

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

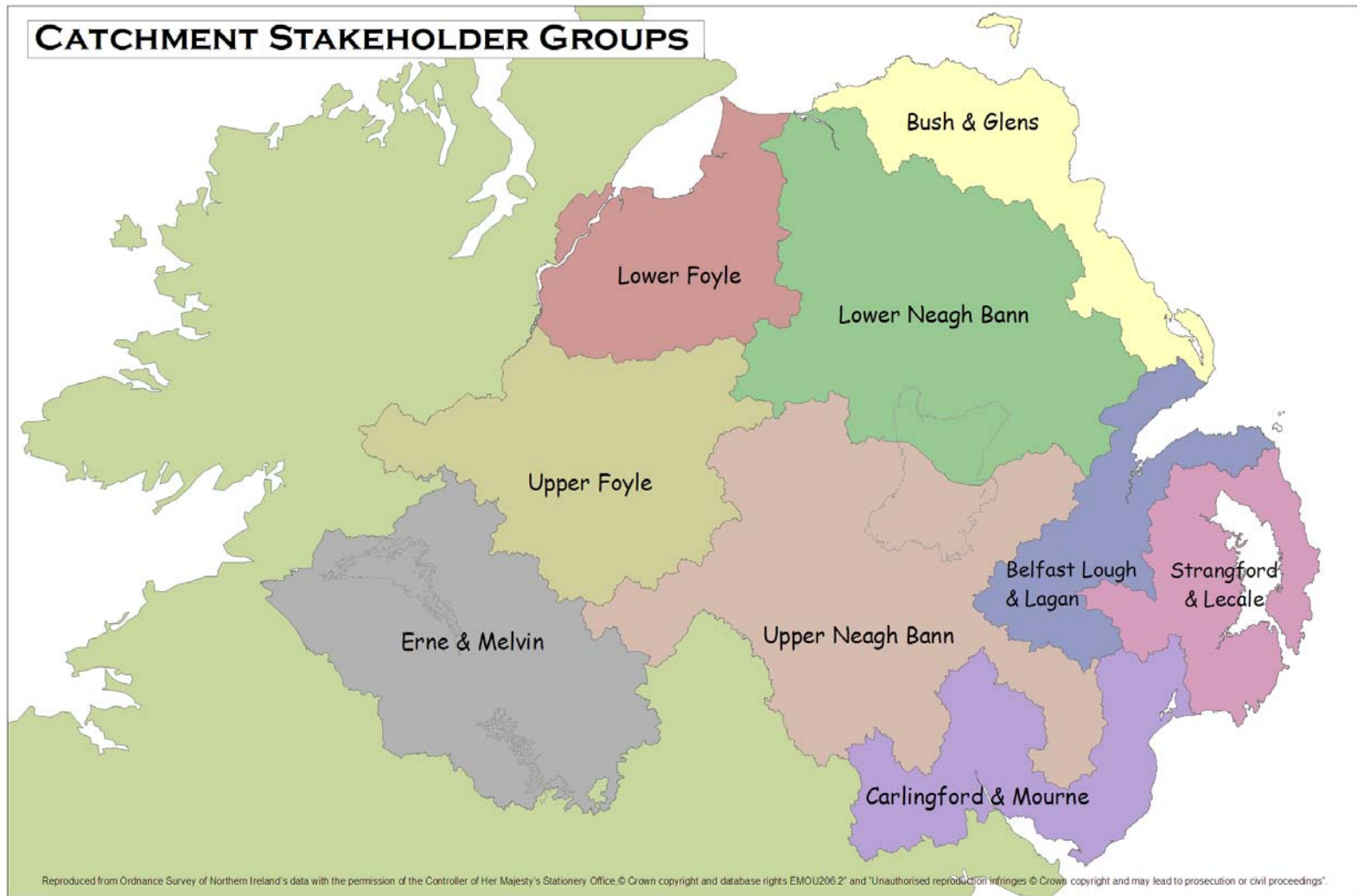
**Upper Neagh Bann
Catchment Stakeholder Group**

Kieron Callaghan – NIEA
River Basin Planning

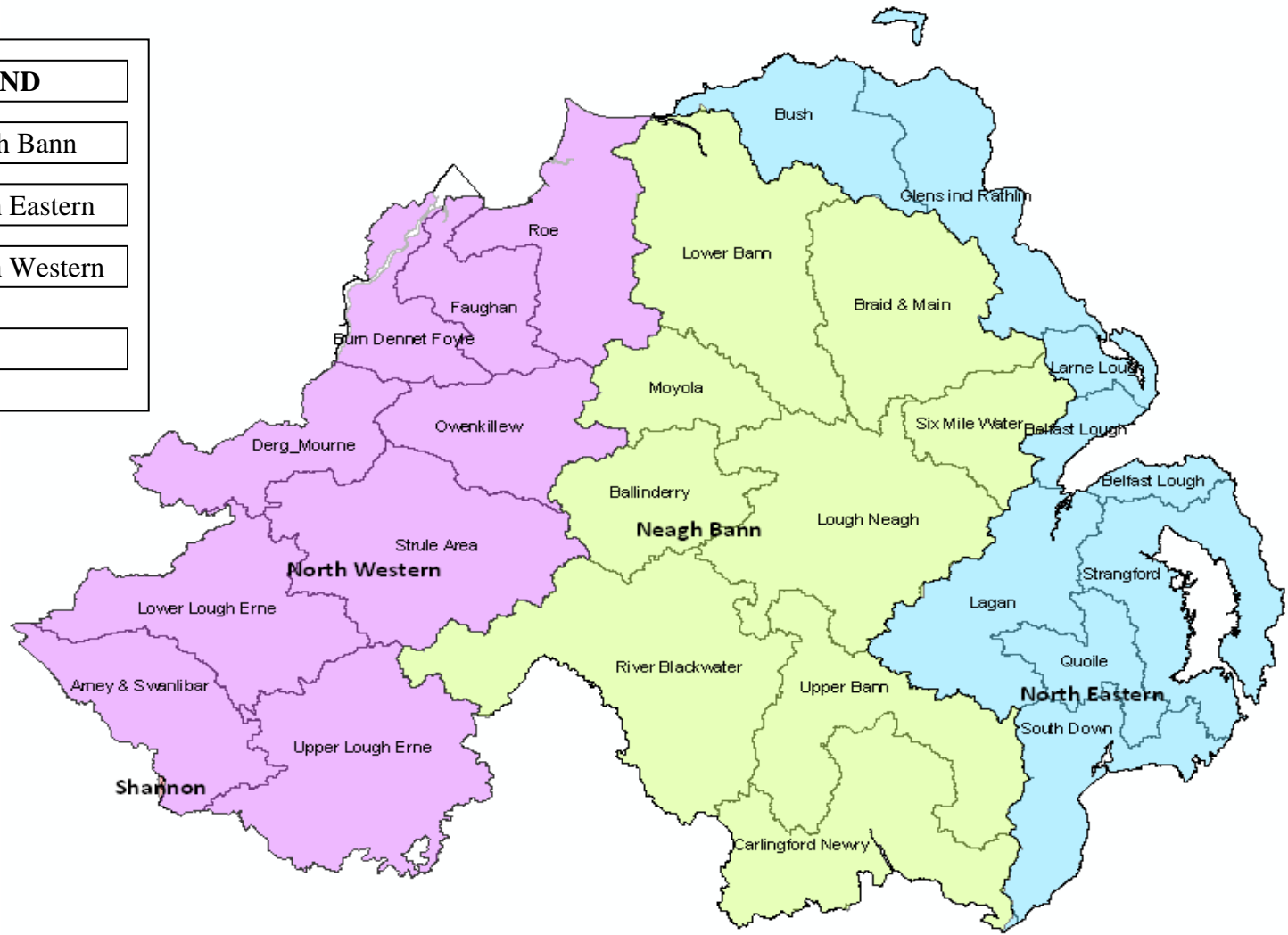
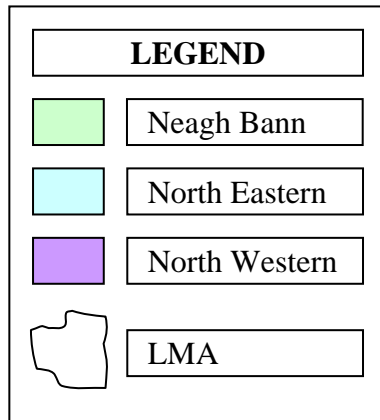
Implementation of the River Basin Management Plans

- 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



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 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 or Bad
 - % 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 available

Reason for Failure and Percentage Failure Spreadsheet

RWBID	Name WB		Overall Eco Status	Invertebrates	Macrophytes	Fish	Pearl Mussel	Diatoms	Phytoplankton	DO	Phosphorus	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	Invertebrates	Macrophytes	Fish	Pearl Mussel	Diatoms	Phytoplankton	DO	Phosphorus	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%

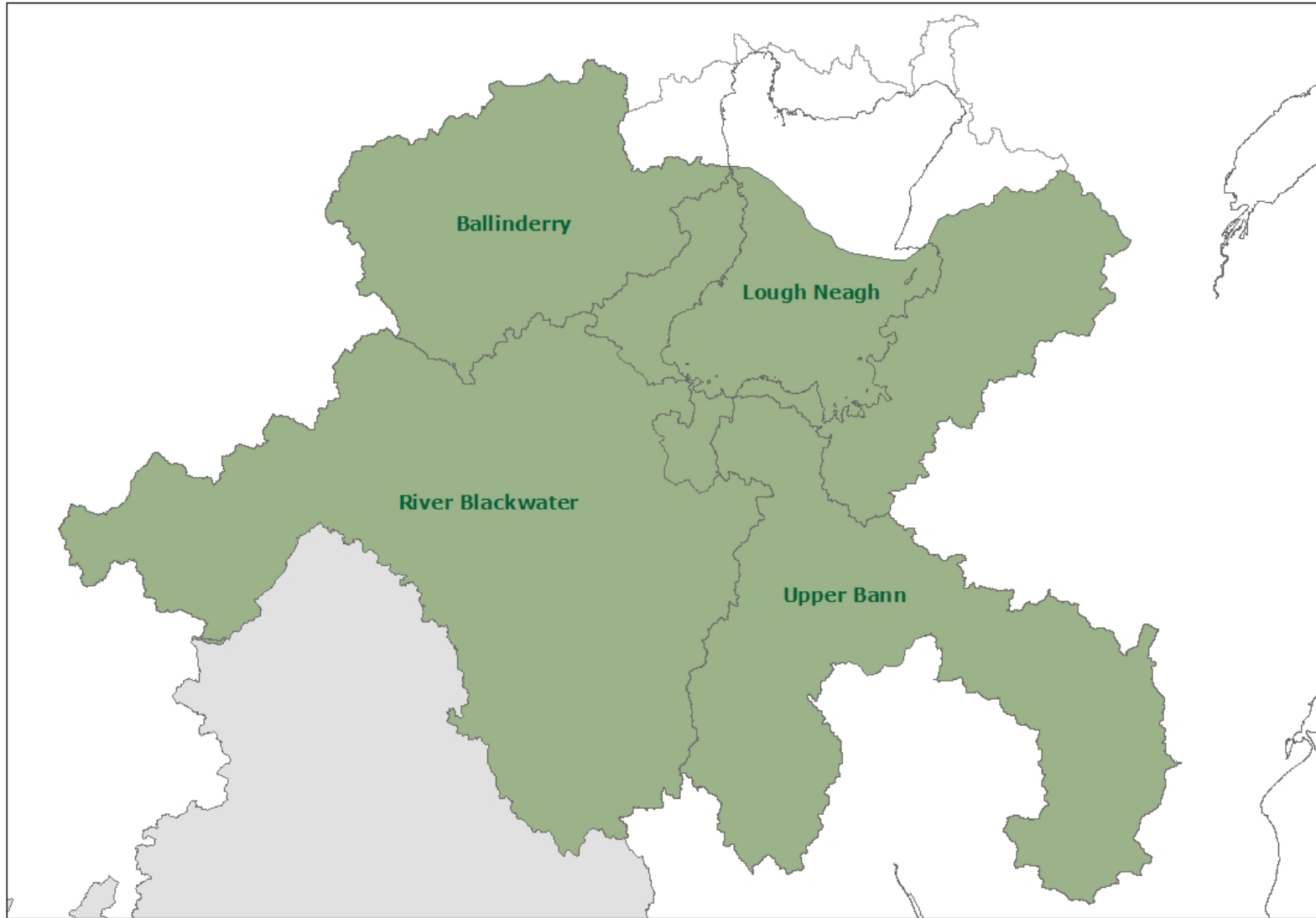
Proportion of Failing Water bodies and Eco Score

NB Assessment Rating												
Man Area	% < Good	Invertebrates	Macrophytes	FISH	Pearl Mussel	P & I	Number WBs <Mod	% <Mod	Number WBs <Bad	%Bad	Eco Score	Number of WBs
Ballinderry	91.7%	79.2%	29.2%	8.3%	16.7%	4.2%	11	45.8%	0	0.0%	137.5	24
Braid Main	45.7%	34.3%	28.6%	2.9%	0.0%	0.0%	2	5.7%	0	0.0%	51.4	35
Carlingford & Newry	68.6%	42.9%	14.3%	14.3%	0.0%	25.7%	7	20.0%	1	2.9%	91.4	35
Lough Neagh	95.2%	42.9%	33.3%	9.5%	0.0%	19.0%	4	19.0%	2	9.5%	123.8	21
Lower Bann	67.5%	57.5%	30.0%	0.0%	0.0%	7.5%	10	25.0%	2	5.0%	97.5	40
Moyola	68.4%	42.1%	42.1%	10.5%	0.0%	5.3%	2	10.5%	0	0.0%	78.9	19
Blackwater	82.4%	64.7%	35.3%	7.8%	0.0%	15.7%	16	31.4%	4	7.8%	121.6	51
Six Mile	66.7%	58.3%	8.3%	8.3%	0.0%	0.0%	1	8.3%	0	0.0%	75.0	12
Upper Bann	89.3%	60.7%	60.7%	7.1%	0.0%	7.1%	6	21.4%	0	0.0%	110.7	28

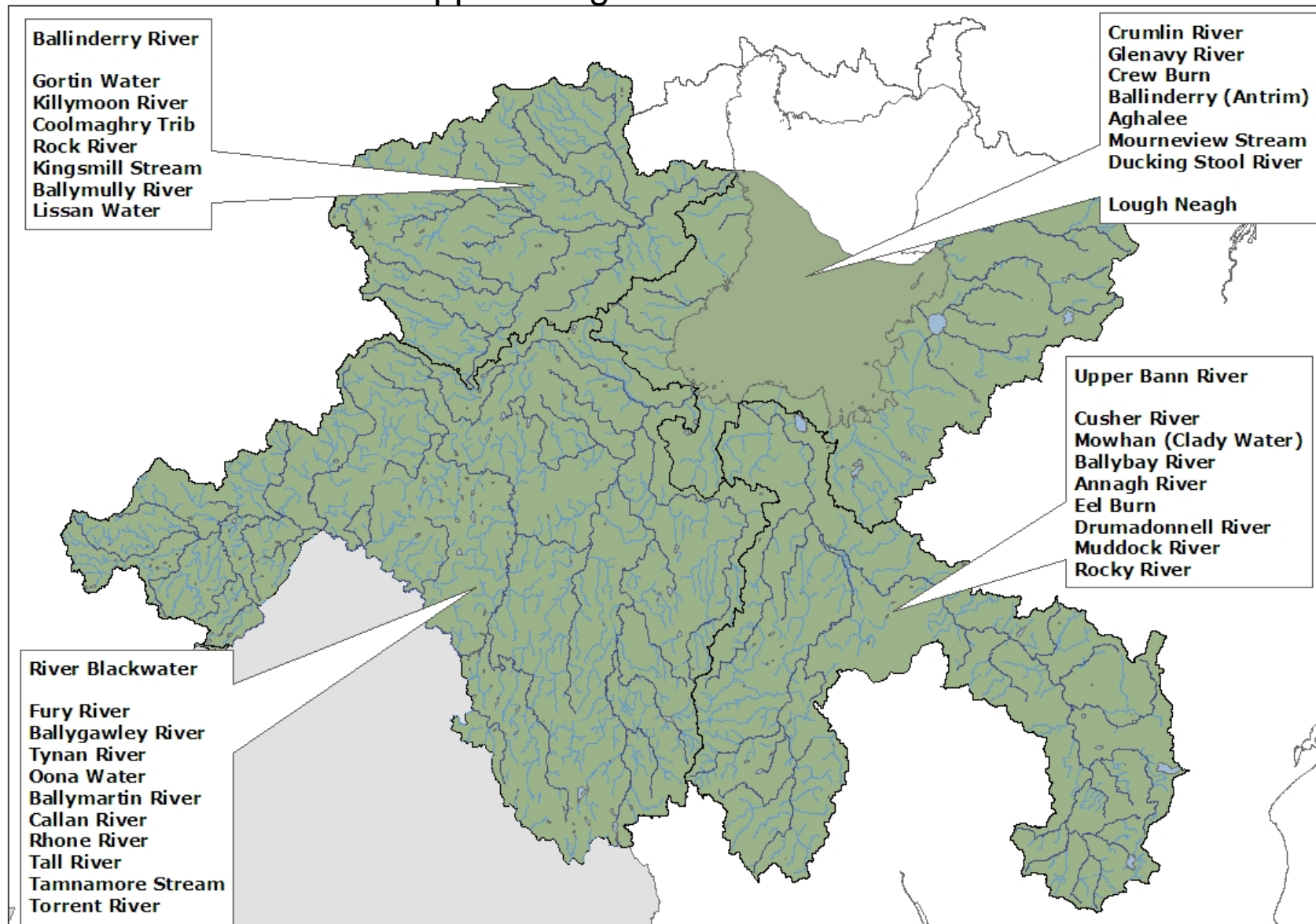
LMA Implementation Plan Selection

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	Carlifgord & 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	

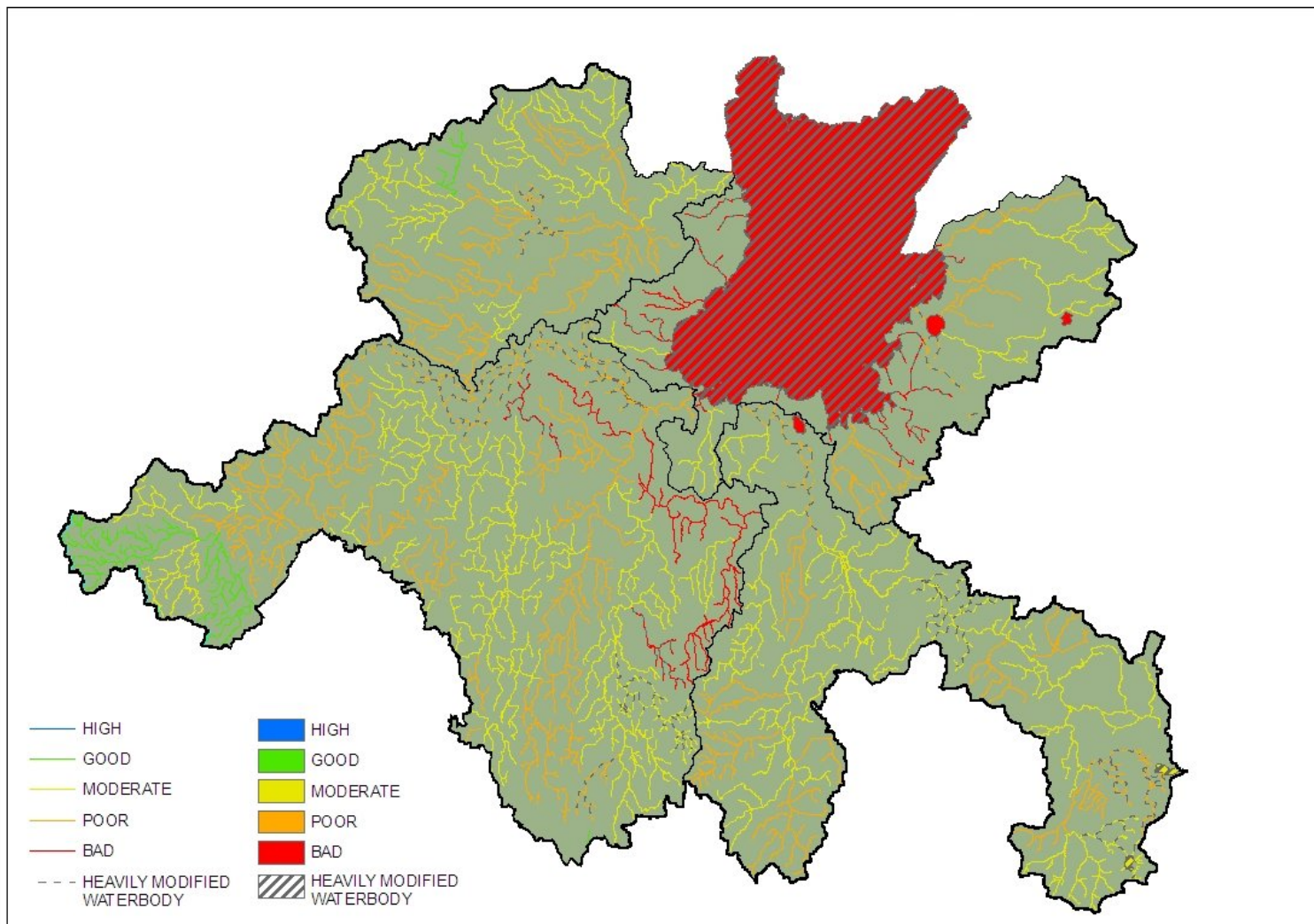
Upper Neagh Bann CSG



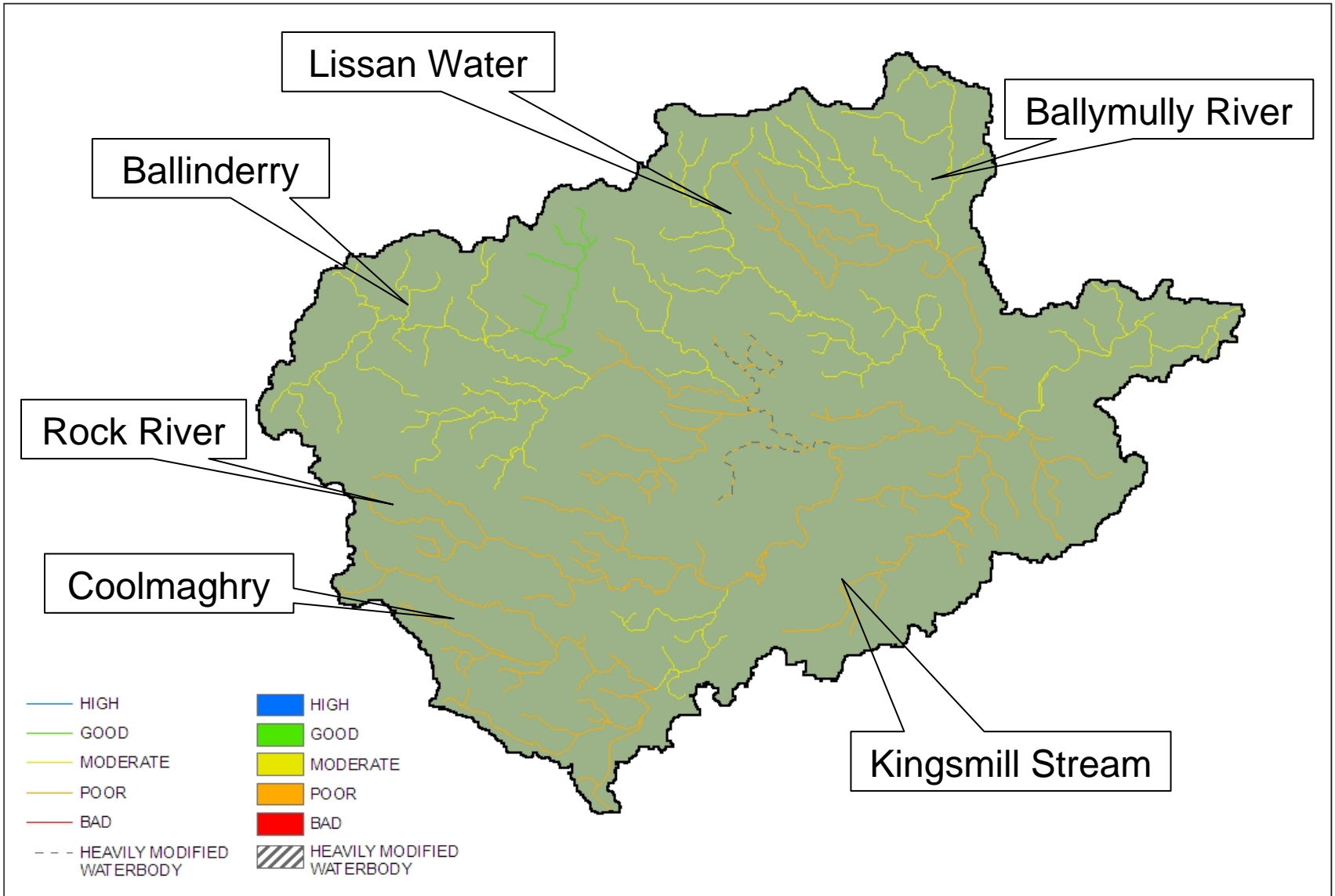
Upper Neagh Bann CSG



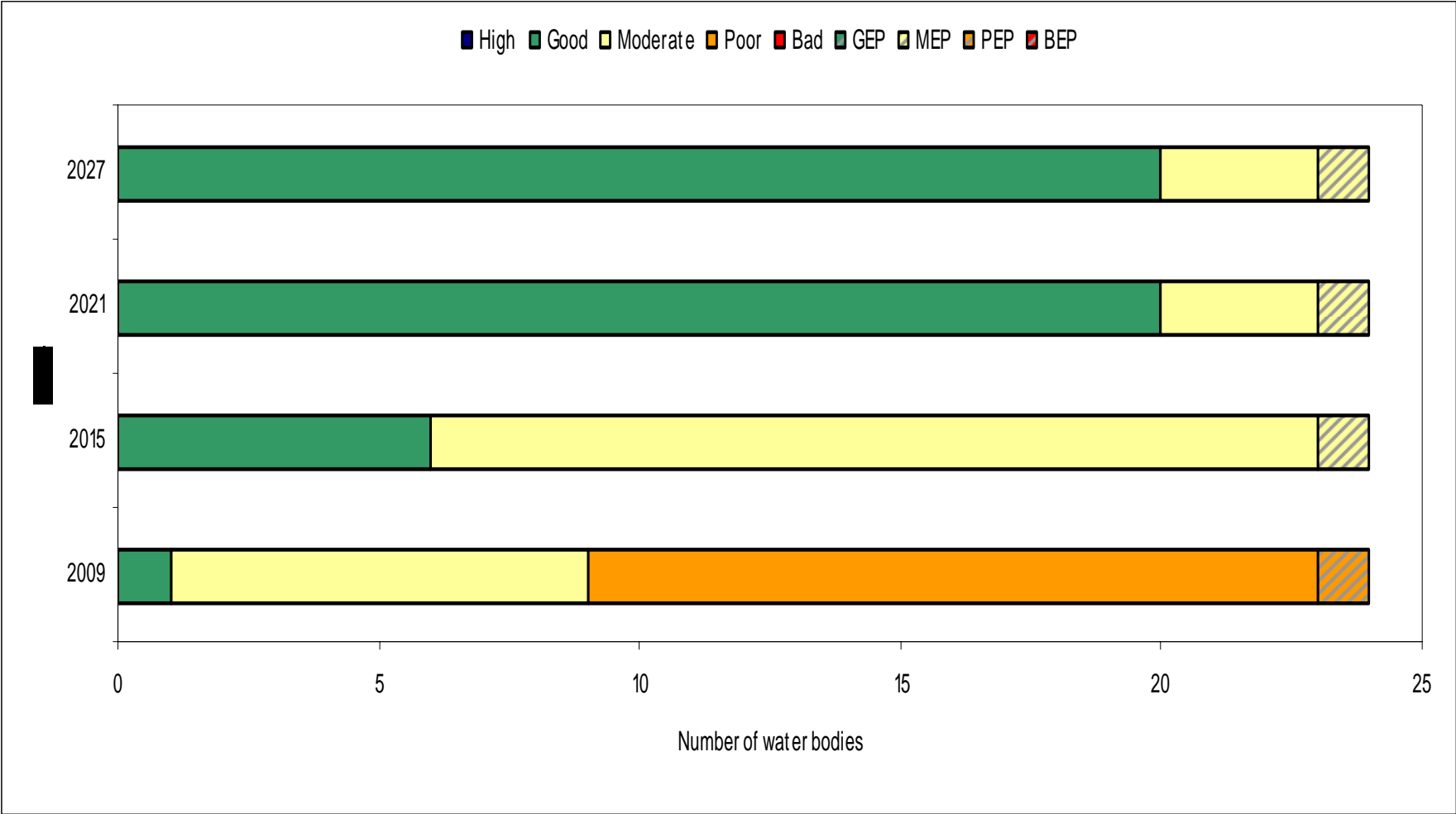
Upper Neagh Bann - Status



Ballinderry - Rivers



Ballinderry LMA Statistics



Reasons for failure Ballinderry LMA

NAME	Invertebrates	Macrophytes	Fish	DO	SRP	Morph Site Visit	Ammonia	Pearl Mussel	Pressures and Impacts
Ballinderry River	1	1	3	1	2	0	1	3	0
Ballinderry River	3	1	0	1	1	LESS THAN GOOD	2	0	0
Claggan River	4	2	0	2	2	LESS THAN GOOD	2	0	0
Drum Water Ballinderry	4	2	0	1	2	0	2	0	0
Ballymully River tributary	4	2	0	3	2	LESS THAN GOOD	2	0	0
Ballinderry River	3	4	0	1	2	0	1	3	0
Ballymully River	4	3	0	2	2	0	3	0	0
Ballinderry River	3	4	0	1	2	0	1	3	0
Killymoon River	4	1	0	1	2	0	1	0	0
Gortin Water	2	2	0	1	3	LESS THAN GOOD	2	0	0
Ballinderry River	3	4	0	1	2	0	1	0	0
Claggan River	3	3	0	2	2	LESS THAN GOOD	2	0	0
Ballymully River	3	1	0	2	1	LESS THAN GOOD	1	0	0
Ballymully River	4	2	0	2	2	0	1	0	0
Lissan Water	3	2	0	1	2	LESS THAN GOOD	2	0	0
Ballinderry River	3	2	0	2	2	LESS THAN GOOD	1	0	0
Ballinderry River tributary	0	0	0	0	0	LESS THAN GOOD	0	0	4
Kingsmill Stream Ballinderry	4	3	0	1	1	LESS THAN GOOD	1	0	0
Ballinderry River tributary	1	2	0	1	2	0	1	0	0
Rock River	4	2	3	1	2	LESS THAN GOOD	1	0	0
Claggan River	4	2	0	2	2	LESS THAN GOOD	2	0	0
Claggan River	4	2	0	2	2	LESS THAN GOOD	2	0	0
Claggan River	4	4	0	1	2	LESS THAN GOOD	1	0	0
Ballinderry River	2	2	0	2	2	2	1	3	0
No. Failed	19	8	2	1	1	14	1	3	1
No. Poor / Bad	11	4	0	0	0	0	0	0	1
No Bad	0	0	0	0	0	0	0	0	0
% Failed	79.2	33.3	8.3	4.2	4.2	58.3	4.2	12.5	4.2
% Poor / Bad	45.8	16.7	0	0	0	0	0	0	4.2
% Bad	0	0	0	0	0	0	0	0	0

Proposed Implementation Programme for Upper Neagh Bann CSG

Programme Year	LMA to focus attention on
2010	Ballinderry
2011	Blackwater
2012	Upper Bann
Programme Year	Review situation in LMA
2013	Ballinderry
2014	Blackwater
2015	Upper Bann

Any Questions ?
Discussion / Suggestions?