

Supplementary Material

This document supplements reports produced by APEM for the National Biodiversity Data Centre:

Tidbury, H., Houghton, R., Lintott, L., Rees, J., & Stebbing, P. (2026). Invasive Species Surveillance and Monitoring: A Comprehensive Review of Existing Programmes and Initiatives. A report commissioned by National Biodiversity Data Centre and completed by APEM Ltd.

Tidbury, H., Bullen, C., Lintott, L., Rees, J., Atkinson, S., & Stebbing, P. (2026). An Invasive Species Surveillance and Monitoring Framework for the Island of Ireland. A report commissioned by National Biodiversity Data Centre and completed by APEM Ltd.

Legislation Summary

Key invasive species legislation and policy relevant to the island of Ireland, and their requirements in the context of invasive species monitoring is documented below.

Legislation / Policy	Primary Focus	Brief description	Requirement for invasive species monitoring	Related / implementing national legislation
EU Invasive Alien Species Regulations (1143/2014)	Invasive Species	The Regulation sets out rules to prevent, minimise and mitigate the adverse impacts on biodiversity of the introduction and spread (both intentional and unintentional) of IAS. Under this legislation, listed species are prohibited from being kept, imported, sold, bred, grown and released into the environment. Included are stipulations for measures relating to early detection and rapid eradication of 'Species Union Concern' at an early stage of invasion and	It requires a surveillance system of IAS of Union concern, or inclusion in an existing system, which collects and records data on the occurrence in the environment of invasive species by survey, monitoring or other procedures to prevent the spread of IAS into or within the Union. It also states that the surveillance system: should cover the territory, including marine territorial waters, of the Member States to determine the presence and distribution of new as well as already established IAS of Union concern, and be used to monitor the effectiveness of eradication, population	This legislation is implemented in Northern Ireland (NI) by The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019. European Union (Invasive Alien Species) Regulations 2024 (SI 374/2024) function to give effect to 1143/2014 in Ireland (IE), with provisions to deal with IAS of national concern. This regulation makes provisions to enact Regulations 49 and 50 (in reference to third schedule species) of the European Communities (Birds and Natural Habitats) Regulations 2011.

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		management for those IAS that are already widely spread.	control or containment measures, as well as the impact on non-targeted species, as appropriate.	Note that the species lists remain of relevance to NI through the Windsor Framework.
EU Marine Strategy Framework Directive (2008/56/EC)	Good Environmental Status (Marine Waters)	The EU MSFD was put in place to "protect the marine ecosystem and biodiversity upon which our health and marine-related economic and social activities depend". The directive sets out 11 descriptors to help countries achieve good environmental status. Descriptor 2 relates to non-indigenous species (NIS). Regional and international cooperation is facilitated through OSPAR.	Requirement for the establishment and implementation of coordinated monitoring programmes for the ongoing assessment of the environmental status of marine waters. Invasive species monitoring is required for assessment against targets relating to the abundance and state characterisation of NIS, in particular invasive NIS (Criterion 2.1), and the environmental impact of NIS (Criterion 2.2)	Implemented through The European Communities (Marine Strategy Framework) Regulations 2011 (S.I. No. 249/2011) (and subsequent amendments) in IE. Implemented through The UK Marine Strategy Regulations (2010) in NI.
Convention on Biological Diversity Global Biodiversity Framework	Conservation of Biodiversity	The Convention on Biological Diversity was ratified in 1993 and established three main goals: the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of the benefits arising from the use of genetic resources. These goals are met through the achievement of specific targets, outlined in the 2023 Kunming-Montreal Global Biodiversity Framework, one of which relates to IAS. Specific requirements for member states are the creation of a national biodiversity strategy and action plan, which are implemented to achieve the targets, and reporting against targets to measure progress.	National monitoring, reviewing and assessment are key requirements for inclusion in national biodiversity strategies and action plans Monitoring to report against the IAS target (target 6): 'Eliminate, minimize, reduce and or mitigate the impacts of IAS on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority IAS, reducing the rates of introduction and establishment of other known or potential IAS by at least 50 per cent by 2030, and eradicating or controlling IAS, especially in priority sites, such as islands' is required.	The requirements of the CBD are fulfilled through the implementation of related legislation including: EU Invasive Alien Species Regulations (1143/214) (see above), European Communities (Birds and Natural Habitats) Regulations 2011 (see below), Wildlife law (such as The Wildlife (Northern Ireland) Order (as amended 2020) , see below), and Ireland's 4th National Biodiversity Action Plan (see below).
The Birds Directive (2009/147/EC) &	Nature Conservation	These complementary legislations focus on nature conservation. The Birds Directive requires the designation of Special Protected Areas (SPAs) to safeguard naturally occurring wild bird	There is a requirement for surveillance and monitoring of the conservation status of the natural habitats and species referred to in the Directives. 'Threats and pressures' require monitoring and assessment for the purposes of developing threat	The EU directives are transported into national law through the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) in IE, and the Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 (as amended) in NI.

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The Habitats Directive (92/43/EEC)		species and their habitats. The Habitats Directive requires designation of Special Areas of Conservation (SACs) for the protection of natural habitats, and wild flora and fauna.	response plans. As such, although not explicit, the monitoring of invasive species, as a 'threat', is required. Invasive species are also incorporated into condition assessments. The Regulations also include provisions for Habitats Regulations Assessments (HRAs) to evaluate potential impacts of plans or projects on European sites which may include invasive species.	The objectives of the Habitats Directive are also supported by the Marine Act (Northern Ireland) 2013 in NI, which focusses on marine planning and conservation through designation of Marine Conservation Zones (MCZs) Note provision to enact Regulations 49 and 50 of the European Communities (Birds and Natural Habitats) Regulations 2011 for third schedule species is included in the European Union (Invasive Alien Species) Regulations 2024 .
International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004	Ballast Water	This convention aims to control the transfer of harmful aquatic organisms in Ships' ballast. Invasive NIS are explicitly listed as one of the harmful aquatic organisms. It establishes standards and procedures for the management and control of ships' ballast water and sediments, outline a survey and certification regime for ships and prescribe technical requirements relating to ballast water management systems installed on ships. To note, the Convention (and the regulations implementing it) does not apply to domestically operating vessels.	Invasive NIS are explicitly listed as one of the harmful aquatic organisms. IMO Guidelines (G7), to be followed when considering exemptions to the ballast water management requirements, outline the need for data on invasive species in donor and recipient ports to inform 'biogeographical risk assessment	This convention is implemented through The Merchant Shipping (Control and Management of Ships' Ballast Water and Sediments) Regulations 2022 in NI, and the Sea Pollution (Ballast Water Management Convention) (Amendment) Regulations 2023 in IE.
Water Framework Directive (2000/60/EC) European Communities (Water Policy) Regulations 2003 (S.I. No. 722/2003)	Good Ecological & Chemical Status (Fresh & transitional waters)	The purpose of the Directive is to establish a framework for the protection of inland surface waters, transitional waters, coastal waters and groundwater, which prevents further deterioration and protects and enhances the status of aquatic ecosystems.	IAS are one of the 'other pressures' documented that could result in a water body failing to meet environmental objectives. Guidance has been produced on how to incorporate alien species data into ecological status classification (UK TAG). While there is no explicit requirement, invasive species should therefore be actively recorded and included in Water body status assessments.	This directive is implemented through the Water Framework Directive (2000/60/EC) European Communities (Water Policy) Regulations 2003 (S.I. No. 722/2003) in IE, and Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 , in NI.

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Ireland's 4th National Biodiversity Action Plan (2023-2030)	Conservation of Biodiversity	The NBAP puts forward a national approach to the governance and conservation of biodiversity, accounting for the wide range of policies, strategies, conventions, laws and targets at the global, EU and national level. There are five strategic Objectives: 1 – Adopt a Whole of Government, Whole of Society Approach to Biodiversity 2 – Meet Urgent Conservation and Restoration Needs (this includes elevating efforts to tackle IAS) 3 – Secure Nature's Contribution to People 4 – Enhance the Evidence Base for Action on Biodiversity 5 – Strengthen Ireland's Contribution to International Biodiversity Initiatives	The strategy Action plan states that by the end of 2023, a systematic baseline survey of priority invasive species and key hot-spot sites has been undertaken with subsequent periodic monitoring.	
Council Regulation (EC) No. 708/ 2007 concerning the use of alien and locally absent species in aquaculture	Invasive Species	This regulation establishes a dedicated framework to assess and minimise the possible impact of alien and locally absent species used in aquaculture in the aquatic environment (European Non-native Species in Aquaculture Risk Analysis Scheme). It requires, as far as possible and as appropriate, prevention of introduction, control or eradication of those alien species which threaten ecosystems.	Article 18 states that: NIS shall be monitored after their release into open aquaculture facilities for a period of two years or a full generation cycle, whichever is longer, to assess whether the impacts were accurately predicted or if there are additional or different impacts. In the event of a non-routine translocation, Article 22 states that the species shall also be monitored in accordance with Article 18.	EC regulation retained in IE and implemented through The Alien and Locally Absent Species in Aquaculture Regulations (Northern Ireland) 2012 as amended by the The Alien and Locally Absent Species (Aquaculture) (Amendment) (EU Exit) Regulations (Northern Ireland) 2020 , in NI.