics (from 59 incidents in 2004 to 44 in 2006), identification of the source vessels has not been possible and no prosecutions have been initiated relating to these incidences. The majority of these spills involve marine diesel and gas, and occur in small harbours or surrounding areas.

Litter

Litter represents a real threat to marine and coastal environments. International estimates suggest around 100,000 marine mammals are killed as a result of plastic litter every year²³. In Ireland the NGO Coastwatch generates the only data on coastal litter, and in their most recent survey found plastic litter at 80% of coastal sites surveyed (2007). “Litter” includes a wide range of types of waste from large items such as cars or abandoned aquaculture structures, to sanitary products, packaging and partially broken up by-products of marine activities, such as netting, rope, etc. Plastics can persist in the marine environment for centuries and have fatal consequences for marine life.

Litter presents a number of problems for wildlife. These include entanglement, which is known to have affected over 144 species of marine animal, causing injury, death by starvation, drowning or suffocation. Discarded fishing nets effectively continue “ghost” fishing²⁴. Over 177 marine species are also known have mistaken litter for food and swallowed all manner of items from tiny particles to large oil drums. Such ingestion may damage or block the intestine, resulting in inability to feed, and ultimately death by starvation, as well as the absorption of any toxic pollutants in the debris²⁵.

What the River Basin Plans propose to address these challenges

Beyond efforts already required under the EU Shellfish Waters Directive (2006/113/EC)²⁶ to put in place Pollution Reduction Programmes (PRP) to achieve the environmental water quality standards established for the 64 designated shellfish waters nationally, **no measures specific to coastal waters are contained in the River Basin Management Plans**. The reason for this is unclear but must be related to the dearth of monitoring information that has resulted in the majority of coastal, estuarine and transitional waters remaining unclassified in the Plans. However, the failure to classify the status of these waters and the refusal to address known pressures affecting them, has not prevented the Plans making claims that complete or near complete compliance with the Directive will be achieved by 2027 – the final deadline for achieving this.

There is at most a paragraph in each of the Plans acknowledging that aquaculture *may* have negative impacts on the status of coastal, estuarine and transitional waters, but there are no measures proposed to address these – or even to establish and evaluate the extent of any such impacts.

²³ Wallace, 1985

²⁴ Fowler, 1995, Westcott et al, 1994

²⁵ 3rd International Conference on Marine Debris, 1994

²⁶ The relatively high water quality standards required for Shellfish waters represent some possible protection for receiving waters that are designated as such. However, these areas are too limited

Both EC and national policy foresee an increase in aquaculture, so the pressures from this sector need to be considered carefully. The absence of measures to safeguard against the negative impacts these operations can cause is negligent of the State's responsibility to protect the status of the receiving waters.

Why the proposals in the River Basin Management Plans are inadequate to address these challenges

The Plans rely heavily on existing legislation (directly the Bathing and Shellfish Waters Directives, and indirectly the Nitrates and Urban Waste Water Treatment Directive) as the means by which the objectives of the Water Framework Directive will be delivered. However, to date existing legislation has not been effectively implemented, despite much of it having been in existence for some time. In the absence of any additional resources being made available to support improved implementation under the River Basin Management Plans, there can be little confidence that the desired results will be realised. Beyond the Shellfish Waters and Bathing Waters Directive, the status of marine, coastal and estuarine waters are not directly addressed in other existing legislation named in the Plans. (Other relevant legislation such as the Dumping At Sea Acts, etc. is not referred to in the Plans or integrated into achieving their stated objectives.)

The lack of sufficient monitoring data, making it difficult to classify the status of most marine, coastal and estuarine waters in all River Basin Management Plans, is not adequate grounds for avoiding tackling known problems and pressures for these water bodies in a proactive manner. Instead it simply provides for a 'business as usual' approach in which known negative impacts are allowed to continue unchecked. The extent of scientific evidence documenting a wide range of challenges to the quality of these waters is irrefutable and the failure to take measures in response to these is irresponsible and shortsighted. It is also contrary to the Water Framework Directive, which requires Member States to prevent deterioration²⁷.

The Plans demonstrate that there is no will on the part of the responsible agencies (both the competent Local Authorities, under the Water Framework Directive, nor the other relevant State agencies – DECNR, DEHLG, EPA, SFPA, BIM, MI, etc.) to engage in the collaborative manner necessary to identify and address the challenges for these waters in an effective and efficient way. This state of affairs is directly contrary to the goal of the Water Framework Directive.

The RBMPs, as they apply to transitional and coastal waters, are meaningless in their current form.

²⁷ Allowing pressures on these waters to continue un-addressed leaves Ireland on the back foot in relation to her commitments to implement the Marine Strategy Framework Directive (to be transposed into law in July 2010) which strengthens the requirement for good ecological status in these waters

SWAN Proposals for Data Collection and Classification of Water Bodies

- The River Basin Management Plans must prioritise data collection and assimilation, as this is necessary to generate demonstrably thorough and reliable baseline assessment of the state of Irish estuarine, coastal and marine waters, as well as to continue to monitor these waters into the future. On the basis of this data, all estuarine, coastal and marine waters must be classified. The Plans must acknowledge that only once this is done can assertions be made as to the ability of measures to deliver Water Framework Directive objectives.
- The Plans also need to acknowledge the extensive range of demonstrated challenges to these waters maintaining or achieving “good ecological status” as required in the Water Framework Directive. This is irrespective of whether the status of a water body is known. Subsequent to this, each Plan must then map and monitor sources of pressures for these waters, and introduce a robust set of measures to address each of these.
- A number of suggested measures in response to some of the most pressing challenges to the ecological status of coastal, marine and estuarine waters in Ireland are set out below. Most importantly, the diverse nature of human activities occurring in these waters means that effective management to deliver “good ecological status” REQUIRES effective, committed collaborative working between Government Departments and State agencies. In Ireland the difficulties and failures in delivering this are widely evident. The coastal zone with its complex interplay of activities in our most dynamic environment – more than anywhere else – is a necessary pre-condition for success, as well as efficient and cost-effective management.

SWAN Proposals for Aquaculture

- At present the Dept. of Agriculture, Fisheries and Food (DAFF) will only consider licensing for aquaculture operations in Natura 2000 sites when they have completed an assessment of the assimilative capacity of the water body concerned. It is recommended that this approach be adopted for **all** coastal and estuarine water bodies, irrespective of any designated status, and in addition,
- That the scientific assessments of the water bodies be carried out by reputable independent scientists and in the context that these waters must be managed in ways that secure good ecological status as set out in the Water Framework Directive.
- Assessments of individual water bodies should be made public and the most comprehensive modelling possible be applied by DAFF when considering proposals for aquaculture enterprises. Decisions as to the degree to which such an impact can/will be tolerated is clearly a matter for analysis, but must be based on WFD targets for ecological status of water bodies.

SWAN Proposals for Aquaculture contd.

- DAFF must undertake and demonstrate that it remains informed of current research and best practice in regard to increasingly sophisticated modelling of assimilative capacities for aquaculture in water bodies (e.g. Silvert 1994, and 2003), and require that these are applied to its assessments of water bodies around the coast.
- The Dept must also be informed of new developments in aquaculture techniques that reduce or eliminate adverse environmental impacts (Fisheries and Oceans Canada, 2008)²⁸. Where such techniques show promise, support for pilot projects implementing these on existing aquaculture sites where the positive impacts can be assessed should be forthcoming.
- Similarly, development and promotion of feedstuffs, particularly for Atlantic salmon, that reduce pressures on other marine resources, and the associated risks of disease transmission, is important. The increasing replacement of fishmeal and oils with soy or other agricultural products is a positive development and should be encouraged. Where fish meal and oil is required, efforts should be made to utilise discarded fish and processing offal from other fisheries (for human consumption).

SWAN Proposals for Administrative and Regulatory Structures and Procedures

- DAFF and the Dept. of the Environment, Heritage and Local Government, in conjunction with the other relevant State agencies and Local Authorities, should conduct a critical evaluation of management models applied in other jurisdictions and recommended in research²⁹. In addition they should engage in detailed consultation with interested stakeholders to develop a more effective and efficient system of administration for activities within the coastal zone that have impacts on water status.
- This exercise should seek to motivate all those with responsibilities in this field to wish to support an improved system of controls, and must stress the necessity for a genuinely collaborative approach to management necessary if the challenges are to be addressed.

²⁸ An example of this would be the Canadian Integrated Multi-trophic Aquaculture Network (CIMTRAN), which is researching innovative solutions for the environmental sustainability, economic stability and societal acceptability of aquaculture, by combining the cultivation of fed aquaculture species (e.g., finfish) with inorganic extractive aquaculture species (e.g., seaweeds) and organic extractive aquaculture species (e.g., suspension and deposit feeders) for a balanced ecosystem management approach that takes into consideration site characteristics, operational limits, and food safety guidelines and regulations.

²⁹ Read & Fernandes 2003, Primavera 2006

SWAN Proposals for Marine Aggregates

- DEHLG must draft proposed policy on the exploitation of marine aggregates as a matter of urgency, based clearly on targets of good ecological status of its marine, coastal and estuarine waters. These must be consistent with the principles of marine spatial planning and environmental protection. In the absence of comprehensive information or adequate understanding of the impacts of extraction, the precautionary principle must be applied.

4.3 Lack of clarity regarding proposed Measures for each water body or Water Management Unit

The Plans, as published, quite simply fail completely in their primary purpose of setting out clearly how we will meet the objectives of the Directive (See Section 2.2 for further detail). They further generally fail to specify what measures will be taken (on what timetable) for each water body to achieve the specified objectives (particularly where extended timescales are being claimed) contrary to the requirements of the Directive³⁰.

The plans contain few new measures for any of the main polluting sectors. The majority of measures proposed in the Plans are simply legislation already in place e.g. the Urban Wastewater Treatment Regulations and the Good Agricultural Practice for the Protection of Waters Regulations. However, the latest EPA report³¹ 'Water Quality in Ireland 2007 – 2008' shows that current legislation is inadequate: it indicates recent increases in fish kills, decreases in the number of bathing water sites meeting EU public safety standards and a dramatic loss in the percentage of high ecological river sites over the last 20 years. This suggests that either current legislation is insufficient and we need additional measures ('Supplementary Measures' in the WFD) or that current legislation is not being properly enforced. In the case of the latter, the Plan does not clearly indicate how enforcement of current legislation is going to be improved. Enforcement is dealt with in more detail in Section 3.

There is, moreover no description of how Ireland will actually achieve the good status objectives of the Directive over the 3 planning cycles to 2027. Indeed, it is not possible even to identify the actions that will be taken for most water bodies or thus to understand the effectiveness of any proposed actions, meaning that it is effectively impossible for even those most familiar with the Directive to understand what is being proposed for any particular place, or when.

For extended deadlines for the achievement of the Directive to be lawfully claimed, the Directive also requires very clearly that a summary of the measures envisaged as necessary to bring the bodies of water to the required status be

³⁰ The Directive states that each River basin Management Plan must contain "a summary of the programme or programmes of measures adopted under Article 11, including the ways in which the objectives established under Article 4 are thereby to be achieved"

³¹ The EPA Report Water Quality in Ireland 2007 – 2008 was released in December 2009. It focuses on key indicators of the aquatic environment and summarises the most recent national water quality assessments. It is available for download at www.epa.ie/downloads/pubs/water/waterqua/name.27541.en.html

set out in the River Basin Management Plan, accompanied by an expected timetable for their implementation. However, in the Plans due to be signed off this month, this has simply not been done in the vast majority of cases. Thus, while the Plans envisage that a significant proportion of improvements in water body status are anticipated as taking place between 2021 and the final 2027 deadline, they provide little clarity on how this sudden achievement of good status will be achieved. This gives the strong impression that DEHLG has adopted an approach of delay rather than phased delivery.

In response to the draft Plans, SWAN supported many of the additional 'supplementary measures' mooted, whilst criticising the speculative nature of the lists of possible measures and the lack of concrete proposals for water bodies. However, we note that in the final Plans, most of these supplementary measures have simply been removed altogether. The draft Plans also stated that *"the total number of waters for which supplementary measures will be necessary is 388 nationally"*. This begs the question of how are we going to reach good status (or other objectives) for these waterbodies? This has also been removed from the final Plan, adding to the lack of clarity regarding how we are going to attain WFD objectives.

The limited numbers of additional measures that are proposed in the Plans are couched in indefinite language such as 'may' and 'can', making it unclear as to whether these measures will indeed be implemented.

SWAN Proposals

- Remove ambiguous phraseology such that additional measures are actually being proposed
- In the absence of an action plan for each water body, in the Plan, as was envisaged by the Directive, a commitment and timeline for developing these must be set out in the Plans as a matter of priority.
- In order to be in compliance with the Directive, for water bodies for which extended deadlines are claimed, a summary of the measures envisaged as necessary to bring the bodies of water to the required status, along with an expected timetable must be set out in the Plans.

4.4. Sites of High Conservation Value

In relation to our sites of highest conservation value and our most pristine areas, the only Natura 2000 sites for which special measures are proposed are those containing the Freshwater Pearl Mussel (FWPM). Whilst these special measures are to be welcomed, it is unacceptable that the Plan only proposes specific measures in Special Areas of Conservation (SACs) containing FWPMs. According to the 2008 Habitat Directive Article 17 report, most aquatic SACs are in unfavourable conservation status. In light of this and the fact that the latest EPA Water Quality report³²

³² 'WATER QUALITY IN IRELAND 2007 - 2008 Key Indicators of the Aquatic Environment', EPA, 2009

found that “the percentage of high ecological quality river sites in the country has almost halved in the 21 years between 1987 and 2008”, it is clear that these sites of high conservation status cannot meet WFD objectives without specific measures being put in place.

The Plans state in relation to the protection of high quality waters: “Additional measures may be required in order to protect and restore these sensitive areas” [SWAN’s emphasis] . The use of the word “may” means that measures are not actually being proposed.

SWAN is also particularly concerned that DEHLG informed a Local Authority seminar on the WFD in April³³ that the WFD permits them to apply exemptions to reaching WFD objectives (good ecological status by 2015) in sites of high conservation value (Natura 2000) sites. Whilst the legality of this is debatable, it clearly represents an extremely un-ambitious interpretation of the Water Framework Directive, Habitats Directive and Birds Directive.

SWAN Proposal

- A sub-catchment management plan in the form of a dedicated targeted individual Programme of supplementary measures is drawn up and implemented for each Natura 2000³⁴ Protected Area. If this is not feasible then as an absolute minimum, a specific Programme of Measures for each habitat type³⁵ under the Habitat’s Directive should be applied to all Natura 2000 sites. These should be designed in consultation with NPWS, EPA and outside experts as necessary.
- Exemptions should not be applied in water bodies with associated Natura 2000 sites.

4.5 Integration with Land Use Planning

The Plan is totally inadequate in relation to this key area. The lack of identification of a clear package of measures for the integration of the statutory planning system with the requirements of the WFD, which are easily and quickly implementable at the ‘coal face’ at local level through the development management system, is a key shortcoming of the RBMPs.

All the Plan says is that “there *may* be need to strengthen the statutory basis for integration of water quality objectives with the planning system”. This must in fact be done urgently by incorporating mandatory consideration of WFD objectives into the Planning Bill, now at an advanced stage in the Oireachtais.

³³ Seminar on European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009) & European Communities Environmental Objectives (Groundwater) Regulations, 2010 (S.I. No. 9 of 2010) Seminar, Athlone, April 14th

³⁴ Natura 2000 sites are those designated as either Special Areas of Conservation (SACs) under the EU Habitats Directive or SPAs (Special Protection Areas) under the Birds Directive

³⁵ E.g. Coastal Lagoons; Oligotrophic to mesotrophic standing waters etc.

The RBM Plan acknowledges that published guidance will be required and that the DEHLG will prepare guidance in due course. However, with the regional planning guidelines and many development plans for the critical period 2010 – 2016 due to be adopted shortly this guidance is required urgently. (It is noted that RBMP Guidelines are not even currently on the DEHLG schedule for publication in 2010.) Given the complexity of the WFD, the multitude of water quality legislation and the often specialist nature of water management issues, the new Guidelines should be accompanied by comprehensive training for all local authority and Bord Pleanála staff involved in development, planning and environmental management.

SWAN Proposals

- A legislative amendment to the Planning Acts should be included in the Planning & Development (Amendment) Bill 2009 to make it a statutory obligation on all planning authorities to **implement** the provisions of the relevant RBMPs for their functional area.
- An amendment to the Planning & Development Regulations should be pursued to de-exempt arterial drainage, agricultural infill and initial forestry from the need to apply for planning permission. These activities should be brought fully within the planning code and thresholds for EIA reviewed.
- Fast track the publication of new policy guidance under S.28 of the Planning & Development Act setting out exactly how WFD environmental objectives are to be translated by local authorities into best-practice land-use planning policy and practice in the field. The critical issues which should be addressed in new guidelines include the following:
 - Development expansion in urban centres (zoning) must strictly match planned future capacity in urban wastewater treatment plants by reference to the 'Combined Approach'. All urban centres targeted for investment must be designated vertically through NSS/RPG hierarchy. Urban centres where there are no plans for investment in wastewater capacity must be de-/down zoned.
 - Ireland is likely to face a continued demand for unsewered residential development in rural areas. This will continue to present a significant challenge to WFD objectives. Significant focus must be placed on promoting villages and smaller urban centres as alternatives. This will require investment in innovative local treatment facility options to ensure adequate capacity exists to gather up demand for rural dwelling houses.
 - All future proposals for unsewered developments must be subject to rigorous independent appraisal (Best Practice Guidance/Part H Regulations). Water quality must be the over-riding consideration in all planning applications for development and where the potential for deterioration cannot be disproved beyond all doubt, planning permission must be refused (i.e. burden of proof must be on applicant).

SWAN Proposals contd.

- Development plans should be required to clearly map out (zone) areas where groundwater/surface water is vulnerable (e.g. GSI – Groundwater Protection Schemes), particularly coastal areas, riparian corridor zones, protected habitats and areas with poor percolation. Specific policies and objectives for the protection of water resources tailored to each zone should be included in development plans, including types of development permitted, so that applicants for development are aware of restrictions.
- Investment in water infrastructure is costly (capital and operational) and extremely energy intensive. Land-use plans should be required to include measures that move towards waste minimisation (e.g. SUDS/Grey Water harvesting/ Water Pricing) and localised treatment options (e.g. Reedbeds/Integrated Constructed Wetlands etc). This will require an integrated development management/building regulation approach. In particular, there are (outside Dublin) currently no guidelines for the effective implementation of best practice Sustainable Urban Drainage Systems (SUDS).
- *'Prevention is better than Cure'* – land-use plans should be required to use an ecosystems management approach to manage land use (not just a development management approach). Wetlands, peat extraction, upland development, forestry, agricultural infill etc must all be brought fully into the planning system and guidance provided to local authorities as to how this can be achieved in practice. It should be an objective to preserve all wetlands and peatlands in their natural state. This will require considerable cross-referencing between various policies (REPS, Natura 2000, Flood Management, Green Infrastructure etc) and will have wider benefits in terms of flood protection, biodiversity, habitat protection, carbon sequestration, human amenity etc.

4.6 Public Participation

Public Participation in the RBD Planning process to date has been inadequate and there is no provision for a programme of public participation set out in the draft Plans. SWAN does not agree with the statement in the Plans that they “resulted frompublic stakeholder participation”. Whilst a process of consultation was engaged in, it did not result in substantive changes to the Plan. Article 14 of the WFD required that “*Member States shall encourage the active involvement of all interested parties in the implementation of this Directive*” and a commitment to this must be set out in the Plans. Although some limited public consultation activities have been part of the process until now, a commitment to reviewing and improving these efforts into the implementation phase must be set out in the Plans. This is necessary if the Plans are to be compliant with the Directive and with the Aarhus Convention, which requires that all Parties “*..shall guarantee...public participation in decision-making...in environmental matters..*” It is also vital to secure the required engagement and co-operation of the public and specific sectors that is necessary for successful implementation of the Plans. Therefore, a requirement must be included in the Plans for the development and implementation of a full programme of public participation in the implementation of the Plan.

The Directive required that the Plans contain “a summary of the public information and consultation measures taken, their results and the changes to the plan made as a consequence.” The Plan does not comply with this requirement, since it does not outline how the Plans were revised as a consequence of consultations. Despite comprehensive and detailed submissions, SWAN has not been informed of where the Plans were changed in response to this. Nor is it evident from reading the Plans.

SWAN Proposal: Public Participation

- A commitment to a programme for encouraging active involvement and participation of the public in the implementation of the Plans should be included in the text of the Plans and this should be:
 - developed as soon as possible, and at least within the first 6 months of the implementation of the Plans and,
 - delivered as an integral part of the Implementation Plans.

SWAN Proposals: Public Awareness Campaign

- The cornerstone of public participation, in accordance with international best practise, must be a public awareness campaign, targeted at the general public and specific sectors. This is necessary to address the very low level of awareness amongst the general public in relation to water issues and the WFD. (Whilst the Plans refer broadly to a public awareness campaign, there needs to be a specific recommendation).
- As a first step to implementing a programme of public participation, cost-effective RBD-level public awareness initiatives are recommended in the SWAN ‘Blueprint for a Public Awareness Campaign on Water’, in conjunction with community, environmental and other NGOs should be piloted³⁶

Advisory Councils

The Advisory Councils presented significant potential for engaging stakeholders, but the role of members in influencing the process has been minimal to date and thus the degree to which the Councils encouraged active involvement was limited. Most members were unclear as to who in fact they were advising and felt they had little or no influence over the content of the RBD Plans, or the decision-makers drafting them.

³⁶ *Blueprint for a Public Awareness Campaign on Water* was produced by SWAN on commission to DEHLG in 2009 was designed in modular format and could be adapted for use in a pared-down form. SWAN could deliver aspects of this in cost-effective way.

SWAN Proposal: Advisory Councils

- SWAN submitted set recommendations to DEHLG on how to improve the effectiveness of the advisory Councils in April 2010. However, in that document SWAN expressed reservations about the effectiveness of the Councils, as they were constituted. In this context SWAN would welcome a full review of DEHLG's public participation / consultation strategy, especially if this were to include a public participation / stakeholder body with more 'teeth', with a clear decision-making as well as advisory remit. Ideally this should be a forum where public stakeholders and official stakeholders (public authority officials) work together.

SWAN Proposals: Access to Information

- The background documents and the information generated by the GIS WaterMaps tool must be made more accessible and monitoring data and discharge data provided clearly
- Information on monitoring (location of sample points, frequency, results, responsible agency etc.) must be made available
- Background documents referred to in the Plan as being available on the wfdireland.ie website must be there

4.7. Climate Change

It is vital that climate change projections are built into the assessment of pressures on water bodies and also into the design of measures to address them. Although the Plans state that all measures have been 'climate checked', as they stand³⁷ they do not clearly demonstrate how climate change projections have been considered in the assessment of pressures and impacts, monitoring and appraisals of measures. Nor do they detail the potential for sustainable climate change resilience through restoration of floodplains.

Protection and restoration of wetlands in floodplains and uplands

Flood and drought management, both increasingly vital under future climate change scenarios, must take a sustainable, integrated catchment-based approach, in particular, focusing on increasing natural infiltration rates and retention capacities. Such measures, whilst increasing water storage can often also increase natural cleaning capacities. Therefore, measures to reconnect wetlands and riparian ecosystems to the river channels and groundwater should be introduced. This helps to re-establish their function as buffer and water storage during flood and dry periods whilst simultaneously acting as a purification medium by trapping potential river pollutants and high-rate water run-off from hill-slopes resulting in immobilisation and microbial decay of pollutants. They can also contribute towards

³⁷ Including the background document '*Adapting the Plans to Climate Change*'

providing habitat reservoirs for native species under stress from climate change. The importance of this approach and a commitment to it must be included in the draft Plans.

The RBM Plans should influence the development of adaptation (e.g. flood risk mitigation) and mitigation (e.g. energy saving and renewable energy sources) strategies alongside their main aim of achieving “good status” of all waters. There is ample scope to promote ‘win-win’ strategies that meet multiple objectives for forestry viability, water quality, biodiversity, flood and drought risk mitigation and adaptation, increasing resilience to cope with climate change impacts and support mitigation policies. Such strategies should be guided by the following principles:

- Reduction in water use;
- Increasing of water infiltration and storage, and cleaning capacities of the urban and rural landscape;
- Increasing ecosystem resilience and managing invasive species
- Identification of locally appropriate species to minimise diverse interventions (over-drainage, over fertilisation, etc).
- Integration of water and energy policy objectives

SWAN Proposals

The Plans must highlight, as a priority the importance of sustainable flood management, especially floodplain protection and restoration in mitigating the effects of climate change and they must propose a set of actions to initiate such a programme nationally during the 6-year period of the Plan. This must include a programme of training and guidelines for the Office of Public Works in the area of sustainable flood management.

In more detail then, the Plans must include proposals/provisions to:

1. Increase natural water retention and cleaning capacities to:

- Protect and restore wetlands in floodplains and uplands;
- Increase resistance to water flow in the river channel and floodplain, via increasing river length (meandering) and river bank vegetation cover;
- Promote soil conservation in agricultural and forestry practices, which increase water retention (e.g. changes in ploughing seasonality, cover crops, direct drilling, hedgerows and grass strips on field edges; use of locally appropriate crops and increased broadleaf cover);
- Prevent infrastructure on flood plains or areas at risk of inundation interference with the drainage pattern of sensitive upland blanket bog areas.

2. Increase ecosystem resilience and managing invasive species:

- Protect and enhance wetlands and riparian ecosystems, which are great pools of biodiversity and help species migration;
- Prevent the construction of new barriers to migration like dams and require the removal of obsolete barriers; and

SWAN Proposals contd.

2. Increase ecosystem resilience and managing invasive species contd.:

- Actively manage invasive species via reduction of the risk of new arrival (e.g. international sailing and commercial boats) and spreading of unwanted invasive species and managing actively the new composition of species in Ireland based on monitoring and research.

3. Integrate water, climate and energy policy objectives

Reducing water and energy use is the most cost-effective approach to achieve multiple objectives.

Therefore, RBMPs should:

- Support ambitious water and energy standards for buildings;
- Introduce economic incentives to reduce water use, including water abstraction and impoundment charges for commercial (transport, hydropower, manufacturing) and farming activities;
- Domestic water charges encouraging the uptake of efficient devices and behaviour change, which are designed sensitively to address basic social and economic needs;
- Environmentally sound slurry and fertiliser management practices that would reduce fertiliser production, and thus greenhouse gas emissions, and enhance water quality.
- The support of rainwater harvesting that could feed into non-drinking water supply and also reduce run-off from buildings.

4.8. Economics

The Directive requires that each Plan contains “a summary of the economic analysis of water use as required by Article 5 and Annex III”. The absence of this analysis renders the Plans clearly non compliant and also means that the necessary information is not available to fulfil the additional requirements for economic analysis in the Directive. It requires that “The economic analysis must contain “enough information in sufficient detail in order to a) Make the ...calculations necessary for taking account... the principle of cost recovery of water services; Make judgements about the most cost effective combination of measures”. By omitting this information the Plans are in contravention of the Directive.

Thus, there is no attempt in the report to provide an estimate of the costs of meeting the objectives of the WFD, or how, or from whom, the authorities intend to recover those costs.

The WFD requires the integration of economic analysis in its implementation. The key areas and aspects where such application is called for are setting exemptions (through disproportionate cost analysis); calculating cost recovery and determining the cost effectiveness of supplementary measures. Setting heavily modified designation also requires an economics analysis. This review will briefly cover each of these components.

1. Cost Recovery

Article 9 states that member states must “take account of the principle of recovery of the costs of water services, including environmental and resource costs ... in accordance ... with the polluter pays principle”. The main policy focus of Article 9 is on the role of pricing as a tool to enhance the protection of the environment. The Plans reference water pricing policy in section 5.2.4 where they refer to non-domestic and domestic pricing policies for water services, focusing primarily of financial cost recovery. They do not demonstrate the impact of the pricing policies on the ecological status of waterbodies nor relate the pricing policies to the recovery of environmental and resource costs. While the application of pricing policies to recovery of environmental and resource costs is a challenging exercise, no attempt has been made in the Plans to demonstrate that the planners are attempting to bridge this gap.

In the absence of any economic assessment in the Plans, it is not possible to work out the costs of the provision of water services (other than the obvious provision of drinking and waste water services) and thus to develop a system for recovering those costs from water users.

2. Disproportionate cost analysis

Disproportionality, as referred to in Article 4.4 and 4.5, is a political judgement informed by economic information, and an analysis of the costs and benefits of measures is necessary to enable a judgement to be made on exemptions. The EU CIS Guidance document³⁸ cited in SWAN’s submission on the draft Plans and also by Goodbody’s ‘Guidance Manual on the Economic Analysis Required by the Water Framework Directive’ offers a number of guidelines regarding disproportionality (although it stops short of providing a definition) including that disproportionality should not begin at the point where measured costs simply exceed quantifiable benefits and the assessment of costs and benefits should include qualitative costs and benefits as well as quantitative. Both the CIS and Goodbody Guidance emphasise the importance of identifying and taking into account the qualitative benefits of high water quality, despite the fact that these may be difficult to quantify, or may not be expressible in money terms. In applying time exemptions the Plans completely ignore any consideration of environmental or resource benefits or costs.

The plans state that “economic analysis has not been used to justify deferral of measures or extension of objectives in the district.” Nevertheless, the extension of the deadline for mines (see table 4.5 in the RBM Plans) references disproportionate cost analysis without giving any additional information on the methodology or findings of this analysis.

³⁸ 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*

3. Cost effectiveness analysis

The concept of cost-effectiveness is primarily aimed at selecting the least-cost option for achieving good ecological status. It can also help prioritise measures in the context of exemptions. When lower environmental objectives are proposed, results of the cost- effectiveness of assessments can be used to select priorities for implementation. For example if a programme of measures is judged to be disproportionately expensive, it will be necessary to review the programme of measures by removing measures that are the least cost- effective or by choosing the next most cost- effective programme of measures.

The Plans do not propose supplementary measures to achieve good ecological status; instead they rely on technical infeasibility or natural ecosystem lags to justify extension of deadlines (see table 4.5 in the RBM Plans). For example:

- 1) **Wastewater discharges** from some treatment plants (extended to 2021) on the basis of technical infeasibility. It is far from transparent whether the upgrade requirements are related to the Urban Wastewater Treatment Directive (UWWTD), i.e. a basic measure, or whether the upgrade requirement relate to supplementary measures under the WFD to achieve good status. If the former, time extensions of that nature are not permitted under the UWWTD. If the latter, a cost-effectiveness analysis of supplementary measures is required.
- 2) **Mines** (extended to 2027) on the basis of physical recovery times. It states that scientific data indicates status recovery may take a significant number of years. How did the Planners determine this? It is not transparent what the type of measures the plan refers to. If supplementary measures are being used, a cost-effectiveness analysis is required.

SWAN Proposals

- The Plans must include “a summary of the economic analysis of water use” that contains “enough information in sufficient detail” in order to conduct calculations regarding cost recovery of water services including environmental and resource costs in accordance with the polluter pays principle. If it is too late to include this then a commitment for so doing and a plan of action and timeline for addressing this gap should be included in the Plan.
- Key to conducting either a cost effective analysis of a disproportionate cost assessment is a baseline valuation of the Irish aquatic resource, including non-quantifiable benefits. This work must be proposed in the Plans and should be initiated as soon as possible
- The Plans must relate the pricing policies (i.e. current and proposed domestic water charging) to the recovery of environmental and resource costs and demonstrate the impact that they have/ will have on the ecological status of waterbodies. SWAN acknowledges that this is a challenging exercise. At a minimum we propose that a timeline and commitment to a set of actions be set out in the Plans to complete this analysis

SWAN Proposals contd.

- Disproportionate Cost cannot be referenced in the Plans as a reason for an extended deadline without the accompanying transparent analysis. More detailed justifications must be provided
- The Plans must incorporate some assessment of environmental and resource costs into the process by which they applied time extensions. At a minimum they must include a statement regarding the need for such an assessment and a commitment and timeline for carrying it out

4.9 Classification of Water Bodies – ‘Defining’ Good Status

The Classification systems used to assess the current state of our water bodies is of an extremely interim nature and this has been acknowledged by the EPA. It does not include all the biological, physical and chemical quality parameters required by Annex V of the Directive and in addition, the status for a significant number of waterbodies is based on extrapolated data.

The classification is the absolute basis on which the Plans are founded; telling us what state are our waters are in at present and thus what action we need to take. SWAN therefore welcomes the commitment in the Plans to review the Programmes of Measures in 2011 when the results of the first monitoring cycle is reported on. We would further strengthen this by proposing an annual review of monitoring data to screen for waterbodies for which significant status changes are being found and an associated review if necessary of the programmes of measures for that water body.

SWAN Proposals:

- The Plans should set out clearly in table form for all waterbodies classified as less than good, or otherwise failing objectives, the quality elements (as listed in Annex V of the WFD) that:
 - were measured;
 - were not measured and the reason why and
 - were responsible for the failure
- As the classification methodology is refined opportunities for public input to this must be provided
- Public participation should also be facilitated regarding the Monitoring programme – by providing easy access to exact locations of sampling points and information regarding spacial and temporal frequency of monitoring
- A requirement should be written into the plan to review the classification annually based on increasingly accurate WFD monitoring data, and to amend the PoMs accordingly.
- The possibility of filling monitoring data gaps with a citizen-monitoring programme should be considered.

5. Key Vertical Water Management Issues

5.1. Agriculture

The Environmental Protection Agency estimates that agricultural sources accounts for 31% of water pollution incidences nationally. SWAN's rejects the proposal in the Plans that the Good Agricultural Practices for the Protection of Water Regulations (GAPP or 'Nitrates Regulations') alone will address this and deal with the impacts of intensive agriculture on aquatic ecosystems. It is SWAN's firm position that these regulations are not based on science, but on a negotiated position with the agriculture sector and Department of Agriculture Fisheries and Food. Indeed the draft Plans themselves acknowledged that "*it is not yet possible to measure their effectiveness*" (Interestingly, this has been removed from the final Plans). This approach will inevitably lead to a significant number of water bodies not meeting WFD targets, because their status either continues to deteriorate or does not reach Good Ecological Status by 2015³⁹.

Weaknesses in the GAPP Regulations are outlined below:

- Whilst the Regulations are designed to limit the impact of intensive agriculture on water bodies, the limits are not set at levels which would ensure significant reductions in eutrophication processes:
 - They allow for the application of fertiliser consistent with retention of soil P levels at Index 3, which is likely to lead to further nutrient enrichment of water bodies
 - Soil P index 3 allows for a considerable range of levels of Phosphorus - from 5.1 mg/l to 8.0 mg/l for grassland and 6.1 mg/l to 10.0 mg/l for other crops. The upper ends of these ranges are far beyond what is necessary for maximum production in most areas and much of it ends up being lost into lakes and rivers.
 - Thus, in order to improve protection of waters from agricultural nutrient enrichment, a soil P index of 2 should be specified (the range for this index is 3.1 mg/l to 5.0 mg/l for grassland and 3.1 mg/l to 6.0 mg/l for other crops).
- There is nothing in the Regulations to address the urgent need to reduce overall land spreading of slurry. This is especially significant in respect of slurry arising from livestock, especially pigs and dairy cattle, which contains high levels of nutrients that have been "imported" in artificial foodstuffs into the catchment.
- The restrictions on the spreading of slurry and chemical fertilisers at various distances from water bodies are too lax. To permit chemical fertiliser to be spread just 1.5 metres from a surface watercourse is ineffective. No spreading mechanism is able to operate within such tolerances and, secondly, it means that much of such fertiliser will leach through into the water.
- To allow slurry to be spread just 20 metres from a lakeshore is also ineffective. There is an immediate problem in many lakes since the "lakeshore" moves as water levels change. Thus, slurry spread on land 20 metres from the lakeshore when water levels are low, may be on land that is under water for much of

³⁹ Primarily due to eutrophication

the year. This aspect also has human health implications since it means that slurry can, in effect, be legitimately spread on land that will be inundated as part of a drinking water supply.

- New mechanisms for the disposal of slurry other than land spreading (especially when it includes “imported” nutrients) and a major reduction in the use of chemical fertilisers are required e.g. biodigester technology.
- The last point is seemingly addressed in the Regulations through the introduction of limits on application of fertilisers according to existing soil nutrient levels. However, Part 3 of the Regulations on “Nutrient Management” does not place a mandatory requirement on farms but rather leave a large loophole through which excessive nutrients can be applied. The wording requires only that farmers should “*take all such **reasonable steps** as are necessary for the purposes of preventing **or minimising** the application to land of fertilisers in excess of crop requirement*” (SWAN’s emphases).
- Probable failure to implement the Regulations and NAP effectively: The RBM Plans recognise that nearly one third of farms nationally are known to be failing to comply. Whilst SWAN welcomes the fact that selection for inspection will be based on risk-assessment criteria (although this should surely always have been the case), and resources for inspections have improved somewhat, the Plans do not indicate how this high level of non compliance will be addressed. The Plans state that a total of “*approximately 3,000 farms*” will be inspected annually. However, since it is recognised that over 30% of farms are known to be non-compliant, an inspection regime that covers only 2.3% of all farms is unlikely to have a major impact. There are around 128,000 farms in the state, of which about 39,000 are believed to be non-compliant. Inspecting 3,000 is likely to identify less than 1,000 as being non-compliant, leaving approximately 38,000 non-compliant farms uninspected in the first year.

Waiting for the results of the Teagasc mini-catchment studies to assess the efficacy of the GAPP Regulations in meeting WFD objectives, as the Plan proposes, entails an unacceptable delay, especially for high quality sites (Natura 2000 Protected Areas), which are particularly vulnerable and must have more stringent measures implemented immediately to prevent further deterioration⁴⁰ (See Sites of High Conservation Value section 4.4 above). An example is Lough Carra in the Western RBD, which is significantly degraded due to agricultural pressures; the GAPP Regulations are not going to halt this deterioration. (SWAN member group, The Carra Mask Corrib Water Protection Group has presented a detailed dossier of research to the Minister on this case).

In additions to the inadequacies of the GAPP Regulations, other agricultural pressures such as the use of sheep dip; animal access to water courses and agricultural drainage are not dealt with in the Plans. The use of Synthetic pyrethroids (Cypermethrin) as sheep dip can have significant negative impacts – especially in sites of high

⁴⁰ Preventing deterioration in the ecological status of the aquatic environment is a key requirement of the WFD

conservation status⁴¹. A review of current research should lead to the prohibition on synthetic pyrethroids as sheep dip in Ireland.

SWAN would support the proposal for the piloting of an environmentally friendly farming scheme in Karst areas and refers readers to the Burren Beo project. However, we would propose a wider application to all farms with water-dependent Natura 2000 sites, especially to address the loss of protection due to the discontinuation of the Rural Environmental Protection Scheme.

SWAN Proposals

- Supplementary measures in addition to the GAPP Regulations are needed urgently to address agricultural pressures for many sites of high conservation status, including N2000 sites.
- The GAPP Regulations must be fully reviewed, with ample time for public consultation. Soil P limits must be reviewed, in addition to land spreading of slurry and buffer zones. The loophole regarding application to land of fertilisers in excess of crop requirement must also be removed
- A statement of the limitations of the GAPP Regulations and a commitment to review them should be included in the Plan.
- Alternative disposal mechanisms for slurry (and municipal sludge) other than land spreading must be provided. biodigester technology. This should be proposed in the Plans
- The use of Synthetic pyrethroids (Cypermethrin) as sheep dip must be prohibited and the product permanently withdrawn from sale in Ireland as is the case in the UK since March 2010
- Measures to address the impact of animal access and wetland drainage also need to be included
- Environmentally friendly farming schemes should be initiated for all farms with water dependant Natura 2000 sites

5.2 Waste Water and Industrial Discharges

Wastewater Discharges

Despite significant investment and resulting increases in compliance 48 % of large wastewater treatment plants ($\leq 15,000$ p.e.) were still non compliant with the Urban Waste Water Directive in the 2006-2007 period. Much of the pressure from wastewater treatment plants has been as result of inappropriate development for which there was insufficient wastewater treatment capacity. In this regard this pressure is intrinsically linked to development-lead planning and the need for extremely tight integration of the River Basin Management Plans and the statutory land use planning system to address this. This is dealt with in Section 4.5.

⁴¹ Following research by the Environment Agency and an NGO campaign, the UK Government and manufacturers of Cypermethrin sheep dip announced the withdrawal in March 2010 of all relevant product permissions.

In terms of resourcing SWAN welcomes the risk-based prioritisation of the recent Water Services Investment Programme and also the fact that it was developed on an RBD basis, in line with the WFD. In addition, the Wastewater Discharge Authorisation Regulations are a significant step in addressing pollution from wastewater treatment plants.

It is unfortunate however that the emission limit values set in these Regulations and thus in the licenses under which waste water treatment plant are now operating were set before the Surface Water regulations set new WFD-led environmental standards. Thus they are already out of date. These now need to be reviewed as a matter of priority to bring them into line with Surface Water Regulations. Review of licensing for wastewater discharges to Protected Areas, in particular N2000 sites must be prioritised.

Industrial Discharges

Discharge to water and discharge to sewer licensing under the Water Pollution Act needs to be made more robust and consistent across Local Authorities. Issuing and enforcement of licences must move from a sometimes ad hoc approach to adhering strictly to the requirements of the Recommendation of the European Parliament and the Council for Minimum Criteria for Environmental Inspections in Member States (RMCEI.)

It has come to SWAN's attention that the issuing of discharge licenses does not occur in a standardised way and the conditions attached to the license, and levels of enforcement, vary widely between authorities. Inspection of the RCMEI-required Enforcement Enforcement Inspection Plans of a number of Local Authority show that many water discharge licensees are not allocated into the "Category A" bracket for the most regular inspections (3 times a year) This may need to be revised in light of WFD requirements.

All discharge licenses must now be reviewed with limits amended to take account of the Surface Water Regulations, which set the deadline for completing this at 2012. This must be initiated immediately. This is an ideal opportunity to review the entire water discharge licensing system. Guidelines should issue from DEHLG in this regard. (There was considerable confusion at the DEHLG Surface Water Regulations seminar for local authority staff on April 14 about the implications of the regulations for their licensing. There is need for a comprehensive training programme.

SWAN is concerned also that DEHLG indicated at that seminar that it was acceptable for Local Authorities to continue issuing discharge licenses even if water bodies are at less than good status. They were told that if they issued licenses as per correct current practise this was in order and in line with the WFD. SWAN disagrees. If a discharge contains a substance, which would contribute to deterioration on a quality parameter responsible for failure, this will surely cause further deterioration. Also, if a license hasn't been revised to bring it into line with the Surface water regulations, then simply enforcing the license as it stands does not comply with the Directive.

SWAN Proposals:

- A full review of all discharge licenses to assess compliance with Surface & Groundwater Regulations must begin without delay. Guidelines must be issued by DEHLG to guide this process
- Priority should be given to discharges to waters of less than good status or in Natura 2000 sites
- Priority should also be given during the review of Wastewater Discharge Authorisations to discharges to water bodies of less than good status or in Natura 2000 sites and other sensitive waters
- See Section 4.5 for recommendations regarding Integration with Planning

5.3 Waste Water from Unsewered Properties

SWAN welcomes the planned regulations to control onsite waste water systems. However, their effectiveness will be dependent on the stringency of the provisions in these. Pressures from systems associated with current housing, in addition to new houses must be addressed. In the case of proposed new building, where conditions (such as inadequate soil cover for filtration) are found not to support use of septic tanks, installation of an alternative treatment system must be required, or in some cases, planning permission for housing denied. Support measures for alternative systems such as subsidies on new tanks or treatment systems, or connection to municipal sewerage schemes where possible should be provided.

SWAN Proposals

- All future proposals for unsewered developments must be subject to rigorous independent appraisal (Best Practice Guidance/Part H Regulations). Water quality must be the over-riding consideration in all planning applications for development and where the potential for deterioration cannot be disproved beyond all doubt, planning permission must be refused (i.e. burden of proof must be on applicant)
- Comprehensive mandatory training, in support of the Department circular must be provided for planning staff in all Local Authorities to ensure they incorporate the EPA Code of Practice into planning decisions
- Provision for comprehensive public consultation on the proposed regulations to control on site wastewater treatment must be provided, including a lengthy consultation period. SWAN will respond to this in detail but some initial recommendations are outlined below:
 - Proprietary treatment systems must be mandatory in all permissions for new one-off housing where soil percolation / assimilative capacity is insufficient.
 - Bye-laws requiring certified annual de-sludging of septic tanks must be mandatory.
 - A modest grant/incentive scheme to support the obligatory replacement of demonstrably failing septic tanks must be initiated in Natura 2000 Protected Areas.

SWAN Proposals contd.

- Site assessment should independently be carried out by accredited professionals according to strict guidelines and commissioned by the planning authorities in the case of private developments in order to avoid undue pressure on companies doing site assessments.
- Comprehensive guidance must be issued to Planning sections with regard to compliance with WFD obligations when issuing permissions for houses off the sewer. This must be accompanied by training.

5.4 Forestry

The RBM Plans do not propose specific measures to address the impacts of Forestry – primarily nutrient enrichment; sedimentation and acidification – but instead refers primarily to a) the review of the 1946 Forestry Act; b) the Forestry and Water Quality Guidelines published in 2000.

The Forestry Act has been under review for more than 10 years by an internal departmental panel. The most recent opportunity for input was written consultation in 2006. The new Forestry Bill is due shortly but SWAN members have no confidence that this will address water quality problems surrounding current forest policy and forestry regulation. A parallel policy review is underway which does not address water quality or environmental performance of forestry in its terms of reference, nor is this issue to be covered in any of the meetings scheduled. SWAN is thus extremely concerned that neither the legislative nor policy reviews will address the significant contribution made by forestry practices to declines in water quality, yet the WFD Management Plans still appear to base expectation of legislative and regulatory reform in relation to forestry and water quality on these flawed processes. The ENGO sector has little confidence that either review will provide for improved practices toward water quality, undermining the potential to attain high water quality in many of the water bodies where forestry is significant contributing factor to poor water quality.

In relation to the Guidelines (the Forestry & Water Quality Guidelines, 2000), these are inadequate to address water pollution associated with Forestry. The main shortcomings in the Guidelines are as follows:

- The guidelines depend much on aquatic buffer zones to prevent nutrient enrichment and siltation of waterways from forest operations. However the guidelines do not give detail about the capacity or maintenance of buffer zones,
- Nor do they require that soil type or the naturally occurring nutrient levels in the stream or river, for example, be considered in the design of the buffer zones. This means that a forest consisting of a monoculture of acidifying tree species on a erodible soil by a very sensitive oligotrophic upland stream where salmon spawn will need only a 15 metre unplanted grassy strip along the stream to protect water quality in that stream, according to the guidelines.

- In addition in recent years there has been a general acceptance that Buffer zones are not effective means for protecting waterways from excessive nutrient loading and the high sediment levels associated with clear felling of plantations or disturbing forest management operations. Yet the management plans do not include any specific measures to address or rectify nutrient runoff or prevent sedimentation from destroying these aquatic habitats (other than in sub-catchments that are protected for the Freshwater Pearl Mussel under the Habitats Directive.)
- There are no specific measures in the draft plans to address the problem of sediment runoff from forestry felling operations in the upper reaches of many rivers, other than vague reference in the Guidelines to silt traps and their regular maintenance, even though no specification is given for what exactly comprises a silt trap or its 'regular' maintenance or how this must be properly carried out. A hay bale placed in the drain, for example, is a widely used, and ineffective, silt trap.
- Similarly, forest road building is often not sensitive to the surrounding environment leading to sedimentation in many cases. This problem is covered sparingly in the Guidelines. The most specific measure of the guidelines in relation to forest road building is as follows: *“roads should be located at least 50 metres from an aquatic zone, where possible. Road layout should aim to direct off road traffic away from streams. If there is no other option but to cross an aquatic zone, construct an appropriate bridge or culvert”*. The vagueness of this requirement provides an unacceptably low level of protection for aquatic systems. The impacts of culverting a stream can be devastating to aquatic life, in terms of benthic disturbance; 'smothering' of benthic habitats downstream with silt generated from in-stream construction; and from the ongoing presence of a culvert which many species will not traverse.

Measures proposed for the Freshwater Pearl Mussel (FPM), primarily the sub – basin catchment management plans for the sub-basins containing the FPM are to be welcomed and if implemented will do much to protect water quality in these catchments. However, this was only achieved by sustained pressure from ENGOs and the European Commission and is only applicable to a very small proportion of waterways. Similar measures are required for all Natura 2000 sub catchments.

SWAN also welcomes the proposed removal of the requirement to replant, allowing for change of land use from forestry to other sustainable uses.

SWAN Proposals

- The measures in the RBM Plan MUST list specific legislative measures required to protect water quality from damaging forest management operations, for incorporation into the provisions on the new Forestry Bill.
- Forest and Water Quality Guidelines need to be revised, using up to date research and best practice from Ireland and abroad to produce more specific and detailed guidance. This must include:

SWAN Proposals contd.

- A requirement for site assessments before planting and before major management operations to provide the required information on the sensitivity of the water body and its trophic status, soil characteristics, site history in relation to soil nutrient status, and drainage patterns and will provide the basis for appropriate planting, species choice, buffer zone treatment, and silt traps. (Currently the afforestation licensing system only requires a minimal site description, such as whether the soil is peat or mineral, and several categories of vegetation cover.)
- Detailed guidance on how to plan and manage forests to avoid silt generation and nutrient runoff and to ensure that forestry does not negatively affect water quality
- Targeted monitoring of water quality is an essential part of assessing compliance with guidelines and measuring progress towards set objectives. Monitoring of sediment loading at critical times, nutrient status of waterways and buffer zone soils, other water quality parameters, and river habitat quality are all practiced in the UK. Monitoring is not currently carried out here. Thus the percentage of upland stream that are impacted by nutrient and sediment inputs and the extent and duration of same, remains unknown, particularly on upland environmentally sensitive areas’.
- A review of licensing for afforestation, forest road building, and felling is needed, specifically in relation to screening for cumulative impacts on catchment basis of afforestation and forest management. A European Court ruling against Ireland on the EIA Directive, states that the cumulative effect of operations in the catchment must be considered, as individual impacts may be small but the combined impact may be significant. Assessment of and cumulative impacts must include drainage, siltation and fertiliser inputs, and be applied to applications for afforestation, forest roads, restructuring, and felling licences in a combined system.
- Measures similar to those in the FWPM plans should be applied to all N2000 sub catchments

5.5 Landfills Quarries Mines and Contaminated Land

It is well documented that leachate from landfills – licensed and illegal; and discharges from quarries - licensed and illegal pose a significant threat to ground and surface waters in Ireland. Many SWAN members have been reporting such sites for many years with inconsistent results due to authorities often being slow to act in a significant proportion of cases. Many illegal sites persist, despite their existence being highlighted by eNGOs and being well known to Local Authorities. Despite this, the RBM Plans do not propose a plan of action to address these persistence pressures but state vaguely that “*additional measures **may** be required in order to address issues caused by mines and contaminated sites*” [SWAN emphasis] This is even less treatment of the issue than the draft plans which made reference to site-specific remediation and investigative monitoring. According to the draft Plan more than 200

groundwater bodies nationally are deemed to be at risk from contaminated sites. Yet the current Plans do not propose actions to confirm that risk or, if necessary, to address it.

The 2007 Significant Water Management Issues Report stated that *'All Local Authorities must have completed a survey of all contaminated sites in their jurisdiction by the end of 2008 and must have plans developed and in place to address associated threats to water bodies by the end of 2009 to be incorporated into the River Basin Management Plans.'* It is most unsatisfactory that this did not happen. It is unclear whether these surveys and plans have not been carried out or have been omitted from the Plans.

No measure is proposed to address potential impacts from quarrying activities on water status. Threats include discharge of polluted waters, contaminated with suspended solids and chemicals and lowering of the water table at some quarry sites which can affect nearby wetland areas. There are a significant number of unregistered quarries, whose impacts are unknown and not officially regulated.

SWAN Proposals:

- The Plans must include an inventory of all quarries, landfills, mines and contaminated sites in each RBD, along with a management plan to address threats from each one. These must include measures to ensure compliance with current licenses and an action plan to deal with unlicensed operations. If this is not yet done then a requirement for it to be completed as soon as possible should be included in the Plans
- Retrospective licensing for existing unregistered quarries can only be permitted where outcomes of an assessment of impacts is satisfactory.
- Local Authorities and the EPA must take effective enforcement action where pollution events occur

5.6 Physical Modifications

A diverse range of physical modifications from the building of marinas and harbours to river channelization and damage to river morphology through overgrazing pose a threat to the ecology of our waters. As stated in the 2007 'Water Matters – Have Your Say' Significant Water Management Issues (SWMI) Consultation Document, it is clear that *"existing controls are limited in scope"*.

SWAN welcomed a proposed prior authorisation regime when it was proposed in the 2007 SWMI document and again in the draft Plan. We now note that this commitment has been weakened in the current Plans to *"new regulations may be introduced"* (SWAN's emphasis) and there is no reference to this in the Action Plan in Appendix 5. However the Executive Summary the Plan states that authorisation regulations for physical modifications are *'under preparation'*.

These regulations need to be brought forward as a matter of priority if deterioration of waterbodies due to such developments is to be prevented, as required by the Directive. Of course the efficacy of the regulations at achieving this will depend on their stringency. SWAN looks forward to responding to consultation on the regulations under preparation and seeks clarity on the timing of these.

SWAN Proposals

- The development of new regulations providing for the prior authorisation of physical modifications must be progressed as a matter of priority and a commitment to this included in the Plans
- There should be provision for public consultation on these regulations

5.7 Abstractions

Similar to physical modifications, SWAN is concerned that the final Plans are not as definite as the draft Plans in relation to a new system of prior authorisation of abstractions. The draft Plan stated that “a new system of prior authorisation for abstraction and impoundment activities will be introduced”. SWAN welcomed this in our response to the draft Plan but now notes that this commitment has been weakened in the current Plans to “*new regulations may be introduced*” (SWAN’s emphasis). Again there is an apparent contradiction due to the reference in the Executive Summary to a prior authorisation regime being ‘*under preparation*’. These regulations should be brought forward as soon as possible and a timeline for this included in the Plans.

Measures to reduce abstractive pressure at the outset must also be implemented, as required by the Directive⁴². Every effort should be made, and this should be prioritised within the Plan, to reduce the demand for water. Many of these actions – supporting and promoting rainwater harvesting; grey water use and other water conservation measures in the home - can engage individuals and groups within the community in actively working to conserve water at minimum cost.

SWAN supports the proposals to develop water conservation public awareness campaigns and to introduce water metering and domestic charging as measures to reduce water use.

⁴² Recital 23; Article 1; Article 9

SWAN Proposals

- A definite commitment to the development of new regulations providing for the prior authorisation of abstractions must be re-instated in the plans and this must be added as a concrete measure in the 'Action Plan' Appendix in each Plan.
- These must provide for an independent licensing authority (as opposed to Local Authorities).
- There must be adequate provision for public consultation on these regulations.
- "Measures to promote efficient and sustainable water use" as required by the Directive must also be introduced to reduce abstractive pressures, including the promotion and support of rain water harvesting and use of grey water in the home.

5.8. Peat Extraction

The Plans do not sufficiently highlight the impacts on water quality from discharges of effluents from peat extraction sites and neither do they propose any new measures to address these, proposing only enforcement of current licensing controls. As outlined in the 2008 Shannon International River Basin District 'Peatlands Report', high concentrations of peat silt in drainage discharge to surface waters can kill fish by clogging up gills and or making it impossible for the fish to feed. It can also clog up spawning gravels making spawning impossible and reduce primary productivity in rivers. U.V. radiation from sunlight on silt deposits, contained in the shallow waters of the rivers, causes the release of organically bound and bio available orthophosphate to the waters, which increases the amount of eutrophication in the water.⁴³

In UK uplands, water discoloration is a major issue since moorlands, [peatlands] particularly when degraded, tend to produce more discoloured water with higher concentrations of dissolved organic carbon⁴⁴. This is not only pressure in relation to meeting WFD targets but also one for raw water treatment because chlorination of highly coloured water releases trihalomethanes, which are potentially toxic and carcinogenic⁴⁵.

Peat extraction is largely unregulated and the 7-year planning exemption rule is used. No County Councils have records of peat extraction other than for a small number of Bórd na Mona sites, in their jurisdiction, yet large scale extraction is widespread and it unclear the degree to which silt lagoons are used in all these unlicensed sites, and thus the resulting sedimentation load from them. Many sites exceed the 50ha limit for IPCC licensing; yet SWAN's

⁴³ See <http://www.shannonrbd.com/pdf/peatlandsreportjul08.pdf>, at p.17.

⁴⁴ Driscoll et al., 2003

⁴⁵ Kneale and McDonald, 1999

experience is that the EPA is slow to take any action when informed of cases. In addition, Bord na Mona is exempt from prosecution for water pollution under the Turf Acts.

Whilst some of the assertions in the Peatlands Report are incorrect,⁴⁶ the Report makes a number of very good recommendations, which have not been implemented to date and which are omitted from the Plans. These include *inter alia*:

- Private peat producers (i.e. producers other than Bord na M6na) with excavation of peat in areas >50 hectares should be brought into the IPPC licensing system by the EPA
- Discharges from smaller private enterprises, in catchments with less than good water status, and with quantities of peat extraction less than the threshold currently required for IPPC licensing should be licensed under the Water Pollution Acts by the relevant Local Authority.⁴⁷

SWAN Proposals

- A legislative review is essential, especially of the Turf Acts
- Areas greater than 30ha must undertake an EIA as per the legislation. Private peat producers (i.e. producers other than Bord na M6na) with excavation of peat in areas >50 hectares should be brought into the IPPC licensing system by the EPA
- Discharges from smaller private enterprises, in catchments with less than good water status, or with an associated Natura 2000 sites, and with quantities of peat extraction less than the threshold currently required for IPPC licensing should be licensed under the Water Pollution Acts by the relevant Local Authority.'
- As a matter of urgency the scale of this problem must be addressed. Remote sensing can be used as a cost effective method of identifying the extent peat extraction (such as that currently being carried out by UCC to map all areas undergoing peat extraction) and a proactive approach must be taken to control emissions to water.
- The EPA, Local Authorities, Fisheries Boards, NPWS and NGOs must work together to identify areas of concern and ensure pollution is brought under control, including diffuse pollution.

⁴⁶ For example, at p.13 the report provides: "Conflicts between turf cutting and conservation arise only where peat excavation is occurring on sites that are of conservation or archaeological value (NHAs/SACs/RMs)." This is evidently not the case: conflicts between turf cutting and conservation arise everywhere that turf cutting takes place and can impact on protected areas many kilometres distant.

⁴⁷ See <http://www.shannonrbd.com/pdf/peatlandsreportjul08.pdf>, at p.33.

5.9 Invasive Alien Species

SWAN welcomes the proposal in the Plans to “*Introduce new regulations under the Wildlife Act to control introduction or possession of any species of flora or fauna which may be detrimental to native species*”. If further deterioration of water status is to be avoided, these regulations should be introduced at a matter of urgency. SWAN will make a detailed response to any consultation on these.

SWAN Proposals

- Regulations to control the import, sale and anthropogenic spread of invasive alien species must be brought forward as a matter of urgency.
- Lists of known invasive alien species must be included in Plans with a prioritised timeline for the development and delivery of a invasive alien control action plan for each species and clear identification of which agency/ies has responsibility for tackling invasive alien species, the resources available to do this, and their ability to command compliance from others in delivering this task.
- The agencies that have responsibility for tackling invasive alien species must be made clear and the authority of this agency/ies to compel cooperation and compliance from other state bodies must be ensured and adequate resources identified to support this work.
- The sale of all known invasive alien species, especially priority species already known to be causing serious deterioration should be banned immediately with emergency legislation

5.10 Cruising and Boating

There is insufficient focus in the Plans on identifying and regulating inappropriate recreational use of waters, especially in sensitive areas (such as power boats and jet skis that cause wash erosion, sediment movement and wildlife disturbance, and subsequent negative effects). Also the role of boat users in the transference of alien species must be addressed. The measure put forward in the Plans – to enforce pump-out control and speed restrictions at district level is to be welcomed.

SWAN Proposals

- In addition to enforcing pump out control, a full suite of measures should be developed in conjunction with Waterways Ireland and the EPA. This should include:
 - provision of sufficient pump out stations at adequate intervals along
 - a regime for maintaining these in working order and emptied regularly.
 - An awareness campaign for leisure boat owners
 - An effective inspection regime for commercial operators providing leisure cruisers for hire
- Prioritisation for speed restrictions should apply to sensitive ecological habitats and in particular Natura 2000 sites
- Prohibition of certain water craft should be implemented on sensitive waterways e.g. jet skis
- An awareness campaign for other recreational users e.g. canoeists and swimmers, with regard to minimising impacts could be delivered in cooperation with representative sporting bodies

5.11 Dangerous Substances

SWAN welcomes the review of all industrial and wastewater permits to bring them in line with the Surface Water Regulations and the revised limits for certain dangerous substances which this will involve. This will not however address many sources of pollution from a wide variety of non-licensed sources. An information campaign is required to prevent inappropriate dumping of many dangerous household chemicals down drains. Diffuse sources of dangerous substances such as gardening and agricultural chemicals and leakage of fuel oils and run off from roads and urban areas also needs to be addressed.

SWAN Proposals

- Prioritise the review of discharge licenses for discharges
 - a) with most dangerous substances;
 - b) to designated high conservation status sites
- Conduct a public awareness campaign on the use and disposal of a range of household chemicals: oils, detergents, paints, solvents etc.
- Tighter measures to control pollution from dangerous substances used in gardening, sports grounds, aquaculture and agriculture should be included

APPENDICES

Appendix I

SWAN Partner Groups

SWAN National Groups		SWAN Regional & Local Groups	
1.	An Taisce	16.	Carra Mask Corrib Water Protection Group
2.	Bat Conservation Ireland		
3.	Birdwatch Ireland	17.	Cavan Leitrim Environmental Awareness Network
4.	Coastwatch Europe Network		
5.	Coomhola Salmon Trust Ltd.	18.	Cork Environmental Forum
6.	Eco-UNESCO	19.	Longford Environmental Alliance
7.	Friends of the Earth	20.	Macroom District Environmental Group
8.	Friends of the Irish Environment		
9.	Irish Doctor's Environmental Association	21.	Save Our Lough Derg
10.	Irish Peatland Conservation Council	22.	Save Our Lough Ree
11.	Irish Seal Sanctuary	23.	Save The Swilly
12.	Irish Water and Fish Preservation Society	24.	Shannon Whale & Dolphin Foundation
13.	Irish Whale and Dolphin Group		
14.	Irish Wildlife Trust		
15.	Voice Of Irish Concern for the Environment (VOICE)		

Appendix II

SWAN Board of Directors

SWAN Board of Directors:	
Mark Boyden, Chair	Coomhola Salmon Trust
Eamonn Moore, Vice Chair	An Taisce
David Lee, Director	Cork Environmental Forum
John Mulcahy, Director	Save the Swilly
Joachim Schaefer, Director	Cavan Leitrim Environmental Awareness Network

Appendix III

Extract from Common Implementation Strategy for the Water Framework Directive (2000/60/EC), Guidance Document No. 20, Guidance Document on Exemptions to the Environmental Objectives

“An integral part of the environmental objectives set out in Article 4 are the so-called exemptions. Article 4.4, 4.5, 4.6 and 4.7 describe the conditions and the process in which they can be applied. These exemptions range from small-scale temporary exemptions to mid and long term deviations from the rule “good status by 2015”, and include the following aspects:

- **the extension of the deadline** , in other words, good status must be achieved by 2021 or 2027 at the latest (Article 4.4) or as soon as natural conditions permit after 2027;
- the achievement of **less stringent objectives** under certain conditions (Article 4.5);
- the **temporary deterioration** of the status in case of natural causes or “force majeure” (Article 4.6);
- **new modifications** to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or failure to prevent status deterioration of a body of surface water (including from high status to good status) as a result of new sustainable human development activities (Article 4.7).

Common to all these exemptions are strict conditions to be met and a justification to be included in the River Basin Management Plan.

Comparing the criteria for applying the various exemptions (or “exemption tests”), there are some similarities between them. Thus, it should be discussed how and when to apply particular exemptions and whether there is a certain sequence or hierarchy when applying them together (see chapter 3 for more details).

Finally, paragraphs 8 and 9 of Article 4 introduce two principles applicable to all exemptions,

- *first, exemptions for one water body must not permanently exclude or compromise achievement of the environmental objectives in other water bodies*
- *second, at least the same level of protection must be achieved as provided for by existing Community law (including those elements to be repealed).*

2.2 Scope of article 4.4 and 4.5

Under certain conditions, the WFD permits the assignment of a less stringent objective or the extension of the timescales for achieving a particular objective:

Art 4.4

The deadlines established under paragraph 1 may be extended for the purposes of phased achievement of the objectives for bodies of water, provided that no further deterioration occurs in the status of the affected body of water when all of the following conditions are met:

(a) Member States determine that all necessary improvements in the status of bodies of water cannot reasonably be achieved within the timescales set out in that paragraph for at least one of the following reasons:

(i) the scale of improvements required can only be achieved in phases exceeding the timescale, for reasons of technical feasibility;

(ii) completing the improvements within the timescale would be disproportionately expensive;

(iii) natural conditions do not allow timely improvement in the status of the body of water.

(b) Extension of the deadline, and the reasons for it, are specifically set out and explained in the river basin management plan required under Article 13.

(c) Extensions shall be limited to a maximum of two further updates of the river basin management plan except in cases where the natural conditions are such that the objectives cannot be achieved within this period.

(d) A summary of the measures required under Article 11 which are envisaged as necessary to bring the bodies of water progressively to the required status by the extended deadline, the reasons for any significant delay in making these measures operational, and the expected timetable for their implementation are set out in the river basin management plan. A review of the implementation of these measures and a summary of any additional measures shall be included in updates of the river basin management plan.

Art 4.5

Member States may aim to achieve less stringent environmental objectives than those required under paragraph 1 for specific bodies of water when they are so affected by human activity, as determined in accordance with Article 5(1), or their natural condition is such that the achievement of these objectives would be infeasible or disproportionately expensive, and all the following conditions are met:

- (a) the environmental and socio-economic needs served by such human activity cannot be achieved by other means, which are a significantly better environmental option not entailing disproportionate costs;
- (b) Member States ensure,
 - for surface water, the highest ecological and chemical status possible is achieved, given impacts that could not reasonably have been avoided due to the nature of the human activity or pollution,
 - for groundwater, the least possible changes to good groundwater status, given impacts that could not reasonably have been avoided due to the nature of the human activity or pollution;
- (c) no further deterioration occurs in the status of the affected body of water;
- (d) the establishment of less stringent environmental objectives, and the reasons for it, are specifically mentioned in the river basin management plan required under Article 13 and those objectives are reviewed every six years.

2.3 Scope of article 4.6

Article 4.6 differs from articles 4.4 and 4.5 in that it relates to events which "could not reasonably have been foreseen".

Art 4.6.

Temporary deterioration in the status of bodies of water shall not be in breach of the requirements of this Directive if this is the result of circumstances of natural cause or force majeure which are exceptional or could not reasonably have been foreseen, in particular extreme floods and prolonged droughts, or the result of circumstances due to accidents which could not reasonably have been foreseen, when all of the following conditions have been met:

- (a) all practicable steps are taken to prevent further deterioration in status and in order not to compromise the achievement of the objectives of this Directive in other bodies of water not affected by those circumstances;
- (b) the conditions under which circumstances that are exceptional or that could not reasonably have been foreseen may be declared, including the adoption of the appropriate indicators, are stated in the river basin management plan;
- (c) the measures to be taken under such exceptional circumstances are included in the programme of measures and will not compromise the recovery of the quality of the body of water once the circumstances are over;
- (d) the effects of the circumstances that are exceptional or that could not reasonably have been foreseen are reviewed annually and, subject to the reasons set out in paragraph 4 (a), all practicable measures are taken with the aim of restoring the body of water to its status prior to the effects of those circumstances as soon as reasonably practicable, and
- (e) a summary of the effects of the circumstances and of such measures taken or to be taken in accordance with paragraphs (a) and (d) are included in the next update of the river basin management plan.

Hence it is not used for setting alternative objectives during the improvement planning process - rather it is used after the event, as a "defence" to justify why an objective which was set in a river basin management plan has not been met. This justification must be provided in the following (update of the) river basin management plan. Details are discussed in section 3.4.

2.4 Scope of article 4.7

Article 4.7 sets out circumstances in which failure to achieve certain of the WFD objectives are permitted.

Art 4.7.

Member States will not be in breach of this Directive when:

- failure to achieve good groundwater status, good ecological status or, where relevant, good ecological potential or to prevent deterioration in the status of a body of surface water or groundwater is the result of new modifications to the physical characteristics of a surface water body or alterations to the level of bodies of groundwater, or
- failure to prevent deterioration from high status to good status of a body of surface water is the result of new sustainable human development activities and all the following conditions are met:

- (a) all practicable steps are taken to mitigate the adverse impact on the status of the body of water;
- (b) the reasons for those modifications or alterations are specifically set out and explained in the river basin management plan required under Article 13 and the objectives are reviewed every six years;
- (c) the reasons for those modifications or alterations are of overriding public interest and/or the benefits to the environment and to society of achieving the objectives set out in paragraph 1 are outweighed by the benefits of the new modifications or alterations to human health, to the maintenance of human safety or to sustainable development, and

(d) the beneficial objectives served by those modifications or alterations of the water body cannot for reasons of technical feasibility or disproportionate cost be achieved by other means, which are a significantly better environmental option.

Note that Article 4.7 does not provide an exemption if deterioration caused by inputs of pollutants from point or diffuse sources drives the water body to a status below good.

If the resulting development is not causing a deterioration of status on the water body scale, art. 4.7 does not have to be used (for example if replacing one activity by another). “

Appendix IV

Extract from SWAN submission on the Draft RBD Plans outlining the process by which SWAN submission to the Draft RBM plans was developed

Between May 5th and June 3rd 2009, SWAN hosted a series of facilitated focus meetings, two in each River Basin District, for members of all SWAN affiliate groups, as well as any other environmental non-governmental organisations. (See Appendix 4 for details) At each meeting an outline of the background implementation of the Water Framework Directive was presented, and the format and content of the River Basin District Draft Plan was reviewed. Issues of concern raised at the SWAN RBD meetings on the consultation on Significant Water Management Issues (2007) were reviewed, and how these are addressed in the Draft Plan was considered. The meeting also examined the <http://watermaps.wfdireland.ie> website to obtain supplementary information on individual water bodies.

A summary of the feedback generated at each meeting was circulated afterwards to all participants and additional comments on foot of this were incorporated into an overall summary document. The outputs from these meetings form the core of this submission, along with inputs in particular areas of expertise from SWAN's core members, Board and Advisory Council representatives.

Appendix V

SWAN 'Water Matters' Focus Meetings on Draft River Basin Management Plans, May – June 2009

DATE	RBD	TOWN & VENUE	TIME
MAY:			
Tuesday 5th	South Eastern	Carlow The Seven Oaks hotel, Athy Road, Carlow	7.00 p.m.
Wednesday 6th	South Eastern	Wexford Wexford County Council, Chambers Hall, Wexford Town	1.00 p.m.
Monday 11th	North Western	Buncrana Inishowen Gateway hotel, Buncrana Inishowen, Donegal	7.00 p.m.
Tuesday 12th	North Western	Ballyshannon Dorrian's Imperial Hotel, Main Street, Ballyshannon	8.00 p.m.
Wednesday 13th	Western	Castlebar Days Hotel, Lannagh Road, Castlebar, Co. Mayo	8.00 p.m.
Thursday 14th	Western	Galway Galway Bay hotel, the Promenade, Salthill, Co. Galway	8.00 p.m.
Monday 18th	Shannon	Athlone Coosan Cottage, Eco guest house, Coosan point road, Athlone, Co. Westmeath	8.00 p.m.
Monday 25th	South Western	Killarney Malton Hotel, Town Centre, Killarney, Co. Kerry	8.00 p.m.
Tuesday 26th	South Western	Cork The Gresham Metropole Hotel, MacCurtain Street, Cork	7.00 p.m.
Wednesday 27th	Eastern	Wicklow Grand hotel, Wicklow town	8.00 p.m.
Thursday 28th	Eastern	Dublin Central Hotel, Exchequer Street, Dublin 2	7.00 p.m.
JUNE:			
Tuesday 2nd	Shannon	Carrick on Shannon Bush Hotel	8.00 p.m.
Wednesday 3rd	Neagh Bann	Monaghan Ballybay Wetlands centre	7.00 p.m.

Appendix VI

SWAN Nominee Selection Meetings to select Environmental Representatives on the Advisory Councils, January – February 2010

DATE	RBD	TOWN & VENUE	TIME
JANUARY:			
Tuesday 19th	South Western	Cork City Gresham Metropole hotel, MacCurtain Street, Cork	7.00 p.m.
Thursday 21st	South Eastern	Wexford Ferrycarrig Hotel, Wexford	8.00 p.m.
Monday 25th	Eastern	Dublin City Central Hotel, Exchequer Street, Dublin 2	7.00 p.m.
Tuesday 26th	Shannon	Athlone Shamrock Lodge Hotel, Clonown Road, Athlone, Co. Westmeath	7.00 p.m.
Wednesday 27th	Western	Galway Galway Bay Hotel, The Promenade, Salthill, Co. Galway	8.00 p.m.
FEBRUARY:			
Tuesday 2nd	North Western	Letterkenny Clanree Hotel, Derry Road, Letterkenny, Co. Donegal	7.00 p.m.
Wednesday 3rd	Neagh Bann	Monaghan Ballybay Wetlands centre, Co. Monaghan	7.00 p.m.