Eastern River Basin District

River Basin Management Plan 2009 – 2015

Executive Summary: South Dublin

eastern
river basin district


Eastern River Basin District Boundary
North Western RBD
Neagh Bann RBD
Shannon RBD
South Eastern RBD
Cavan
Monaghan
Louth
Meath
Westmeath
Fingal
Dublin City
South Dublin
Dun Laoghaire Rathdown
Wicklow
Kildare
Offaly
Laois
Carlow
Wexford
Ballieborough
Virginia
Kells
Navan
Trim
Mullingar
Kinnegad
Edenderry
Dunshaughlin
Drogheda
Dunleer
Swords
Blanchardstown
Leixlip
Celbridge
Dublin
Tallaght
Dun Laoghaire
Bray
Naas
Newbridge
Blessington
Wicklow
Arklow
0 5 10 20 30
km
Town
Main Rivers
Lakes
Eastern River Basin District Boundary
Other River Basin District Boundary
County Boundary

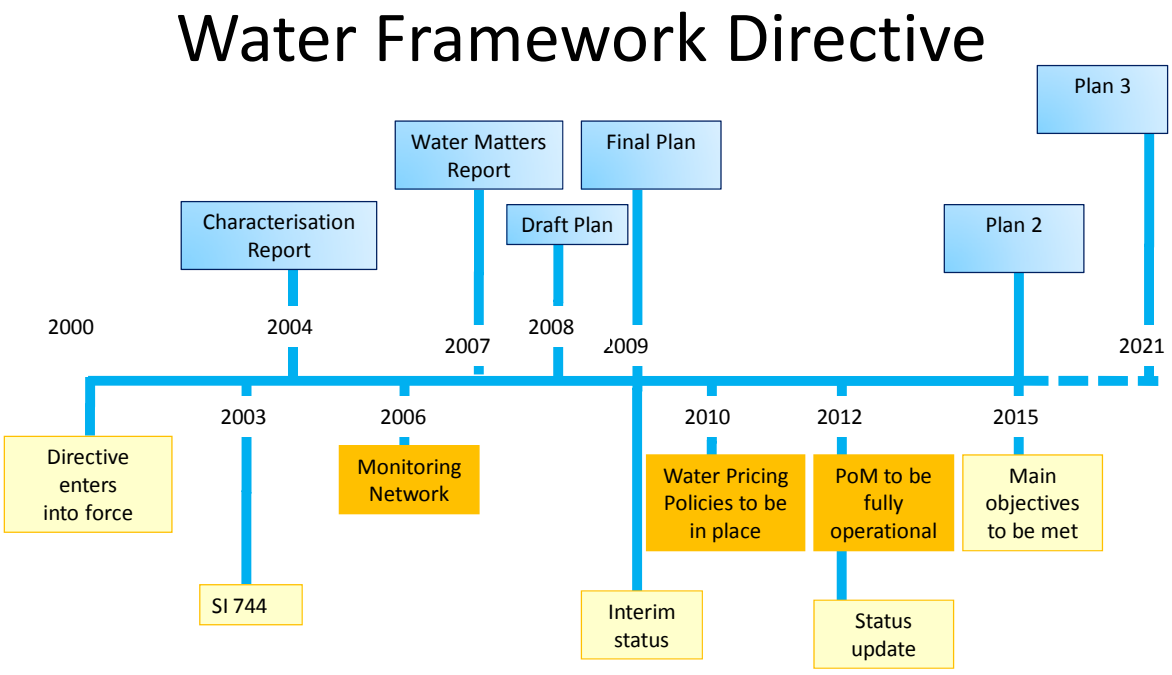
Introduction

The EU Water Framework Directive is perhaps the most forward looking piece of water legislation in the world. It takes a comprehensive catchment based approach to water management and, for the first time, gives us the opportunity to work together to overcome the problems experienced in our natural waters. It fosters cooperative working between local authorities and various stakeholders and is designed to overcome a "single issue" approach by recognising that all of society benefits and impacts our waters.

The Directive is being implemented across Europe and commits all member states to preventing deterioration and achieving at least good status in our rivers, lakes, estuaries, coastal and ground waters by the year 2015.

The island of Ireland has been divided into eight river basin districts and a River Basin Management Plan (the "Plan") has been developed for each. The Plan is the latest in a series of documents implementing the Directive in Ireland meeting deadlines identified in the Directive.

The Water Framework Directive was enacted in Ireland through the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003) which have since been amended in 2005 and 2008. The legislation identifies the EPA as the competent authority for coordination and reporting nationally, the relevant local authorities, acting jointly, for the Plan and Programme of Measures. Dublin City Council is the coordinating and contracting authority for the Eastern River Basin District.



The Draft River Basin Management Plan for the Eastern River Basin District (the Eastern District) was issued in December 2008 for a 6 month period of public consultation. The submissions received on the draft Plan have been reviewed and incorporated in the Final Plan. This Plan describes the actions that are proposed to ensure the necessary protection of our waters over the coming years. It sets out how the aims and objectives of improving and protecting water quality and ecology in the waters of each river basin district could be achieved, by means of a Programme of Measures.

Table 1: Timetable of Directive Implementation

Deadline (December)	Action Required
2000	Directive entered into force.
2003	Directive transposed into national law; international River Basin Districts and River Basin Districts identified; competent authorities identified.
2004	Characterisation of surface and groundwaters completed; impacts of human activity (industry, farming etc) identified; economic analysis of water use completed; location and boundaries of water bodies identified; reference conditions for water status defined; register of protected areas established.
2006	Environmental monitoring established and operational to ensure comprehensive view of water quality in each River Basin District; work programme for production of River Basin Management Plans for each River Basin District to be published.
2007	Interim overview of the significant water management issues for each River Basin District published.
2008	Draft River Basin Management Plans to be published for consultation; draft programmes of measures established in each RBD; draft Strategic Environmental Assessment and Appropriate Assessment (under the Habitats Directive) published for consultation
2009	River Basin Management Plans finalised and published; programmes of measures established in each RBD to meet environmental objectives.
2010	Water pricing policies to be in place.
2012	Programmes of measures to be fully operational; interim progress reports to be prepared on implementation of planned programmes of measures.
2015	Main environmental objectives to be met; River Basin Management Plans to be reviewed and updated every six years thereafter.

The Plan has been produced jointly by the local authorities and the project team. There are twelve local authorities with lands in the Eastern District and these will be the prime implementing agencies for the Plan, although actions will also require the involvement of other state and private organisations. Coordination of these efforts is being developed through an Eastern River Basin District Technical Council which includes all of the local authorities along with agencies responsible for implementing relevant legislation.

Public participation has been a major component of the work leading up to the development of the Plan. Many public meetings have been held at various stages of the process and presentations have been given to the Councils, SPCs and local area committees. The Eastern River Basin District Advisory Council has been involved in the process for several years and has provided valuable contributions to the development of the Plan.

In 2015 a second Plan will be prepared, learning from our experience and successes up to that point. This second Plan will include the development of a new Programme of Measures to manage the waters up until 2021, when a third Plan will be developed.

General Description of the Eastern River Basin District

The Eastern District is home to rich agricultural land, holiday coastline, the city of Dublin and the towns which form the Greater Dublin Area and its commuter belt. With land area of around 6,300 km^2, it covers about one tenth of the entire country and has 350 km^2 of marine waters. 8% of the land area in the basin is urban, 75% agricultural and the remainder natural.

Around 1.6 million people, 40% of Ireland's population, live in the Eastern River Basin District. The distribution of people and their activities varies from rural agricultural communities to the city of Dublin and its commuter belts. Dublin and Greater Dublin are home to 90% of the Eastern River Basin District's population.

The Eastern District incorporates all or part of twelve local authority areas: Dublin City, Meath, Kildare, Wicklow, Cavan, Dun Laoghaire-Rathdown, Fingal, Offaly, South Dublin, Westmeath and small portions of Wexford and Louth.

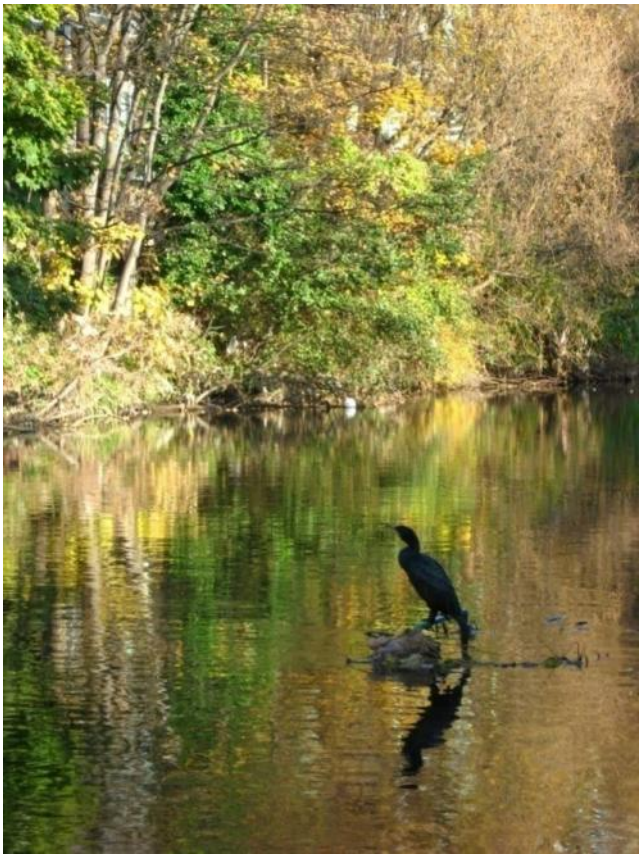
Water Type	Number of Water Bodies
Rivers	356
Lakes and Reservoirs	28
Estuary	13
Coastal	8
Groundwater	75
Artificial Water Bodies	8
Total	488

How Healthy are Our Waters?

In 2004 a report was prepared which provided the first ever comprehensive analysis of data and information in the Eastern District. It was based on the limited available data and on a wide range of risk assessments which evaluated the problems that could be expected based on a variety of factors including known discharges and land use. In 2006 an assessment of the major pressures affecting the waters of the Eastern District was published in the draft Water Matters report for consultation. A network of monitoring sites for the Directive was identified by the EPA in 2006, covering rivers, lakes, coastal waters and estuaries as well as groundwater; this data was used by the EPA to assess the present status of all waters.

The Plan presents the water status using new systems and monitoring information for the first time. It is based on two years of data and is still considered as "interim" by the EPA. We expect changes to water body status as the monitoring data and the scientific tools used to interpret them develop. Over time, we can build a picture of changes in our waters, improvement as a result of actions, or decline due to new problems.

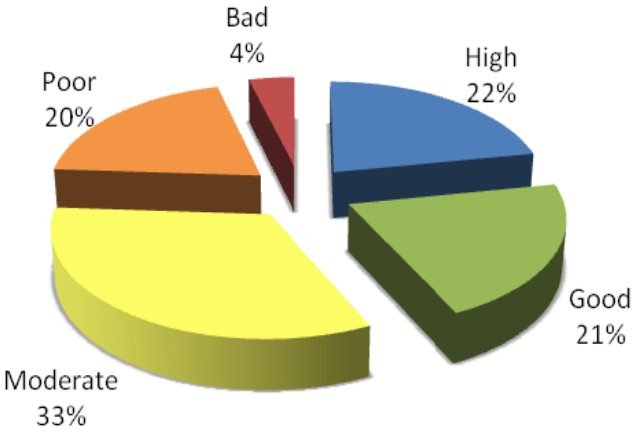
In the past, we have considered water quality predominantly by looking at water quality. The Directive requires a more comprehensive view, including biology, morphology (physical condition) and hydrology (quantity of water).



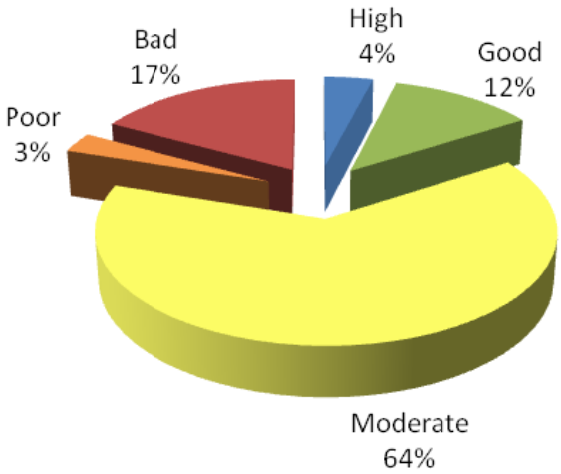
Current Water Status

The Directive requires that all waters achieve high or good status by 2015, with extended time or lesser objectives granted under certain circumstances.

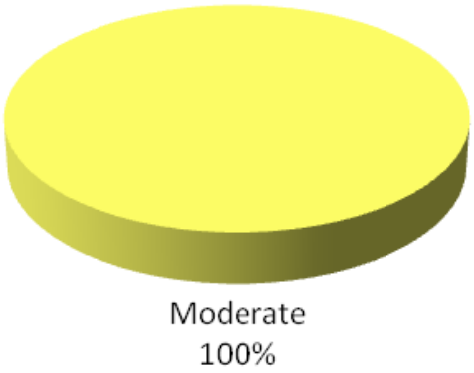
The current ecological status of our waters has been determined by the EPA and can be seen in the pie charts:



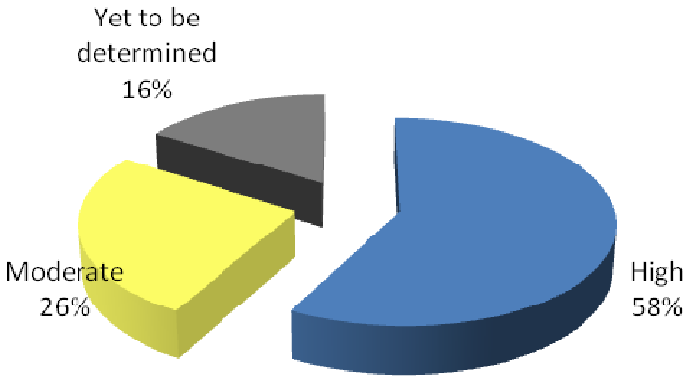
Ecological Status of Rivers
(as a % of number of river water bodies)



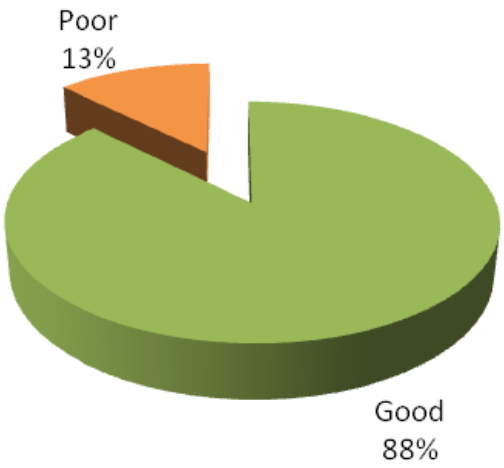
Ecological Status of Lakes and Reservoirs
(as a % of total area)



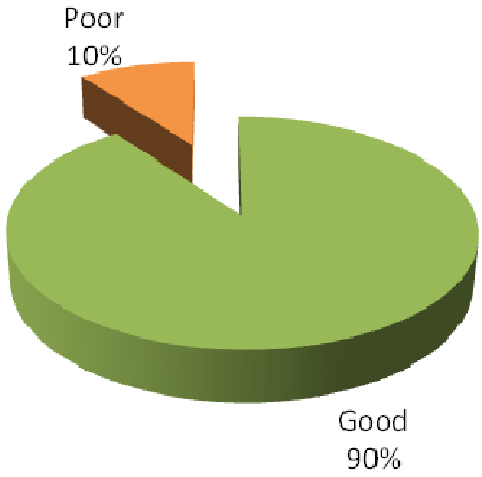
Ecological Status of Transitional Water Bodies
(as a % of total area)



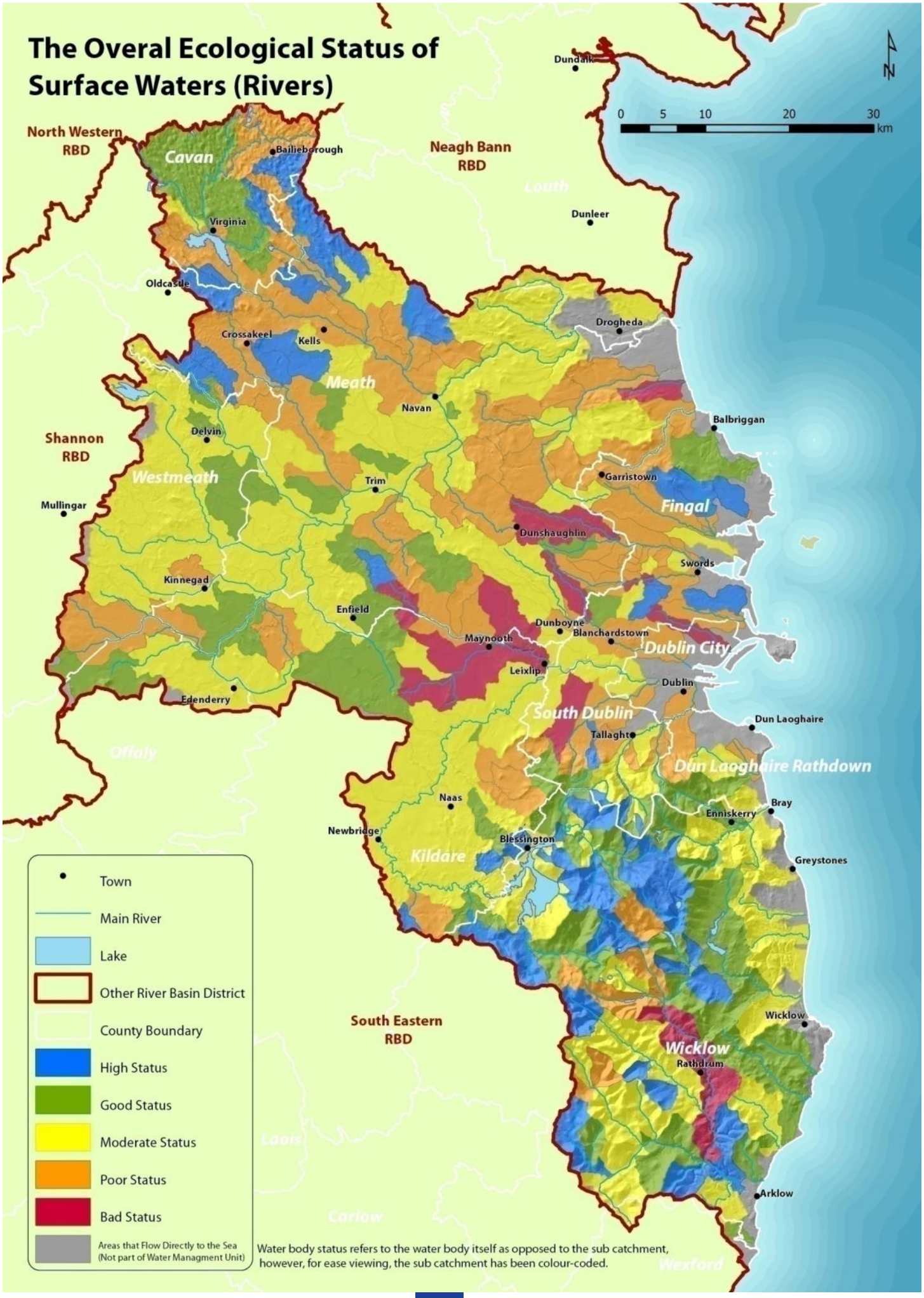
Ecological Status of Coastal Water Bodies
(as a % of total area)



Ecological Status of Artificial Water Bodies
(as a % of number of river water bodies)



Ecological Status of Groundwater Bodies
(as a % of total area)


The Overal Ecological Status of Surface Waters (Rivers)
Dundalk
N
0 5 10 20 30 km
North Western RBD
Cavan
Bailieborough
Neagh Bann RBD
Louth
Dunleer
Virginia
Oldcastle
Drogheda
Crossakeel
Kells
Meath
Navan
Balbriggan
Shannon RBD
Delvin
Westmeath
Trim
Garristown
Fingal
Mullingar
Dunshaughlin
Swords
Kinnegad
Enfield
Dunboyne
Blanchardstown
Maynooth
Dublin City
Leixlip
Dublin
Edenderry
South Dublin
Dun Laoghaire
Tallaght
Offaly
Dun Laoghaire Rathdown
Naas
Bray
Enniskerry
Newbridge
Blessington
Kildare
Greystones
South Eastern RBD
Wicklow
Wicklow
Rathdrum
Laois
Arklow
Carlow
Wexford
Town
Main River
Lake
Other River Basin District
County Boundary
High Status
Good Status
Moderate Status
Poor Status
Bad Status
Areas that Flow Directly to the Sea (Not part of Water Managment Unit)
Water body status refers to the water body itself as opposed to the sub catchment, however, for ease viewing, the sub catchment has been colour-coded.

What are the Problems?

In many waters there are several different pressures, which affect the quality of the water and the diversity of the ecology and so the measures (or actions) necessary to improve the situation have to address all of these pressures. This catchment-based process is an important advance in water management as it overrides the historical approach of single issues dominating the process. Rather than the various individuals and organisations who contribute to the problems pointing the blame elsewhere, this approach highlights all issues and encourages cooperation between all stakeholders in the catchment.

The Water Matters report published in 2007 provided an analysis of the main pressures and identified eight with widespread impacts, in addition to specific local problems that exist from place to place:

- **Wastewater and industrial discharges;**
- **Landfills, quarries, mines and contaminated lands;**
- **Agriculture;**
- **Wastewater and unsewered properties;**
- **Forestry;**
- **Usage and discharge of dangerous substances;**
- **Physical modifications; and**
- **Abstractions.**

The activities listed above all cause pressures on surface and ground waters, to different degrees from place to place and in different combinations. These pressures affect the water quality, the habitats, and the ecology which the waters sustain.

The impacts can be direct, such as physical changes to the water body or over abstraction, which can impact on natural habitats; or indirect, such as increased sediment run off which reduces light and causes oxygen deficiencies. In order to improve conditions and achieve good status, all of the pressures will have to be addressed to a degree where no single pressure, or any combination of pressures, remains a problem.

Protected Areas in the Eastern River Basin District

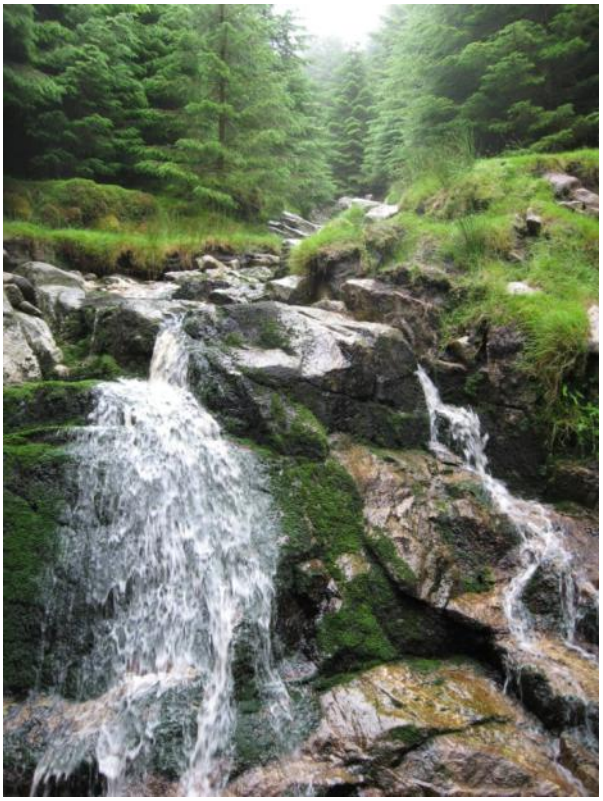
Within the Eastern District, there are many areas that have a special status for environmental reasons. Many of these areas are designated at European level (for example Special Protection Areas under the Birds Directive, Special Areas of Conservation under the Habitats Directive, Shellfish Waters, Bathing Waters). There are also nationally designated areas such as the Natural Heritage Areas.

The protected areas in the Eastern River Basin District are shown in the Plan and comprise:

- 16 Special Protection Areas (SPAs);
- 33 candidate Special Areas of Conservation (cSACs);
- 99 Natural Heritage Areas (NHAs) (9 designated as NHAs and 90 Proposed NHAs);
- 4 Nutrient sensitive waters;
- 3 Salmonid rivers;
- 2 Shellfish areas.
- 21 Bathing waters; and
- 104 Protected drinking water areas.

These protected areas are granted special status and their protection is mandatory under European and/or Irish law; the legislation to protect them forms an integral part of this River Basin Management Plan.

What are the Objectives?



As with all Plans, objectives need to be set to enable us to monitor progress and to determine success. The Plan sets out the objectives for our waters and proposes the actions that are needed to achieve these objectives while promoting sustainable use of our waters.

Waters must have sufficient quantity and be of satisfactory quality to protect the aquatic environment and beneficial uses. Many of our surface waters already have a healthy ecology and the first challenge is to take action to preserve these waters. Similarly, many of our groundwaters have satisfactory quality and sustainable levels and these too must be protected.

Both surface waters and groundwaters that support protected areas (e.g. bathing and shellfish waters, nutrient sensitive areas, protected habitats and species) must enable these protected areas to achieve their stricter status standards. These objectives are, in general, to be achieved by target date of 2015.

Water quality objectives have been established for each water body, taking account of how the waters should naturally be, whether they have a special status (such as Special Protection Areas) and whether they have been physically changed in some way which cannot realistically be reversed.

The objective of 'prevent deterioration' applies to all waters and it is, therefore, possible for a water body to have the dual objectives of 'prevent deterioration' and to 'improve to achieve at least good status'.

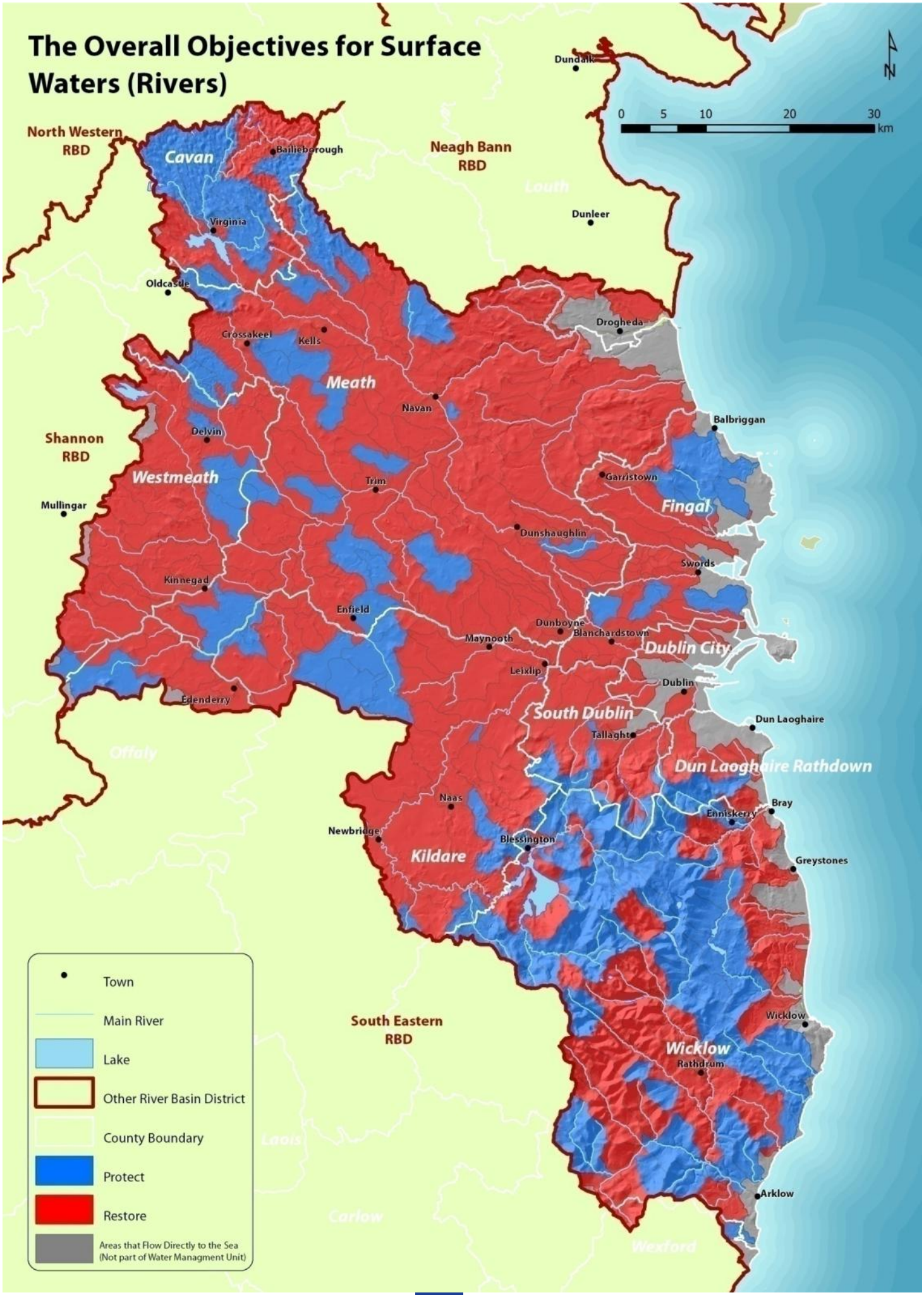
Surface Waters

For high status water bodies there is a clear objective of maintaining their status; in the Eastern District, 77 river water bodies (out of 356), 4 of our 26 lakes and 3 of our coastal water bodies are of high status.

Waters of good status have an objective of non-deterioration, although some will improve to high status. Some 19 of our lakes and 76 of our rivers currently achieve good status.

The majority of waters are of less than good status and a minimum objective of achieving good status has been set for many of these water bodies. The map shows the river water bodies that will be restored to good status and those that must protected from deterioration.

This first Plan will deliver widespread improvements by 2015 by addressing the major pressures affecting our waters. Subsequent Plans will be more focused and will be based on more data and a better understanding of the benefits of the various measures; these later planning cycles should include the improvement of more waters to high status.


The Overall Objectives for Surface Waters (Rivers)
North Western RBD
Neagh Bann RBD
Shannon RBD
South Eastern RBD
Cavan
Meath
Westmeath
Fingal
Dublin City
South Dublin
Dun Laoghaire Rathdown
Kildare
Wicklow
Louth
Offaly
Laois
Carlow
Wexford
Dundalk
Bailieborough
Virginia
Oldcastle
Crossakeel
Kells
Navan
Delvin
Trim
Mullingar
Kinnegad
Enfield
Edenderry
Maynooth
Leixlip
Dunboyne
Blanchardstown
Dublin
Tallaght
Naas
Newbridge
Blessington
Dunleer
Drogheda
Balbriggan
Garristown
Dunshaughlin
Swords
Dun Laoghaire
Bray
Enniskerry
Greystones
Wicklow
Rathdrum
Arklow
0 5 10 20 30 km
Town
Main River
Lake
Other River Basin District
County Boundary
Protect
Restore
Areas that Flow Directly to the Sea (Not part of Water Managment Unit)

Groundwater

Groundwaters are classified as either good or poor status. Only 10% of the groundwater bodies in the Eastern District are classified as poor status. Our objectives are to:

- Achieve good status in those groundwater bodies which are presently classified as being at poor status; and
- Protect those groundwater bodies that are currently at good status (i.e. maintain their good status).

The Wicklow Central (Avoca) groundwater body represents a special case and is the only water body in the Eastern District where it is thought that good status cannot be achieved within the timeframes stipulated in the WFD. Treating the point source discharges to the river from the mine has been proven to be viable, but dealing with the pollutants moving through the natural fissures in the rocks and through the spoil is very much more difficult. A detailed investigative study has been recommended to further investigate the technical viability of restoration and the costs and benefits of such actions.

Types of Measures

The protection and improvements to our waters will require specific measures. The collection of necessary measures required for each water body is termed the Programme of Measures and these are to be implemented in a coordinated way in each catchment to provide comprehensive protection.

Measures can be covered by existing law or additional actions deemed necessary at a particular site. The Plan refers to them as key priority and supporting actions respectively.

The programmes of measures will require close integration with other plans and programmes; up to 300 have been identified in the Plan. County/City Development Plans are of particular importance as they represent a key element of spatial planning in Ireland.

There is a requirement that the implementation of the Water Framework Directive and the Floods Directive are coordinated, and that certain aspects of their implementation are based on consistent information.

The programme of measures identified for each water body addresses the specific problems of that water body; however, there are several issues which apply to all of the waters in the Eastern District and which are best addressed at a district or national level. These fall under broad headings and are addressed in the Plan:

- Hydrological;
- Sustainable use of pesticides;
- Public awareness;
- Climate change; and
- Alien species.

River Basin Management Planning

A specific programme of measures is required for each of the water bodies in the Eastern District. This is an enormous task made more complex by the number of waters (488), the differences in the pressures affecting them and the interrelationships between waters throughout each catchment. The philosophy of catchment management has been rigorously adopted.

A comprehensive process has been followed which reflects the overall structure of the Directive: understanding the pressures affecting the waters; evaluating their relative importance; identifying the measures that will address the specific problems; and assessing the cost and effectiveness of each measure. In this way a detailed profile and plan for each of our waters has been developed.

The Plan is based on all of the available data and information and supplemented, where needed, with expert judgment. In future years the data sets will continue to become more comprehensive as the monitoring continues.

The Eastern District has developed a River Basin Management System (RBMS) to help facilitate the process of selecting measures. The RBMS is an International Water Association award-winning information management system specifically developed by Dublin City Council/CDM which serves a variety of purposes including facilitating a structured approach to the selection of measures. It leads the user through a series of steps culminating in an implementation plan for the measures. All available data and information describing the waters and pressures in the District together with potential measures are available within the system.

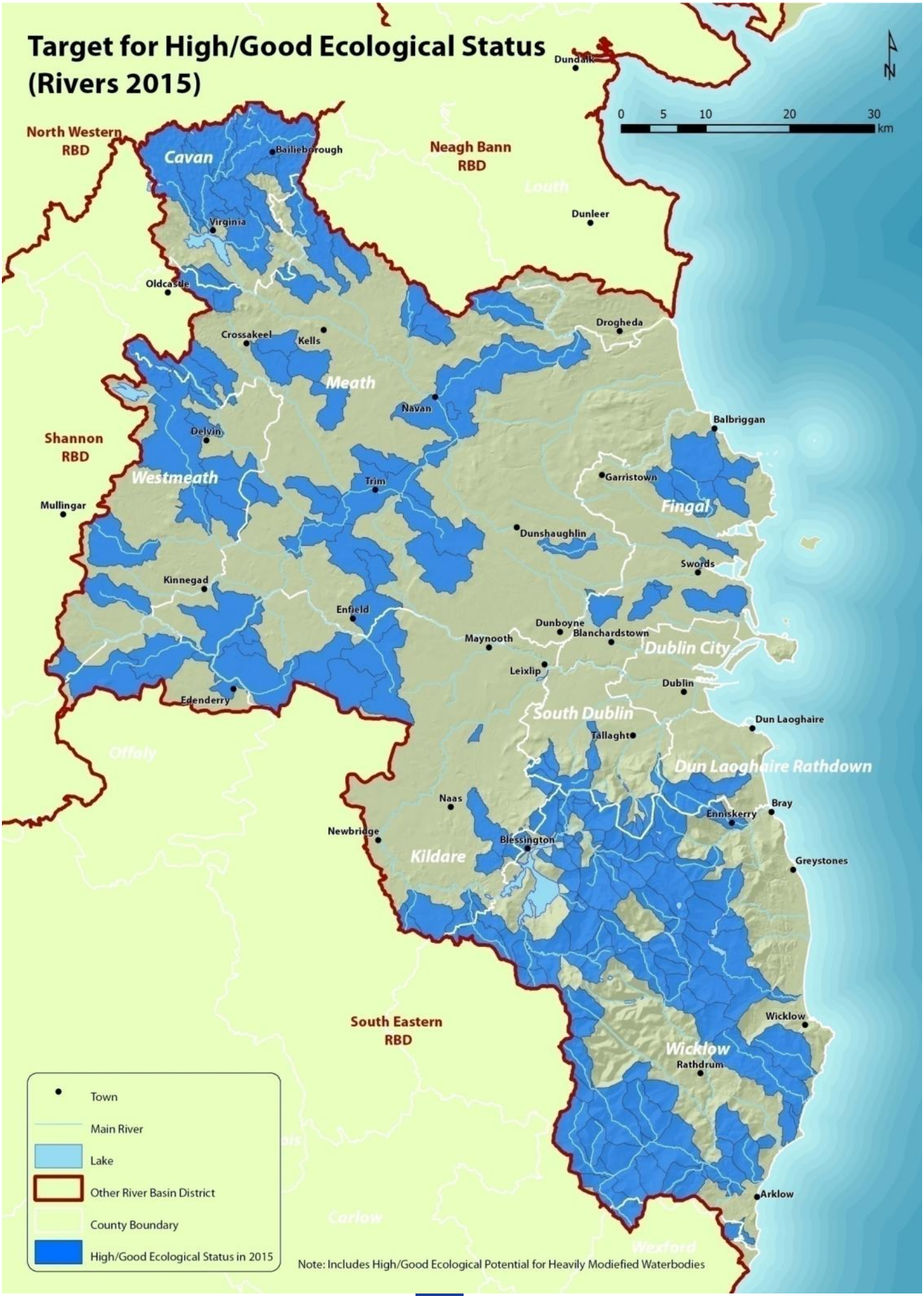
Proposed Measures

The measures that are proposed have been selected jointly by the Eastern River Basin District project team and specialists in the constituent Local Authorities. The initial selections were reviewed internally by different groups within the Local Authorities, and then by the Technical and Advisory Councils prior to the publication of the Draft Plan in December 2008.

The programme of measures for each water body comprises those basic measures (existing legislation) and additional specific actions considered necessary to achieve the objectives of the WFD; this combination of measures is termed "priority actions" in the Plan.

The tables in the Programme of Measures document present the priority actions to address the major pressures affecting each water management unit or water body, the agencies responsible for their implementation and other bodies which have a critical role in their success. These tables also show the present status of each water body and their target dates to achieve good status. The priority actions represent those measures that are considered necessary to achieve good status and include both existing legislation and other measures.

Estimates of cost and effectiveness have been developed for each individual measures in the programme of measures for each sub-catchment or water body for the period 2009 – 2015. At this stage the costs are approximate, sometimes based on unit values or capital costs for works already planned.


Target for High/Good Ecological Status (Rivers 2015)
Dundalk
N
0 5 10 20 30
km
North Western RBD
Cavan
Ballieborough
Neagh Bann RBD
Louth
Dunleer
Virginia
Oldcastle
Drogheda
Crossakeel
Kells
Meath
Navan
Balbriggan
Shannon RBD
Delvin
Westmeath
Trim
Garristown
Fingal
Mullingar
Dunshaughlin
Swords
Kinnegad
Enfield
Dunboyne
Blanchardstown
Maynooth
Dublin City
Leixlip
Dublin
Edenderry
South Dublin
Dun Laoghaire
Tallaght
Offaly
Dun Laoghaire Rathdown
Naas
Bray
Enniskerry
Newbridge
Blessington
Kildare
Greystones
South Eastern RBD
Wicklow
Wicklow
Rathdrum
Arklow
Carlow
Wexford
Town
Main River
Lake
Other River Basin District
County Boundary
High/Good Ecological Status in 2015
Note: Includes High/Good Ecological Potential for Heavily Modiefied Waterbodies

All of the assumptions that have been used in the process of measures selection and evaluation have been recorded in the RBMS. As more accurate information becomes available through pilot studies and other sources, then this can readily be incorporated, and the cost calculations revised accordingly.

The Plan identifies water bodies which are expected to achieve good status by 2015 (see map). However, the vast majority are expected to attain good status in the subsequent planning cycles when the measures have been fully tested and evaluated. Not all waters are planned to achieve Good Status by 2015 for several reasons including the slow pace of natural recovery of soils, sediment and groundwater, the impact of upstream pressures on the lower reaches of rivers and the estuaries and the practicalities of implementing a large scale programme of measures across the entire Eastern District.

Target Objectives and Exemptions and Implementation of Measures

The Programme of Measures for each water body or sub-catchment has been designed to achieve good status in the majority of waters. However, some exceptions remain, as permitted under the Directive, and these are described in the Plan.

Heavily Modified Waters and Artificial Waters

Some surface waters have been substantially changed in character to allow uses such as navigation, water storage, public supply, flood defence and land drainage. To recognise that the benefits from such modifications often need to be retained, these waters are designated as heavily modified. The same reasoning applies to artificial waters (for example canals) created for human activities.

Heavily modified and artificial waters are expected to achieve good ecological potential and this requires that measures addressing, for example, water quality are still implemented.

New Modifications or Developments

Alternative objectives can also be set for waters where it is known that a new modification or development, requiring tailored objectives, will take place during the period of the Plan. Such development proposals must have over-riding social and economic benefits and new developments must still allow waters to achieve good status. Known developments are included in the Plan and they will be subject to normal planning processes, including the requirements for Environmental Impact Statements and Strategic Environmental Assessments as appropriate.

Programmes of Measures

The POM in the Plan addresses the problems being experienced in each water body and identifies the priority actions that need to be taken to mitigate these pressures.

During the preparation of this Plan, full account has been taken of the economic requirements of the Directive and guidance provided by DEHLG.

The date at which it is anticipated that each water body will achieve good status varies and is dependent on a number of factors:

- The period of natural recovery (especially for soils and groundwaters);
- The location in the catchment (downstream areas will not fully recover until the upstream waters are of satisfactory condition);
- The sequencing of implementing the measures; and
- The necessity to gather data in those waters where none is yet available prior to implementation of expensive measures.

The process of measures selection in the ERBD has been extensive and detailed. The Co-ordination Authority project team and Consultant CDM has led and coordinated the process, and all the local authorities in the ERBD have fully engaged. The involvement by local specialists was fundamental to a realistic identification of measures for individual water bodies and water management units.

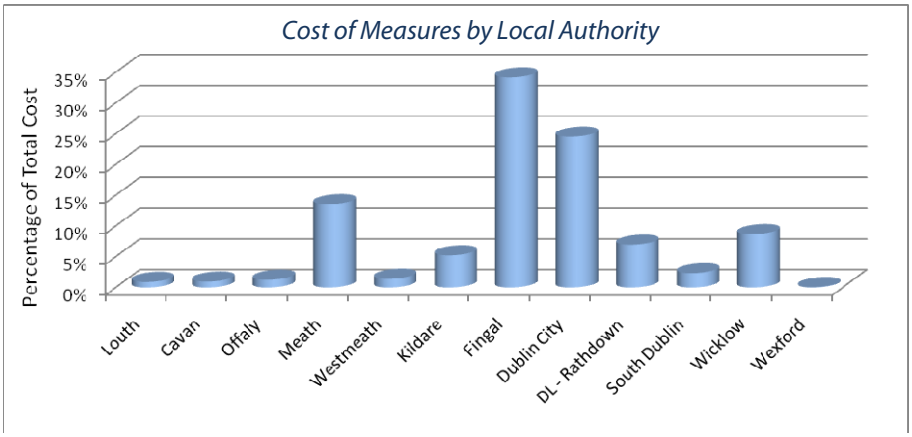
During the process of measures selection, the degree of implementation of all existing legislation in each water management unit or water body has been estimated, providing a valuable indicator of future implementation effort which will be required to fully implement those laws in each area.

The POM that has been developed in this Plan has focused on those elements of existing legislation and any necessary additional actions that are judged to be the minimum necessary to achieve good status, given the pressures in the particular water.

Costs

During the process of identifying the priority actions, the costs of implementing each has been estimated at 2008 rates for all parties. These costs represent the best estimates based on available data and the specialist knowledge available to the project team. This should be viewed as a first step in a continuing process and as experience of implementing some of the actions develops and the planning and design stages of capital projects are completed, then the cost estimates can be refined.

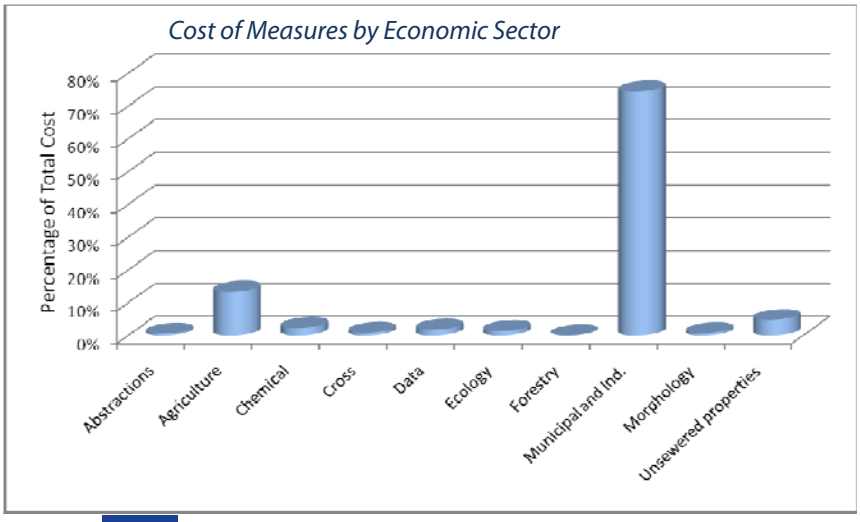
The total cost of the POMs to deliver the stated objectives of this Plan for the entire Eastern District is estimated at €2,950,000,000. This is not to say that implementing the WFD will cost this sum, as significant elements are due to priority implementation of existing legislation. Rather, it is to provide the funding agencies with an indication of **broad budgetary requirements** that will be necessary to achieve the objectives of the WFD.

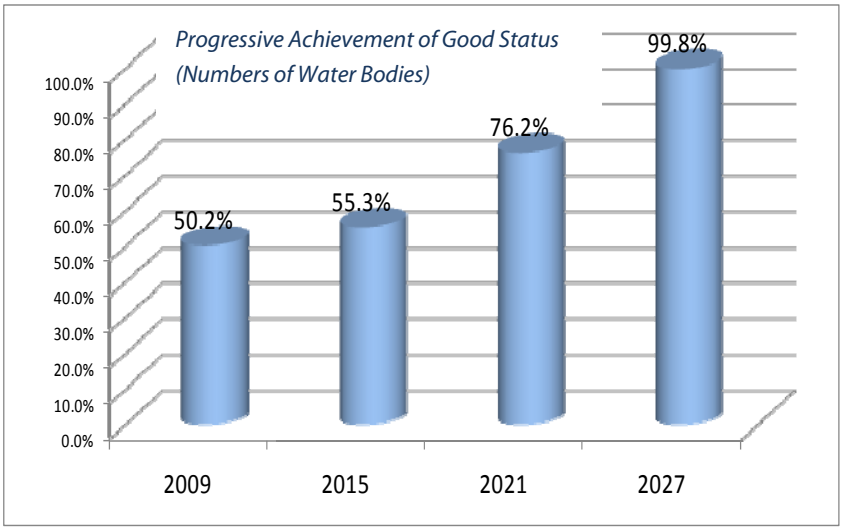


The figure to the left shows the proportion of total costs likely to be incurred in each Local Authority within the Eastern River Basin District. The majority of costs fall within the 4 Dublin authorities reflecting the needs of the Greater Dublin Area for wastewater treatment works, sewer systems and combined storm overflows and the population density.

These costs are for the first planning cycle (in terms of staff resources) and assume that all capital works are constructed in that period. It should also be noted that these costs do not include operations and maintenance of WWTWs as it is not clear at this stage which plants will be constructed and operational in which years; for budgetary purposes we estimate that the O&M costs for all WWTWs in the ERBD would be in the order of €1,000,000,000 for the first planning cycle.

In the figure to the right it can be seen that approximately 75% of the cost of measures is projected to fall within the municipal and industrial sectors to rectify point source discharges and urban pollution. Agriculture accounts for 13% of the costs and unsewered properties 5%. Several other pressures will impact several economic sectors.





To be more cost effective, the Plan recommends a strategy of focussing on delivering the most effective measures in as many waters as possible. It is anticipated that the vast majority of waters in the ERBD will achieve good status over the three planning cycles ending in 2027 and that time based exemptions will reduce in each planning cycle. The figure below shows the planned progressive achievement of good status for all water bodies during the three planning cycles.

It is clear that if upstream pressures are not addressed, then good status will not be achieved in the lower reaches of the rivers and estuaries; this catchment philosophy is at the very heart of the Directive. It is for this reason that the Plan places the initial emphasis on the upstream areas of catchments so that priority is given to measures that deliver multiple benefits.

The Plan recognises that for some waters the EPA's interim status assessments have been based on extrapolated data. In these cases the first action that will be taken is to initiate monitoring to confirm the status and the influencing factors; as a consequence the achievement of good status has been delayed by one cycle in these water bodies.

Implementation of Measures

The full POM will require the implementation of a selection of the hundreds of different actions in all 488 water bodies. It will require funding, staff resources and coordination across several national and local agencies and recognition of fundamental constraints including differing budget cycles. This Plan presents a comprehensive description of what is needed to be done, where, by whom and the priorities, but it cannot address resource allocation. However, clear targets are set for achievement of good status and this should provide guidance for detailed implementation planning.

The overall timescale for waters to achieve good status will be dictated by the slowest response to basic and supplementary measures. For example, even if a treatment plant is installed in the first plan cycle, it may take a further cycle for the waters to show improvement in areas with particular types of soil that are also impacted by agricultural activities. Similarly, recovery of groundwater is dictated by flow rates in the aquifers and improvements in these waters will inevitably take many years.

It is important that the Plan is realistic in its targets and so we have tried to identify all waters where recovery is likely to be slow. One of the problems that we face is addressing the extensive diffuse pollution in the rural areas in the upper parts of the catchments. There are very many farms, septic tanks and forestry areas which will need to achieve compliance with the various standards and this in turn will require an intensive enforcement effort. Realistically this process will take several years and until the water quality improves in the upstream parts of the catchments, those lower down are unlikely to achieve good status.

Similarly, bog and peat lands introduce nutrients to surface waters in the upper parts of some catchments and this will continue to occur.

A further factor in the delay in achieving good status is the necessity to ensure that the current status is an accurate assessment before expenditure is incurred. In the Eastern District 221 river water bodies have no surveillance or operational monitoring data; in these cases the first measure will be to gather more data to confirm the assessment and also to determine which pressures are of greatest concern.

Prioritisation

A work programme of this scale will require detailed planning and management. It is clear that good status will not be achieved in all waters during the first planning cycle and that the implementation of measures will inevitably have to be prioritised.

In 2008 a workshop with all of the Local Authorities in the Eastern District reviewed the existing condition of each water management unit or water body and the pressures affecting it. Neighbouring authorities developed an approach as to which waters would be expected to be improved first based on the nature and scale of pressures affecting them.

There was agreement to start this process at the top of the catchments and then to recognise that waters not achieving good status by 2015 for reasons of either natural recovery or programming would detrimentally affect downstream waters and so these would be expected to improved at a later date. The outcome of this workshop was a clear definition of which waters would be improved in each planning cycle, with steady progress through until 2027.

There are many criteria which should influence this priority setting, many of which are matters for government and society. The government intends to set up a high level committee of major stakeholders to consider the whole issue of prioritisation in the autumn of 2009 and so some further modifications to the implementation programme should be expected.

Pilots

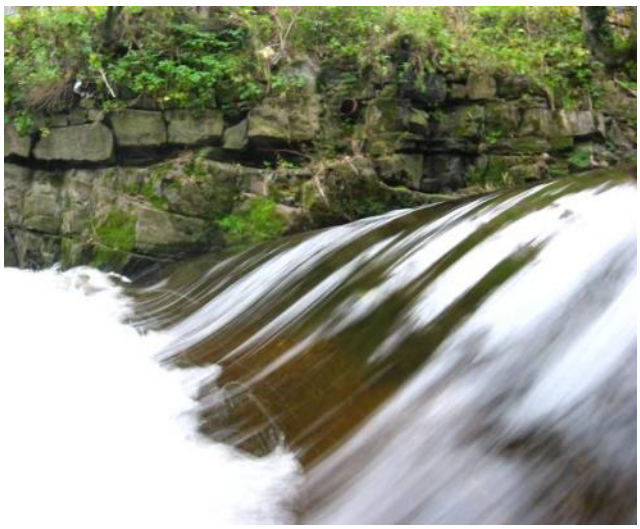
The project has undertaken extensive investigative monitoring and pilot studies which have confirmed the complexity of assessing the reasons for problems in our waters, and the very site specific nature of the problems. These studies have been very enlightening and demonstrated the importance of having detailed and accurate information before initiating expensive programs of measures. They have found very many small scale point sources in the upper catchments which together contribute significantly to pollution in rural areas. Other studies have investigated the effects of septic tanks on poorly draining soils, pollution risk in drinking water catchments and the effects of combined sewer outfalls on estuary water quality.

A great deal of effort has been, and continues to be, invested in gathering monitoring data on an extensive scale, but even so, there is still a lot of uncertainty and many waters where there is no data at all. The investment of resources to address poorly defined problems would be inappropriate and so establishing the causes of the problems in each water body and identifying measures to address them cost effectively is essential. All available data has been used in the Plan and this has been supplemented by computer modelling to extend our understanding of the situation. Based on this, measures have been selected which are designed to deal with the key pressures.

Whilst there is a high level of confidence that the measures are appropriate and cost effective it is recommended that they are examined through pilot implementations to:

- Provide detailed data on the pilot area to confirm that the measures are appropriate;
- Implement measures to confirm that the measures are both effective and cost efficient;
- Engage the various stakeholders in the pilot areas to try to overcome sectoral bias;
- Provide detailed post implementation assessment of the performance of the measures.

Strategic Environmental Assessment



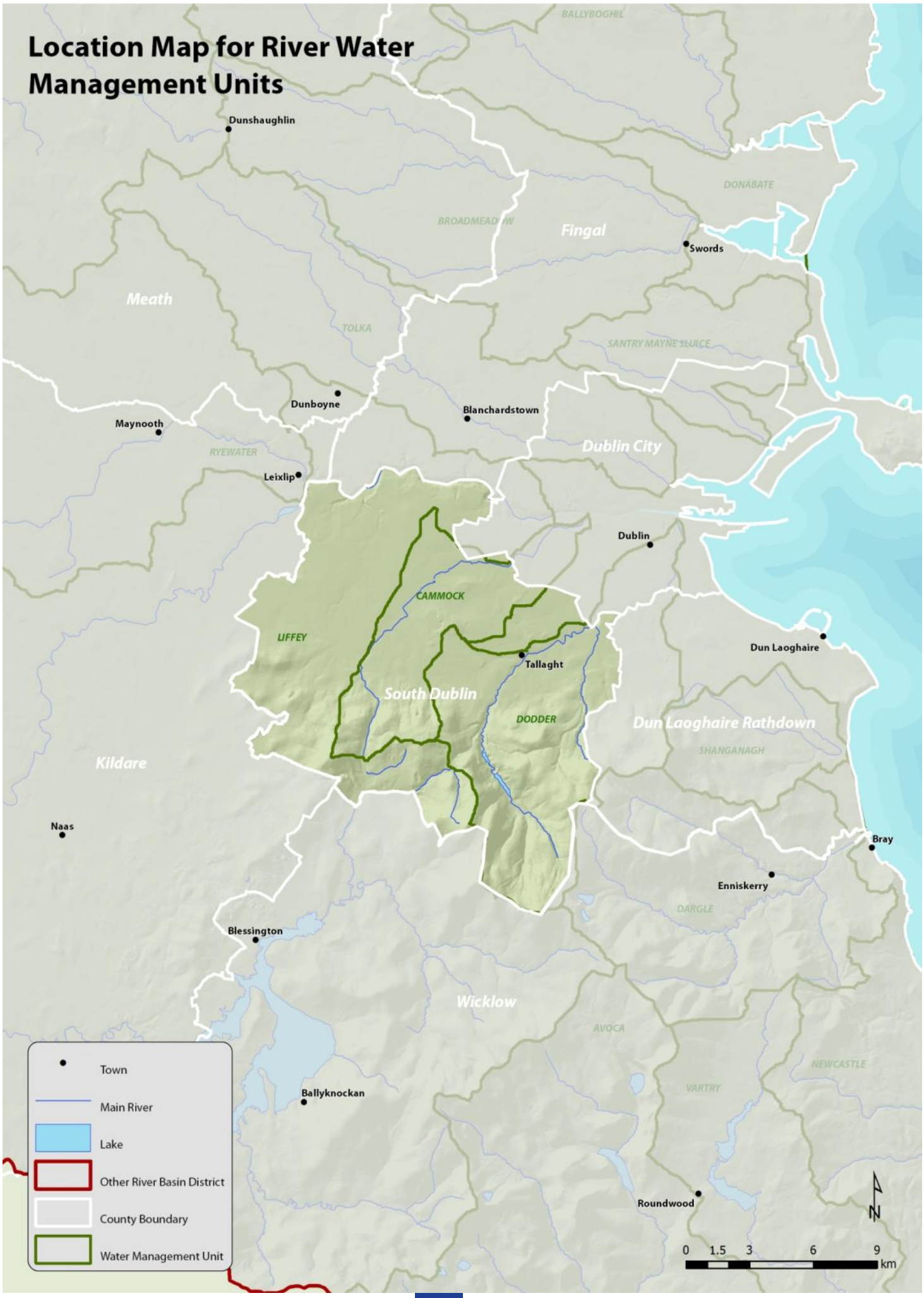
An Environmental Report has been prepared as part of the Strategic Environmental Assessment of the River Basin Management Plan and Programme of Measures (POM) for the Eastern River Basin District.

Strategic Environmental Assessment is a systematic method of considering the likely significant environmental effects of a Plan or Programme by integrating environmental factors into the development of the Plan and related decision-making. The purpose is to ensure that the environmental consequences of the Plan and POM for the ERBD are assessed both during their preparation and prior to adoption and that the Plan and POM are as robust as possible in the context of the wider environment.

What happens next?

A Draft version of this Plan was open for public consultation from December 2008 – June 2009 and the many comments which were received have been reviewed and, where possible, incorporated in this Final version. The programme for the future is laid out in the legislation (SI 722):

- 2009; the Plan to be submitted to each County Council in the Eastern District for their consideration;
- 2009; ERBD constituent Local Authorities to submit the Final Objectives, Plan and Programme of Measures to the EPA;
- 2009; EPA to submit the Final Plan and their recommendation to the Minister for the Environment, Heritage and Local Government;
- 2009; Minister to submit the Final Plan to the EU;
- 2009/2010; re-establishment of Advisory Council
- 2010; Report of Water Pricing Policy
- 2010; EPA to review the monitoring programme and delineation of water boundaries
- 2012; programme of measures to be fully implemented;
- 2012; EPA to issue revised status for all waters; and
- 2015; second river basin management plan to be complete
- 2015; first RBD Flood Protection Plans.


Location Map for River Water Management Units
Dunshaughlin
BALLYBOGHIL
DONABATE
BROADMEADOW
Fingal
Swords
Meath
TOLKA
SANTRY MAYNE SLUICE
Dunboyne
Blanchardstown
Maynooth
RYEWATER
Dublin City
Leixlip
Dublin
CAMMOCK
LIFFEY
Dun Laoghaire
Tallaght
South Dublin
DODDER
Dun Laoghaire Rathdown
SHANGANAGH
Kildare
Naas
Bray
Enniskerry
DARGLE
Blessington
Wicklow
AVOCA
NEWCASTLE
VARTRY
Ballyknockan
Roundwood
Town
Main River
Lake
Other River Basin District
County Boundary
Water Management Unit
N
0 1.5 3 6 9
km

South Dublin County Council

South Dublin is one of the four lead authorities in the Eastern District. All of its lands fall within the Eastern District; it shares many of its waters with Wicklow, Dun Laoghaire-Rathdown, Kildare and Dublin City.

South Dublin has land in three river water management units:

- Cammock;
- Dodder;
- Liffey.

There are three lakes wholly or partly within South Dublin; tere are no transitional waters (estuaries), nor coastal water bodies in South Dublin; and there are three groundwater bodies.

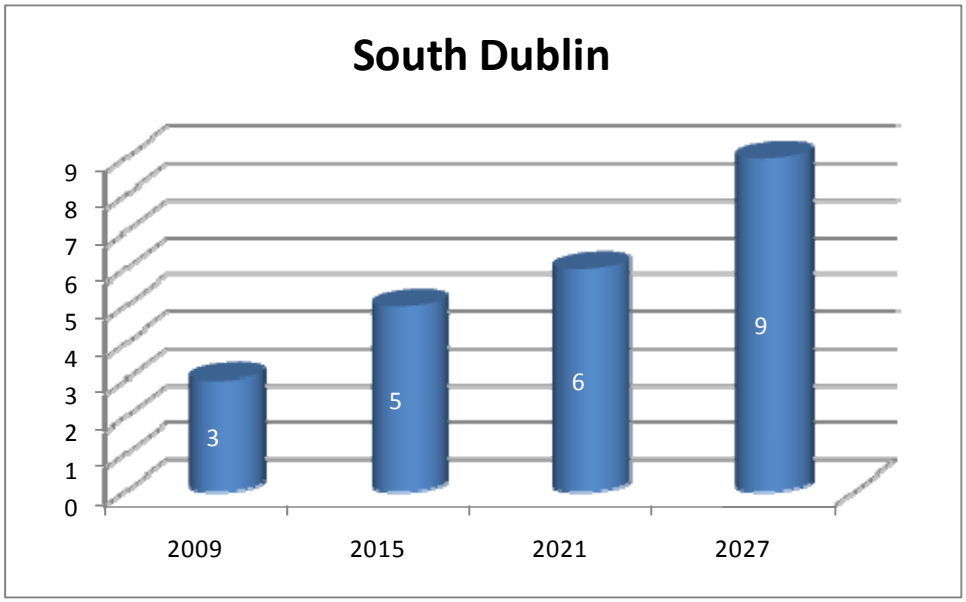
In general the waters in the upper catchments of South Dublin are of high or good status reflecting the low levels of development and human activity. The map of **river water status** depicts areas of high and good status as blue and green.

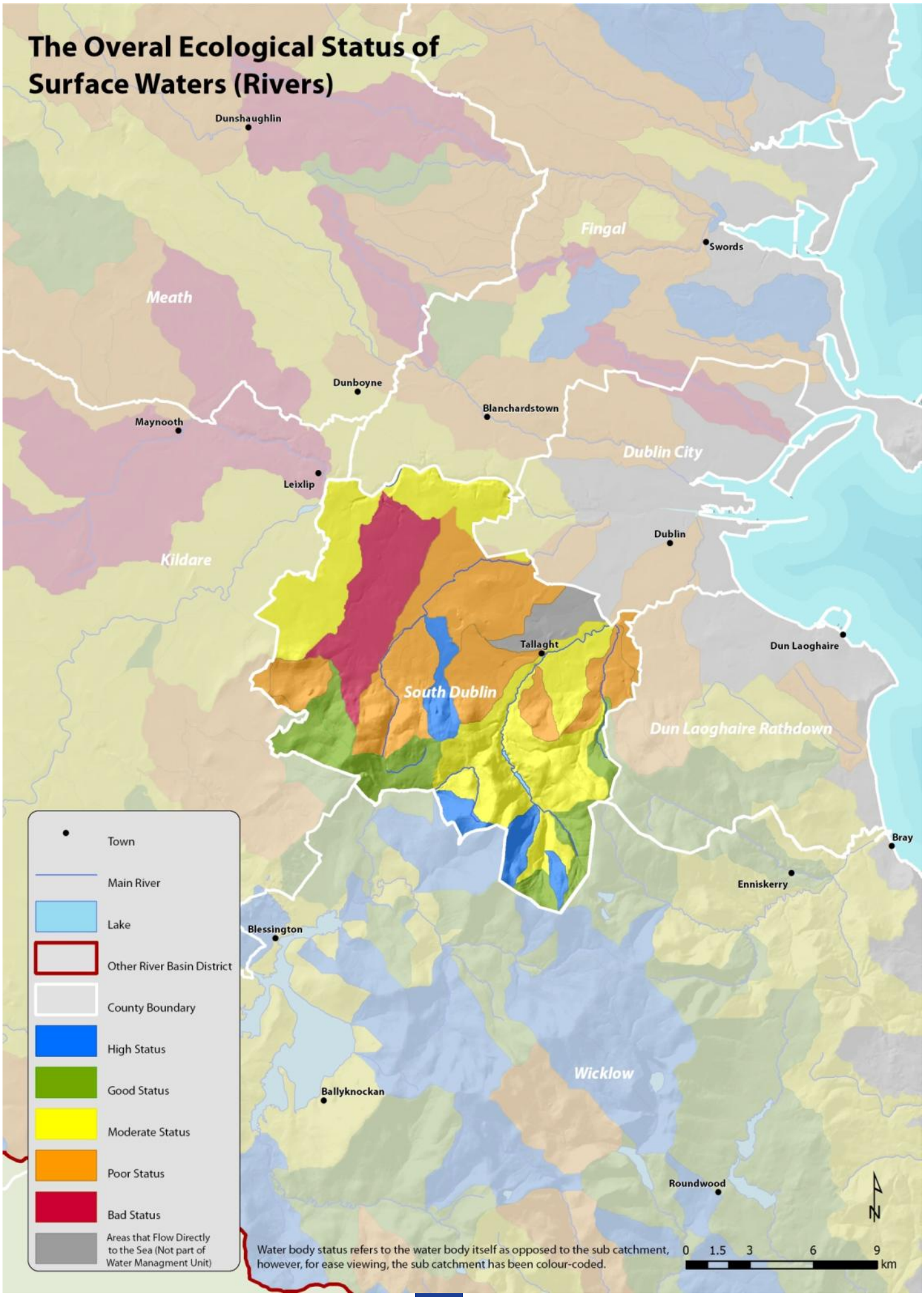
For rivers, areas of less than good status generally occur in the lower reaches to the north and east of the county. The grey area on the map is not a "reportable" river under the Directive and so is not classified here.

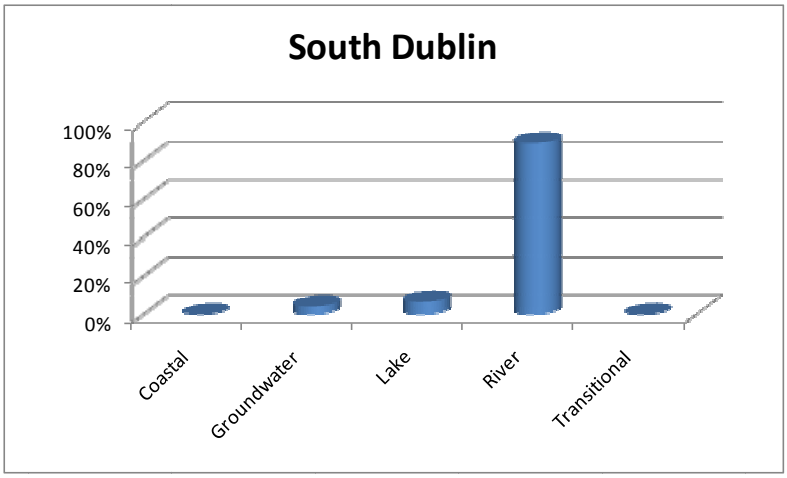
The two Glenasmole reservoirs are of good status and the Leixlip reservoir has been assigned a moderate status on the basis of extrapolated data. When more monitoring data becomes available the status evaluation will be reviewed by EPA (in 2011)

All of the three groundwater bodies in South Dublin are of good status.

The Plan indicates a progressive improvement in waters achieving good status in each management cycle through to 2027. A third of South Dublin's waters are already at good or high status. A comprehensive set of actions has been planned and there will also be a focus in the first cycle to improve the data sets in some areas. It is important that a more reliable assessment of existing status is established before implementing expensive measures.

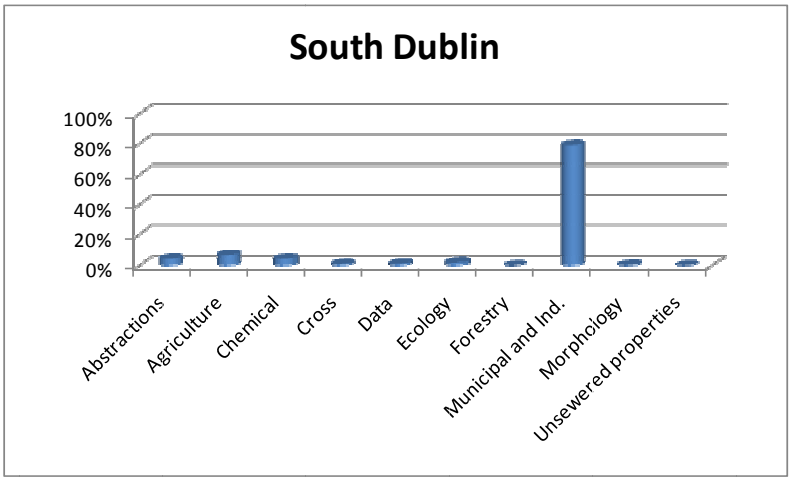



The Overal Ecological Status of Surface Waters (Rivers)
Dunshaughlin
Fingal
Swords
Meath
Dunboyne
Blanchardstown
Maynooth
Dublin City
Leixlip
Dublin
Kildare
Tallaght
Dun Laoghaire
South Dublin
Dun Laoghaire Rathdown
Bray
Enniskerry
Blessington
Wicklow
Ballyknockan
Roundwood
Town
Main River
Lake
Other River Basin District
County Boundary
High Status
Good Status
Moderate Status
Poor Status
Bad Status
Areas that Flow Directly to the Sea (Not part of Water Managment Unit)
Water body status refers to the water body itself as opposed to the sub catchment, however, for ease viewing, the sub catchment has been colour-coded.
N
0 1.5 3 6 9
km



The costs of the Programmes of measures developed for South Dublin (note that this only addresses the lands within South Dublin's jurisdiction) are predominantly aimed at rivers, reflecting the inland nature of the county.

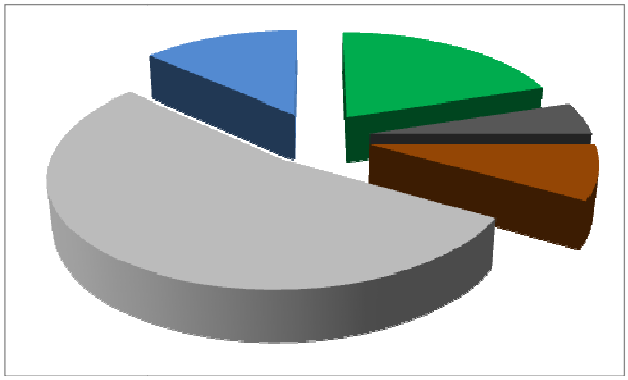
The costs are dominated by planned investment in sewer systems, combined sewer overflows and industrial point sources. The cost of addressing the problems associated with agriculture is also significant.



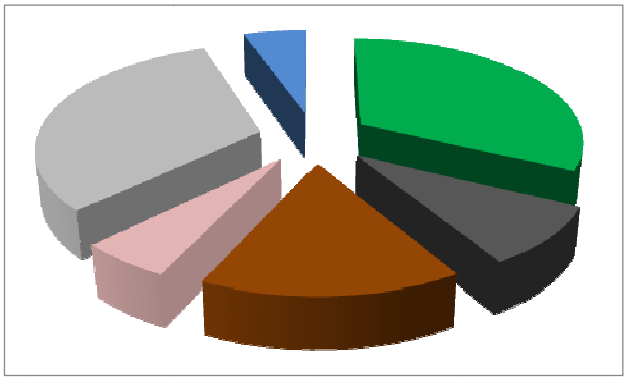
Addressing Pressures in South Dublin

The key pressures identified in the Water Matters report in 2008 will be addressed throughout the county in a phased manner. The relative importance of each pressure type (in terms of water quality) throughout the county of South Dublin is shown in the charts below:

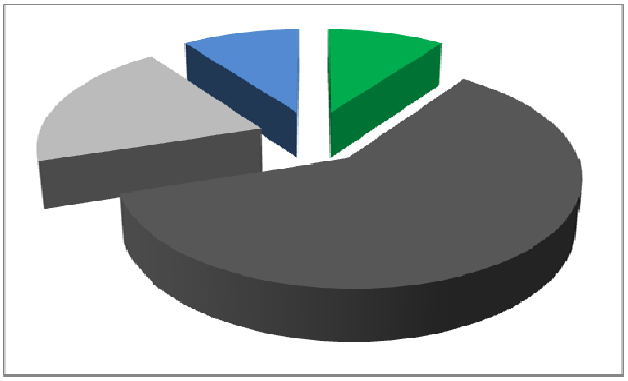
Rivers



Lakes



Groundwaters



Legend

- Agriculture
- Dangerous Substances
- Forestry
- Landfills
- Wastewater
- Wastewater (Unsewered Properties)

Wastewater Treatment Plants

South Dublin has no wastewater treatment works requiring action; wastewater from South Dublin is treated at the Ringsend wastewater treatment works in Dublin City. The Section 4 licensed discharges will be consented and monitored in accordance with current procedures.

Landfills, quarries, mines and contaminated lands

The Plan includes measures to deal with landfill leachate and quarry impacts at the various sites in the county.

Agriculture

Agricultural pressures in South Dublin are less widespread than most areas of the Eastern District; the Plan requires full implementation of the Good Agricultural Practice regulations and some supporting actions in specific locations through a coordinated and prioritized farm inspection programme.

Wastewater and unsewered properties

Wastewater from unsewered properties is a significant pressure on rivers, lakes and groundwater. The Plan requires a coordinated and prioritised inspection programme of unsewered properties and enforcement of existing and proposed regulations. Strong coordination with the local area development plan will be necessary.

Usage and discharge of dangerous substances (e.g. pesticides and herbicides)

Groundwater is considered to be at risk from urban pollution and the use of pesticides and herbicides. Measures to deal with these are included in the Plan.

Forestry

Implementation of forestry regulations and guidance is particularly significant in lake catchments in South Dublin.

Physical modifications

The rivers in South Dublin have all been physically altered to some degree. All of the lakes have also been physically modified preventing fish migration. Little data is available describing the impact of these man-made changes and data collection will be required in the first planning cycle to identify if any additional measures are necessary in these waters.

Abstractions

The impact of existing abstractions on the three lakes/reservoirs and the Liffey and Dodder rivers of South Dublin will be assessed and further data collected during the first planning cycle to allow assessments in line with DEHLG's research project on abstractions.

Comhshaol, Oidhreacht agus Rialtas Áitiúil
Environment, Heritage and Local Government

eastern
river basin district

Dublin City Council
Comhairle Cathrach Bhaile Átha Cliath

comhairle chontae na mí
meath county council

Fingal County Council
Comhairle Contae Fhine Gall

South Dublin County Council

dlr
Comhairle Contae County Council

Dublin City Council | Kildare County Council | Wicklow County Council | Meath County Council
Cavan County Council | Dun Laoghaire Rathdown County Council | Fingal County Council
Louth County Council | Offaly County Council | South Dublin County Council
Westmeath County Council | Wexford County Council