# Selection of Local Management Areas for Implementation of River Basin Management Plans

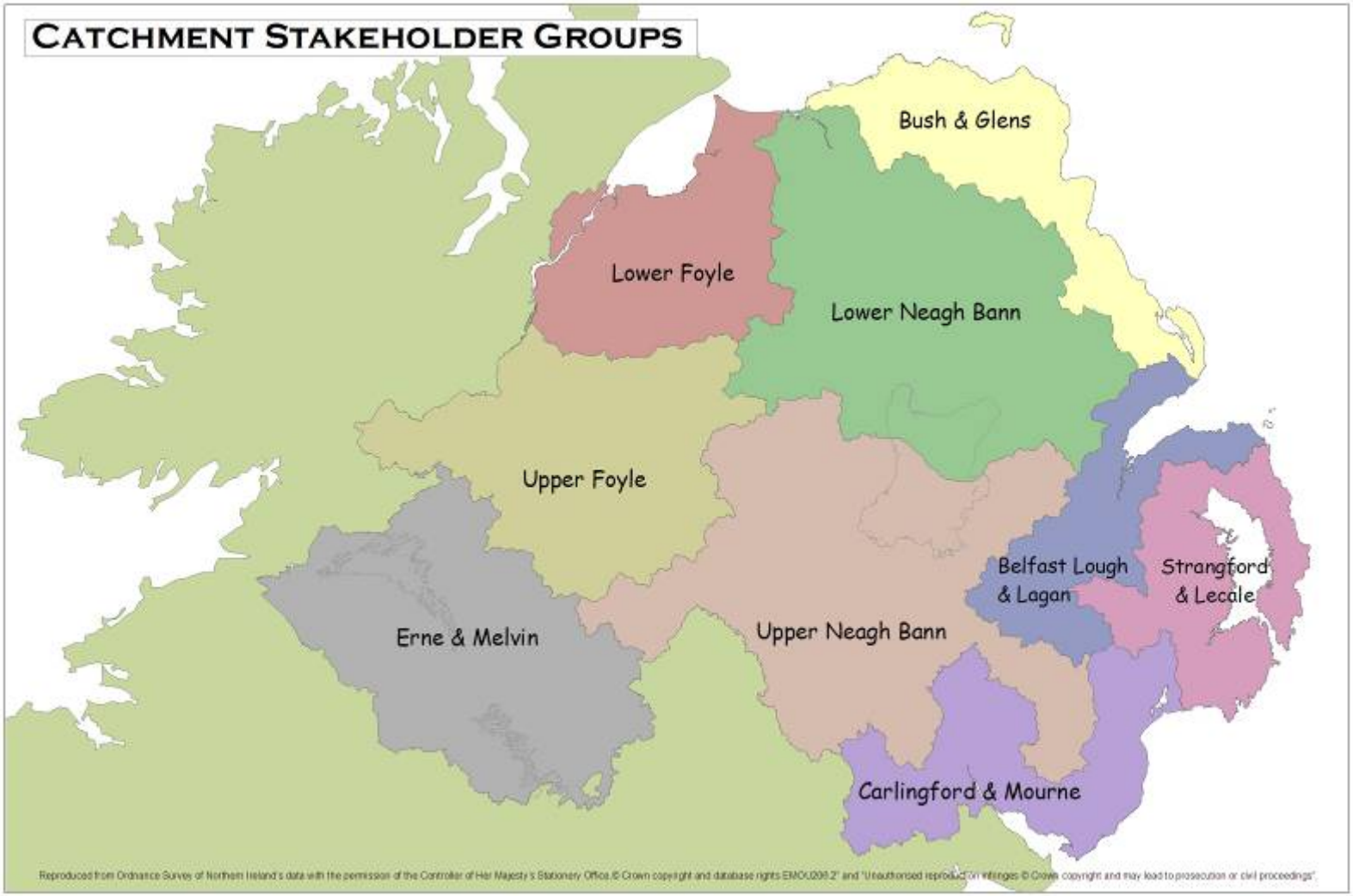
## Belfast Lough and Lagan

## Catchment Stakeholder Group

Gerry Wilson – NIEA
River Basin Planning

# Implementation of the River Basin Management Plans

- The Plans cover the period 2009 – 2015
- Need to focus on the local nature of the plans
- Need to develop an implementation programme over the six year cycle.


CATCHMENT STAKEHOLDER GROUPS
Bush & Glens
Lower Foyle
Lower Neagh Bann
Upper Foyle
Belfast Lough & Lagan
Strangford & Lecale
Erne & Melvin
Upper Neagh Bann
Carlingford & Mourne
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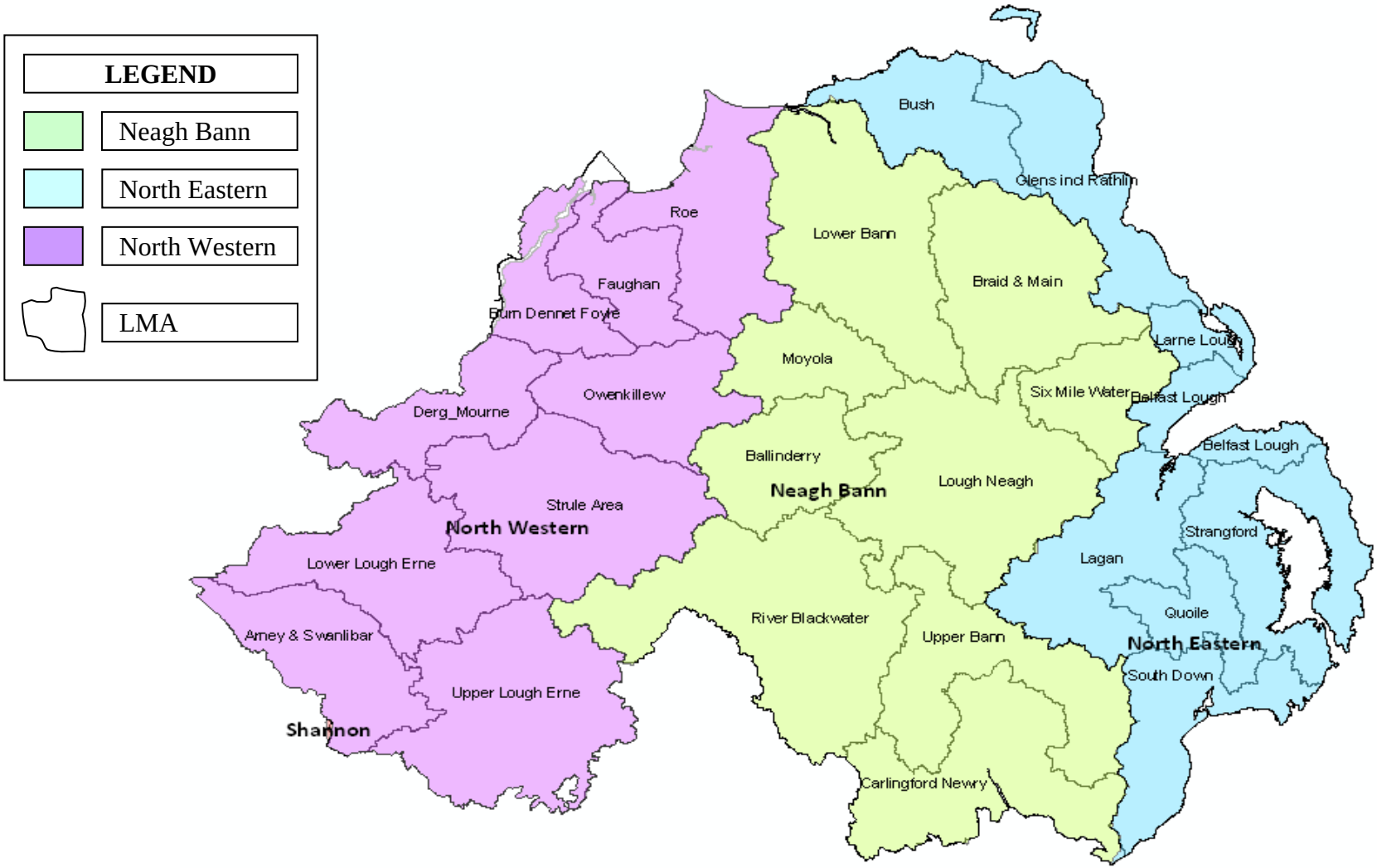
# Map of Local Management Areas



# Why Work at an LMA Level ?

- To develop a localised approach to managing water bodies, yet provide a coherent and comprehensive overview of the pressures at a catchment level, it is proposed to develop action plans at the Local Management Area level (LMA).
- The LMAs represent the hydrological water sheds of the main rivers within the RBDs.
- In targeting resources to deliver good ecological quality, it is considered more effective to focus concerted action on a limited number of LMAs.
- It is proposed to select 9 LMAs out of the 26 each year for detailed analysis, this would mean each LMA is assessed twice in each 6 year planning cycle.

# LMA Selection Process

- The starting point is the Percentage Failure of water bodies for plants, invertebrates (including Pearl Mussels) and fish.
  - % less than Good,
  - % less than Moderate
  - % Bad.
  - The more severe the failure the more difficult to rectify but the smaller the percentage affected.
  - Combining the severity of the failures.
- Some water bodies fail more than one element but are not double counted
- Risk Assessment data used if no status data was available
- Due to low number of marine water bodies per LMA these were not included. Information on Marine Water bodies will inform the development of the detailed implementation plans but not the selection process

# Reason for Failure and Percentage Failure Spreadsheet

| RWBID | Name WB | | Overall Eco Status | Invert ebrates | Macro phytes | Fish | Pearl Mussel | Diatoms | Phyto plankton | DO | Phos phorus | P+I status | SURFACE WATER STATUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GBNI1NE050501004 | Copeland Water | Belfast Lough | 3 | | | | | | | | | 3 | 3 |
| GBNI1NE050501118 | Three Mile Water | Belfast Lough | 4 | 4 | | | | 4 | | | 3 | | 4 |
| GBNI1NE050501120 | Woodburn River | Belfast Lough | 4 | 3 | 3 | 4 | | 3 | | | | | 4 |
| GBNI1NE050502083 | Crawfordsburn River | Belfast Lough | 4 | 4 | | | | | | | 3 | | 4 |
| GBNI1NE050502084 | Ballyholme River | Belfast Lough | 5 | 5 | | 5 | | | | | 3 | | 5 |
| GBNI3NE0028 | Mourne | Belfast Lough | 3 | | 3 | | | | 3 | | 4 | | 4 |
| | Total No. WBs 7 | No. < Good | 6 | 4 | 2 | 2 | | 2 | 1 | 0 | 4 | 1 | 6 |
| | Rivers plus Lakes | No. <Mod | 4 | 3 | 0 | 2 | | 1 | 0 | 0 | 1 | 0 | 5 |
| | | No. Bad | 1 | 1 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 1 |
| | | % < Good | 85.7% | 57.1% | 28.6% | 28.6% | 0.0% | 28.6% | 14.3% | 0.0% | 57.1% | 14.3% | 85.7% |
| | | % <Moderate | 57.1% | 42.9% | 0.0% | 28.6% | 0.0% | 14.3% | 0.0% | 0.0% | 14.3% | 0.0% | 71.4% |
| | | % Bad | 14.3% | 14.3% | 0.0% | 14.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 14.3% |

# A Risk Based Approach
# Taking into Account the Level of Impact

Assume the classification data is an indicator of the level of impact and that the risk is higher the worse the status;

i.e. Bad > Poor >Moderate.

Taking the % of Water Bodies failing GOOD status for the ecological elements macrophytes, benthic invertebrates and fish, as a measure of the risk to the ecology of an LMA.

And adding to this the % less than Moderate and Bad to take account of the severity of the impact, then:

Risk of not achieving good status represented by:

**% < Good + % < Moderate + % Bad = Eco Score**

# Reason for Failure and Percentage Failure Spreadsheet

| RWBID | Name WB | | Overall Eco Status | Invert ebrates | Macro phytes | Fish | Pearl Mussel | Diatoms | Phyto plankton | DO | Phos phorus | P+I status | SURFACE WATER STATUS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| GBNI1NE050501004 | Copeland Water | Belfast Lough | 3 | | | | | | | | | 3 | 3 |
| GBNI1NE050501118 | Three Mile Water | Belfast Lough | 4 | 4 | | | | 4 | | | 3 | | 4 |
| GBNI1NE050501120 | Woodburn River | Belfast Lough | 4 | 3 | 3 | 4 | | 3 | | | | | 4 |
| GBNI1NE050502083 | Crawfordsburn River | Belfast Lough | 4 | 4 | | | | | | | 3 | | 4 |
| GBNI1NE050502084 | Ballyholme River | Belfast Lough | 5 | 5 | | 5 | | | | | 3 | | 5 |
| GBNI3NE0028 | Mourne | Belfast Lough | 3 | | 3 | | | | 3 | | 4 | | 4 |
| | Total No. WBs 7 | No. < Good | 6 | 4 | 2 | 2 | | 2 | 1 | 0 | 4 | 1 | 6 |
| | Rivers plus Lakes | No. <Mod | 4 | 3 | 0 | 2 | | 1 | 0 | 0 | 1 | 0 | 5 |
| | | No. Bad | 1 | 1 | 0 | 1 | | 0 | 0 | 0 | 0 | 0 | 1 |
| | | % < Good | 85.7% | 57.1% | 28.6% | 28.6% | 0.0% | 28.6% | 14.3% | 0.0% | 57.1% | 14.3% | 85.7% |
| | | % <Moderate | 57.1% | 42.9% | 0.0% | 28.6% | 0.0% | 14.3% | 0.0% | 0.0% | 14.3% | 0.0% | 71.4% |
| | | % Bad | 14.3% | 14.3% | 0.0% | 14.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 14.3% |

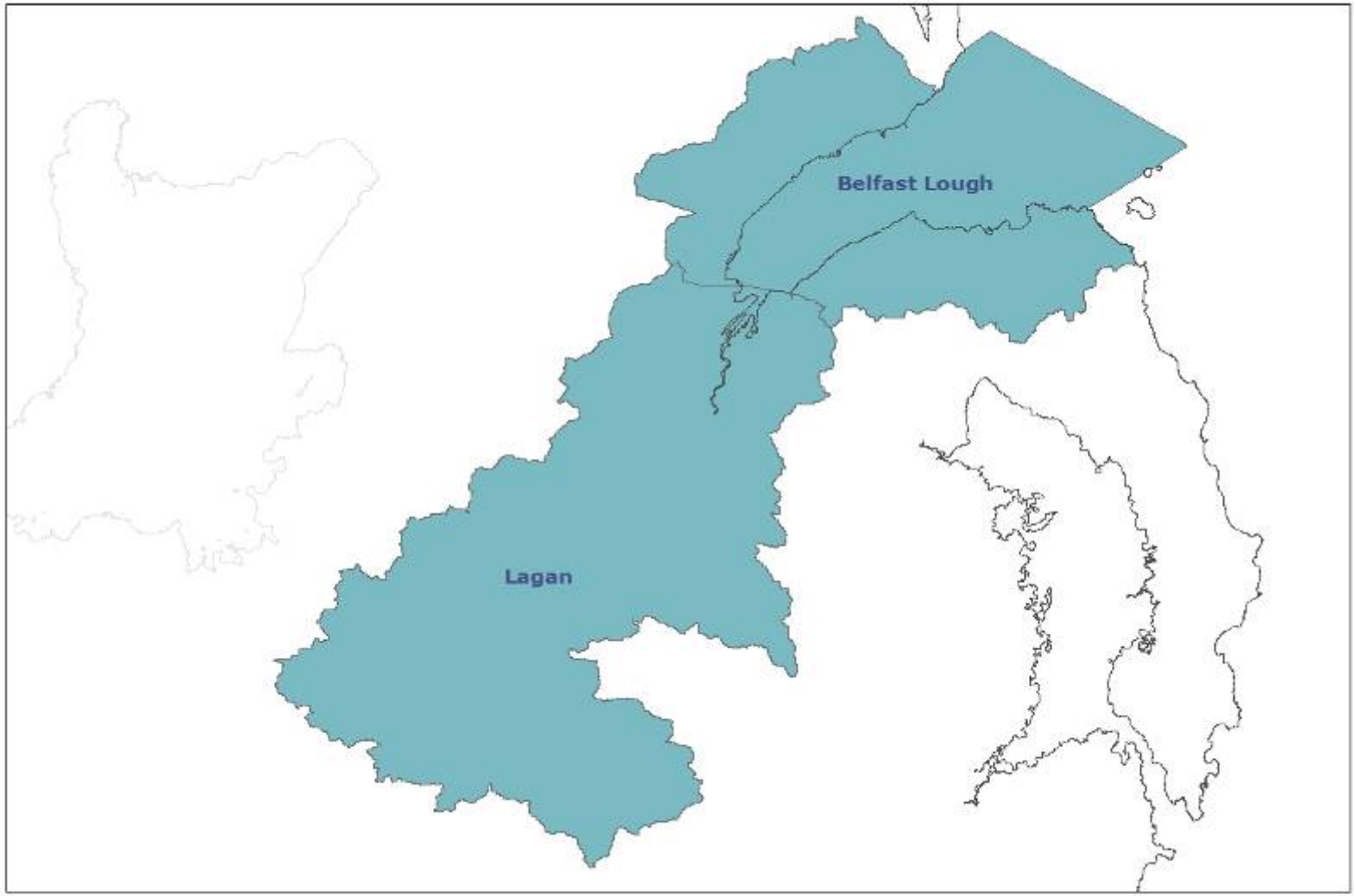
# Proportion of Failing Water bodies and Eco Score

| NE Assessment Rating | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Man Area** | **% < Good** | **Invertibrates** | **Macrophytes** | **FISH** | **Pearl Mussel** | **P & I** | **Number WBs <Mod** | **% <Mod** | **Number WBs <Bad** | **%Bad** | **Eco Score** | | **Number of WBs** |
| Glen & Rathlin | 47.6% | 33.3% | 0.0% | 4.8% | 0% | 9.5% | 1 | 4.8% | 0 | 0.0% | 52.4 | | 21 |
| Bush | 100.0% | 88.2% | 0.0% | 0.0% | 0% | 5.9% | 2 | 23.5% | 0 | 0.0% | 123.5 | | 17 |
| Larne | 50.0% | 0.0% | 0.0% | 0.0% | 0% | 0.0% | 1 | 0.0% | 1 | 0.0% | 50.0 | | 2 |
| Belfast L | 85.7% | 57.1% | 28.6% | 28.6% | 0% | 14.3% | 1 | 57.1% | 0 | 14.3% | 157.1 | | 7 |
| Lagan | 100.0% | 81.8% | 27.3% | 4.5% | 0% | 13.6% | 1 | 40.9% | 1 | 18.2% | 159.1 | | 22 |
| Quoile | 72.7% | 54.5% | 27.3% | 9.1% | 0% | 9.1% | 2 | 27.3% | 0 | 0.0% | 100.0 | | 11 |
| Strangford | 100.0% | 86.7% | 26.7% | 13.3% | 0% | 0.0% | 11 | 73.3% | 3 | 20.0% | 193.3 | | 15 |
| South Down | 78.9% | 63.2% | 31.6% | 5.3% | 0% | 0.0% | 2 | 21.1% | 0 | 5.3% | 105.3 | | 19 |

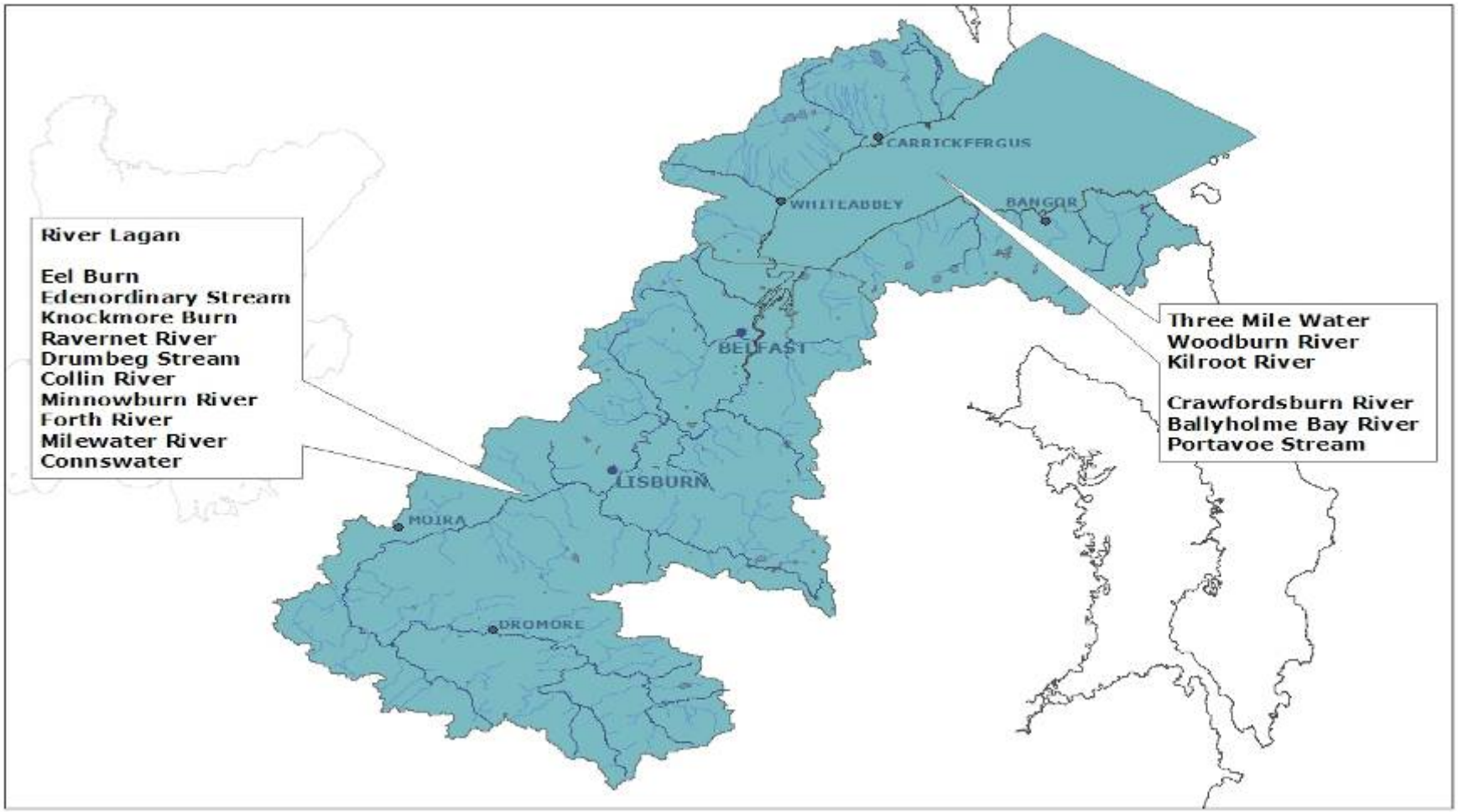
# LMA Implemention Plan Selection

| Option 1 | | Option 2 | | Option 3 | | CSG Area |
|---|---|---|---|---|---|---|
| Local Management Area | Eco Score | Local Management Area | Eco Score | Local Management Area | Eco Score | |
| Strangford | 193.3 | Burndennet & Foyle | 100.0 | Lower Lough Erne | 87.9 | **Erne & Melvin** |
| Lagan | 159.1 | Lower Lough Erne | 87.9 | Upper Lough Erne | 72.1 | |
| Belfast L | 157.1 | Upper Lough Erne | 72.1 | Arney | 39.3 | |
| Ballinderry | 137.5 | Roe | 60.0 | Owenkillew | 50.0 | **Upper Foyle** |
| Lough Neagh | 123.8 | Owenkillew | 50.0 | Derg& Mourne | 47.1 | |
| Bush | 123.5 | Derg & Mourne | 47.1 | Strule | 45.0 | |
| Blackwater | 121.6 | Strule | 45.0 | Burndennet & Foyle | 100.0 | **Lower Foyle** |
| Upper Bann | 110.7 | Arney | 39.3 | Roe | 60.0 | |
| South Down | 105.3 | Faughan | 30.0 | Faughan | 30.0 | |
| | | | | | | |
| Quoile | 100.0 | **Ballinderry** | 137.5 | **Ballinderry** | 137.5 | **Upper Neagh Bann** |
| Burndennet & Foyle | 100.0 | **Lough Neagh** | 123.8 | **Blackwater** | 121.6 | |
| Lower Bann | 97.5 | **Blackwater** | 121.6 | **Upper Bann** | 110.7 | |
| Carlingford & Newry | 91.4 | **Upper Bann** | 110.7 | **Lough Neagh** | 123.8 | **Lower Neagh Bann** |
| Lower Lough Erne | 87.9 | Lower Bann | 97.5 | Lower Bann | 97.5 | |
| Moyola | 78.9 | Carlingford & Newry | 91.4 | Moyola | 78.9 | |
| Six Mile | 75.0 | Moyola | 78.9 | Six Mile | 75.0 | |
| Upper Lough Erne | 72.1 | Six Mile | 75.0 | Braid & Main | 51.4 | |
| Roe | 60.0 | Braid & Main | 51.4 | **South Down** | 105.3 | **Carlingford & Mourne** |
| | | | | Carlingford & Newry | 91.4 | |
| Glen & Rathlin | 52.4 | **Strangford** | 193.3 | | | |
| Braid & Main | 51.4 | **Lagan** | 159.1 | **Strangford** | 193.3 | **Strangford & Lecale** |
| Owenkillew | 50.0 | **Belfast L** | 157.1 | Quoile | 100.0 | |
| Larne | 50.0 | **Bush** | 123.5 | **Lagan** | 159.1 | **Belfast & Lagan** |
| Derg& Mourne | 47.1 | **South Down** | 105.3 | **Belfast L** | 157.1 | |
| Strule | 45.0 | Quoile | 100.0 | **Bush** | 123.5 | **Bush & Glens** |
| Arney | 39.3 | Glen & Rathlin | 52.4 | Glen & Rathlin | 52.4 | |
| Faughan | 30.0 | Larne | 50.0 | Larne | 50.0 | |

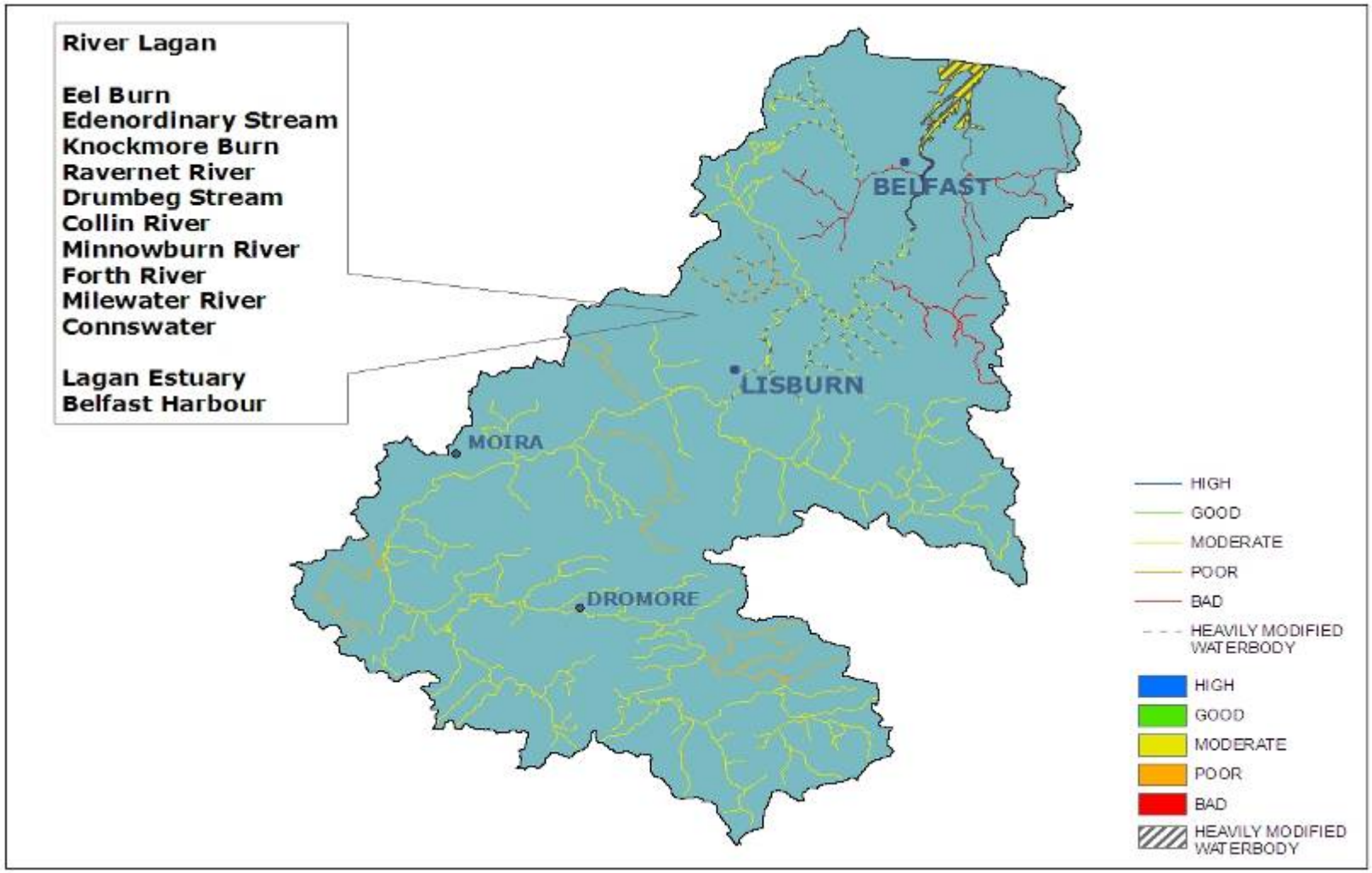
# Belfast Lough & Lagan CSG



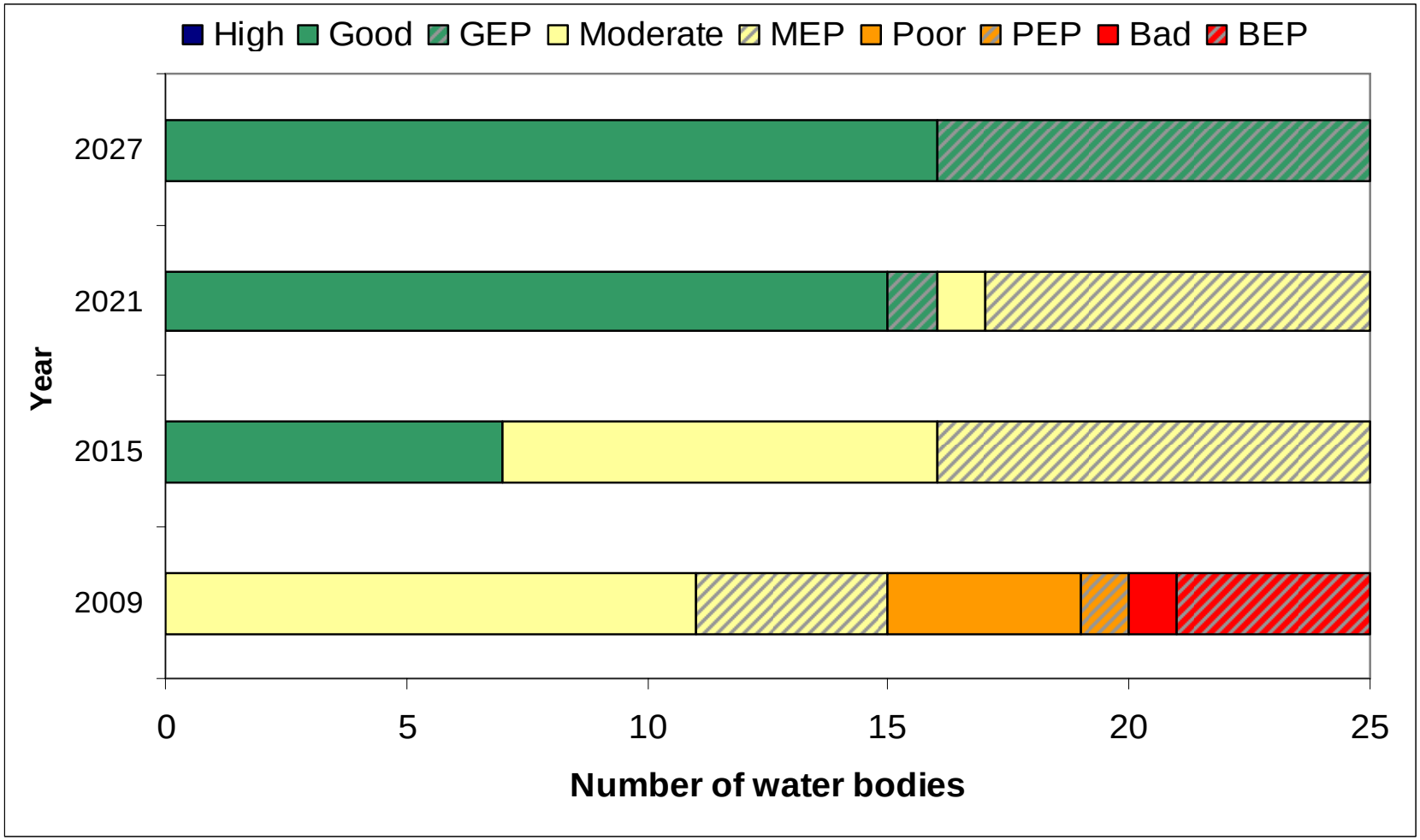
# Belfast Lough & Lagan CSG



# Belfast Lough & Lagan Status



# Lagan LMA Statistics



# Proposed Implementation Programme for Belfast Lough and Lagan CSG

- 2010 – Focus attention on Lagan LMA
- 2011 – " " " Belfast Lough LMA

- 2013 – Review situation on Lagan LMA
- 2014 – " " " Belfast Lough LMA

# Any Questions ?

# Discussion / Suggestions?