

Current environmental baseline and trends for water – NORTHERN IRELAND		
Sub-topic	Current environmental baseline	Trends
Overall	<ul style="list-style-type: none"> In 2009, 28% of all NI water bodies were classed as good or better, by 2015 this will be 64% 	<p>NIEA have produced a facts and figures booklet on the condition of Northern Irelands inland and marine waters, compliance with industrial and waste water discharge standards and pollution incident reporting.</p> <p>http://www.doeni.gov.uk/niea/water-home/water_facts_booklet.htm</p>
Water quality	<ul style="list-style-type: none"> Drinking water: Overall microbiological quality for 2008 remains high at 99.85% compliance. Bathing water: In 2010, two beaches (out of 24 monitored) in Northern Ireland failed to meet the mandatory standards, while sixteen achieved the higher guideline standards. Groundwater: Sixty-five out of sixty-seven groundwater bodies are considered to be at “Good” status by WFD classification. Surface water (rivers): In 2009, 25 % of river waterbodies were classified as ‘High’ or ‘Good’. Surface Water (lakes): The WFD requires that lakes are classified as high, good, moderate, poor or bad, based on three parameters; total phosphorus, dissolved oxygen and chlorophyll. Nitrates: In October 2004, a total territory approach to the implementation of the Nitrates Directive was adopted in NI because of eutrophication of surface waters 	<ul style="list-style-type: none"> There has been a significant increase in the mean zonal compliance achieved at consumers’ taps: 99.49% reported for 2008; and 99.30% reported for 2007. This is mainly attributed to improved compliance for THMs as the ‘Alpha Project’, which upgraded water treatment facilities at five major water treatment works supplying 50 per cent of Northern Ireland’s drinking water, completed. Up until 2006, there were 16 beaches monitored in Northern Ireland. In 2008, this number increased to 24. In 2009, 5 of the 21 lake waterbodies in Northern Ireland are classified as good status and 16 lake waterbodies are classified as less than good status.

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Water pollution-Diffuse sources	<ul style="list-style-type: none"> • General: Water bodies are affected by diffuse source pollution impacts from agriculture, forestry, and land drainage and urbanisation. • Agriculture: Since 2001, there has been a steady decline in the percentage of river length with levels indicative of enrichment, decreasing from 27% in 2001 to the current level of 16%. This decrease coincides with a decline in the purchase and rate of application of phosphorus fertilisers. • Forestry: Forest and woodland cover now accounts for just over 6% of Northern Ireland's land area with public forests amounting to 70% of this area. • Urban development: Impacts include rain water falling upon impermeable surfaces, increase in use of household products and misconnections between the sewerage system and surface water drains. • Other sources: Includes contaminated run-off from roads, construction sites, fuel storage areas and other hard surfaces, septic tanks, the deposition of acid pollutants and nutrients from the air. In rural areas, many houses and businesses are not connected to public systems that collect, treat and dispose of wastewater: they rely mainly on on-site systems. 	<ul style="list-style-type: none"> • Agriculture: It has been estimated that a 20% rate of environmental improvement will be delivered by current regulatory and voluntary actions in the agriculture sector. • Forestry: The objective in Northern Ireland is to steadily expand woodland over the next 50 years to achieve 12% forest cover. Strategically positioned new woodland and well managed existing forests will benefit the aquatic environment by protecting soils from erosion, landslip and by providing a 'buffer' between watercourses and other land uses. • Urban development: Inputs from urban development sources are growing. The use of SuDS is encouraged in all responses to planning and permitted development applications however good practice is key to reducing pollution and alleviating flooding.

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Water pollution- Point sources	<ul style="list-style-type: none"> • Water utility discharges: Water Treatment Works and Waste Water Treatment Works are monitored against registered standards and the Urban Waste Water Treatment Regulations. Some Waste Water Treatment Works have been identified as discharging to sensitive areas and their effluent will require more stringent treatment. • Industry: The monitoring of effluent discharges gives an indication of levels of pollution to the water environment and improvements in controls. • Waste: There are at least 200 unregulated or illegal waste management facilities throughout Northern Ireland. NIEA receive approximately 1,000 reports of alleged illegal dumping each year. 	<ul style="list-style-type: none"> • The number of substantiated incidents attributed to each source for the period –2008-2009, shows that industry, farm and water utility services have continued to be the major sources of pollution, though farm and industrial incidents have reduced over this period. • Sixty-three boreholes and springs were monitored in 2008, 20 of which were part of the old network. Groundwater is currently of a high quality, with less than 2% of monitoring sites having an annual mean concentration of less than 40mg NO3/l. • There was a decrease of 18.1% of High and Medium severity incidents investigated during 2009 compared with 2008 figures. • Water utility discharges: A sustained improvement in compliance, which has now reached 88%, can be attributed to the commissioning of a number of new Waste Water Treatment Works and to improvement schemes carried out by NI Water. • Industry: There has been a steady increase in trade effluent compliance from 69% in 2000 88% in 2009. • Waste: Estimates suggest that in 2002–2004, a minimum of 250,000 tonnes of household waste from Ireland were illegally dumped in Northern Ireland. Legislation for dealing with contaminated lands and development of brownfield sites is being prepared currently.

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Water resources	<ul style="list-style-type: none"> <li data-bbox="472 297 930 745">• In NI water is abstracted for public drinking water supply, industrial use, use in the food and drink industry, hydro-power generation, agricultural and agri-industry use, recreational use (such as golf courses) and for use in fisheries. Abstraction and flow regulation for water supply accounts for 90% of the impacts upon hydrology in river water bodies. The remaining 10% of water bodies are affected by a range of sectors including flood control and manufacturing industries. <li data-bbox="472 757 930 1115">• Approximately 786,000 domestic and commercial properties in Northern Ireland are connected to the public water supply and each day Northern Ireland Water supplies approximately 625 million litres of drinking water to customers. The main sources of this public water supply are reservoirs (48%) and loughs (40%). Rivers and groundwater each supply 6%. 	<ul style="list-style-type: none"> <li data-bbox="954 297 1447 443">• Rising demand (due to population growth) and the impact of climate change may mean that some areas will experience a reduction in the available water resource in the future.

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Hydromorphology	<ul style="list-style-type: none"> • Freshwater: Examples of activities which have caused morphological alterations include construction of impounding structures such as dams and weirs on rivers and lakes for water supply and hydroelectric power. • Marine water: <ul style="list-style-type: none"> ○ There are many morphological pressures on the marine environment around Northern Ireland. In addition to construction pressures within ports, the drive for renewable energy is rapidly extending into the marine environment. Other morphological pressures on the marine environment include the extraction of marine minerals for the construction industry. ○ Fishing and aquaculture activities can also have a morphological impact, and in particular invasive techniques such as bottom trawling, fisheries-related dredging and bottom-culture mussels. There are extensive aquaculture activities within the sea loughs and this industry is important for the Northern Ireland economy. In 2008 64 marine sites licensed for the cultivation of shellfish and 2 marine sites licensed for the cultivation of finfish were recorded. 	<ul style="list-style-type: none"> • Freshwater: In some areas rivers and lakes have been altered to such a degree that attempting to return them to a natural condition would now be economically or technically infeasible. Such water bodies have been designated as Heavily Modified Water Bodies (HMWBs) 68 in total. • Marine water: <ul style="list-style-type: none"> ○ In addition to the major ports in NI 6 out of the 7 transitional waters have been designated as HMWBs. ○ Three NI transitional and coastal water bodies are considered to be at high status for morphology. The remainder of the transitional and coastal waters, with the exception of those that have been designated as heavily modified, are at good status morphologically.
Flooding	<ul style="list-style-type: none"> • It is estimated that in an event with a 100 to 1 chance of occurrence in any one year, some 60,000 properties in NI are at risk from flooding. Nearly 14,000 of these are situated within the Greater Belfast Area. 	<ul style="list-style-type: none"> • With increasing development and climate change the number of properties at risk is likely to increase.

Sources:

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