

Northern Ireland
Environment Agency

River Basin Management Plans (2015 - 2021)

Programme of Measures

Key Sectors: Agriculture

Pressure Type: Diffuse and Point Source Pollution

Pressure Type – Diffuse and point source pollution

Agriculture

Farming is a vital industry in Northern Ireland, however farming can have a major impact on water quality and can affect the quantity of water available.

Why is this a significant issue?

Intensive farming, including livestock and crop production, can lead to pollution. Animal waste can be washed from farm yards and fields, and produced by cattle and sheep which have direct access to rivers. Toxic substances, such as pesticides and sheep dip, can enter the water system – caused by the use or storage of chemicals too close to water, spillages in farmyards, and the inappropriate disposal of toxic substances and spend products – all of which can lead to chemicals leaching into groundwater or flowing into surface waters.

It is accepted that agriculture is a major contributor to the build-up of excess nutrients, such as nitrates and phosphates, which leach into groundwater or flow into surface water, due to the inappropriate application and storage of manures and inorganic fertiliser. High concentrations of phosphate can harm wildlife by stimulating excessive plant growth through a process known as eutrophication, while high concentrations of nitrate can add to the costs of processing drinking water.

Agricultural sources also contribute to the sediment loading entering the water environment – this build up of sediment occurs through soil erosion caused by inappropriate cultivation, and the trampling of riverbanks by livestock, as well as construction and other types of land disturbance. Excess sediment reduces the supply of oxygenated water to aquatic plants and animals, putting salmon and trout stocks at risk.

What are we already doing about this?

The introduction of actions under the Nitrates Action Programme (NAP) and the Phosphorus (Use in Agriculture) Regulations has contributed significantly to reducing the concentration of nutrients in the water environment from agriculture. The Farm Nutrient Management Scheme has led to improved storage capacity for livestock manures. Improved nutrient efficiency has been encouraged through nutrient management advice and training for farmers and promotion of the Manure Efficiency Technology Scheme. All agri-environment scheme participants require Farm Nutrient and Waste Management Plans.

A range of advisory materials is available to farmers which provide information on reducing water pollution and other water quality issues. A network of Farm Pollution Officers has been established through DARD's Countryside Management Branch. These officers can provide targeted advice to address diffuse pollution at an individual farm level.

A voluntary agreement has been made between DARD and the Northern Ireland Grain Trade Association to lower phosphorus levels in animal feedstuffs.

Farms are selected for inspections under Cross Compliance using a combination of risk factors; these include soil type, hydrology, and water bodies not meeting their objectives.

For a full list of measures already in place in the first cycle please see our website.

What further actions will deliver environmental improvements?

The following tables summarise the progress we have made against the supplementary measures proposed in the first RBMP (Table 1) and the new measures which we will take forward in the second cycle (Table 2).

These are measures which will improve our understanding of the pressures, enable us to improve the evidence base to target actions, and build on actions already complete.

In the current economic climate there is no certainty at this stage around future funding and budgets that will be available throughout the lifetime of this plan. However DOE will in collaboration with other departments and agencies continue to make a strong case for additional funding through the standard government bidding processes.

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Table 1 Summary of supplementary measures 2009-2015

Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
Reduction in Phosphorus inputs	To reduce P content of feedstuffs in NI and undertake a study to assess the reductions in P and the environmental benefits of lower P levels in diets.	Voluntary agreement	DARD	DOE, AFBI	In Place
	Ensure sustainable use of manures with a high phosphorus content, particularly poultry and pig manures.	Voluntary agreement	DARD	DOE, AFBI	In Place
	To produce a report on the current P budget for NI to support a review of the need to give statutory effect to phosphorus balances.	Research and development	DARD	DOE, AFBI	In Place
Address diffuse pollution from agricultural sources	To develop a diffuse pollution model to identify areas affected by diffuse pollution	Research and development	NIEA	DARD	Ongoing
	To develop and implement Local management area action plans to target advice and regulatory action	Local Management Area plans	NIEA	DARD	In Place
Reduction in nutrient inputs & Reduction in organic waste (organic matter, faecal pathogens, & ammonia)	Review and investigation of the effectiveness of wetlands in the reduction of nutrient loadings	Research and development	NIEA	DARD	In Place

Table 2 Summary of supplementary measures for 2015 to 2021

Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
Reduction in nutrient inputs & Reduction in organic waste (organic matter, faecal pathogens, & ammonia)	Measures to address the impact of pollution arising from farmyards, including farmyard audits and farmyard management practice with particular focus of farmyard drainage systems	Farm Inspections	NIEA	DARD	In Place
	Develop modelling tools to help understand the natural dynamics and science of the catchments, including groundwater. This may include further development of the SCIMAP tool which examines diffuse pressures, determines flow pathways and flood risk areas within catchments so that measures can be targeted to manage problem areas	Identification of agricultural and general diffuse critical risk areas using GIS and linking with hydrological significant pathways using SciMAP	NIEA		2020
Reduction in nutrients	Measures to address nutrients including review delivery of NAP and review of Rural Development Programme(RDP); Provision of training in Nutrient Management Planning; Provision of online farm nutrient calculators and the facilitation of soil sampling and analysis	NAP 2015-2018 agreed with European Commission. College of Agriculture, Food and Rural Enterprise (CAFRE) Training Programme. DARD online Services. Proposed Land Management Programme (LMP) under NI RDP 2014-2020	DARD/ NIEA/ DOE Regulatory and Natural Resources Policy Division (RNRPD)		2016

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Improvement Required	Actions	Delivery mechanism	Lead Department / Agency	Support Provider	Deadline for delivery of action (year end)
Reduction in pollution from sediment	The Environmental Farming Scheme (EFS) will include measures for riverbank fencing, riparian buffers and pasture pumps. These measures will help to address sediment input to rivers caused by livestock poaching and bank erosion by livestock.	Proposed EFS under the NI RDP	DARD		2016
Reduction in pollution from agricultural land	Consider measures within Woodland and EFS as part of RDP such as riparian woodland	Proposed Woodland schemes under the NI RDP to run 2016-2020	DARD	DARD Rivers Agency (RA)	2016
Education and Awareness	Use the Water Catchment Partnership (WCP) approach to work proactively together to promote and raise awareness of best practice when using pesticides on the farm.	WCP	WCP		2027
Protection of Freshwater Pearl Mussel sites	Implement measures developed through the INTERREG IVA funded project (Practical Implementation of Freshwater Pearl Mussel Measures) to minimise the impact of agriculture on fresh water pearl mussels	Partnership working between Government and NGOs	NIEA	DARD	2021
Reduction in nutrients	Target areas identified under Nitrates Directive reporting with increasing nutrients for investigation and action	As part of the targeted catchment projects identified through annual reporting	NIEA		2019
Protection of Bathing and Shellfish Water Protected areas	Developing models and catchment based approach to protect these areas. INTERREG VA project to develop prediction and discounting at bathing waters.	Partnership working between Government and Non-Government Organisations (NGOs)	Marine Environment Division (MED)	DARD/ NIW	2021

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Potential further new measure on microbial source tracking work to identify sources of bacterial contamination (waste water/ agriculture) being undertaken by NIW in conjunction with AFBI	Partnership working between government organisations	NIW		2021
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