

Bioinvasion and Global Environmental Governance: The Transnational Policy Network on Invasive Alien Species

The European Union's Actions on IAS

Description⁹

The European Union (EU) is a political and economic union of 27 member states spanning from Western to Eastern Europe. Through a standardised system of laws, the EU has developed a single market, comprised of almost 500 million citizens, guaranteeing freedom of movement of people, goods, services, and capital. Fifteen member states have adopted a common currency, the euro. Twenty-one EU countries are members of NATO.

The EU operates through a system of intergovernmental institutions, organizations, and bodies some of which require consensus decision, while others are independent decision-making bodies. EU citizens elect the Parliament every five years. Some institutions and bodies of the EU include the [European Commission](#), the European Council, the [Council of the European Union](#), the [European Parliament](#), the European Court of Justice, and the European Central Bank.

Legislation relating to IAS

- European Parliament resolution of 3 February 2009 on Wilderness in Europe ([2008/2210\(INI\)](#)): “Calls on the Commission and Member States to work together to develop a robust legislative framework on invasive alien species that tackles both ecological and economic impacts arising from such species and the particular vulnerability of wilderness areas to this threat.”
- European Parliament resolution of 4 February 2009 on "2050: The future begins today – Recommendations for the EU's future integrated policy on climate change" ([2008/2105\(INI\)](#)): “Highlights the importance of the ecosystem approach in avoiding and lessening the effects of soil erosion, destruction of permafrost, desertification, invasive alien species and forest fires;”
- European Parliament resolution of 22 May 2007 on halting the loss of biodiversity by 2010 ([2006/2233\(INI\)](#)): contains a section on “Invasive alien species and Alien Genotypes” (Objective 5)” including the limitation of IAS introductions through legislation (5.47), immunocontraception (5.46), the introduction of effective controls on ballast water releases (5.49), and the control of genetically modified fish from being released into marine ecosystems (5.51).^{III}
- European Parliament resolution of 12 July 2007 on a future maritime policy for the European Union: a European vision for the oceans and seas ([2006/2299\(INI\)](#)): “Draws attention to the sometimes disastrous impact of exotic organisms in the marine ecosystem and recognises that invasive alien species are a significant threat to marine biodiversity; calls on the Commission to take urgent measures to prevent the transfer of organisms in ballast water and to introduce effective controls on the discharge of ballast water within EU waters;”
- European Parliament legislative [resolution on the proposal for a directive of the European Parliament and of the Council establishing a Framework for Community Action in the field of Marine Environmental Policy](#) (Marine Strategy Directive): “In view of the particular

sensitivities of the Baltic Sea ecosystem, due to its enclosed and brackish nature, Member States surrounding the Baltic should seek to address as a matter of urgency the particular threats to the Baltic Sea, such as eutrophication, the introduction of invasive species and overfishing.”

- European Parliament legislative [resolution on the proposal for a decision of the European Parliament and of the Council concerning the seventh framework programme of the European Community for research, technological development and demonstration activities \(2007 to 2013\)](#): “Conservation and sustainable management of natural and man-made resources: ecosystems; water resources management; waste management and prevention; protection and management of biodiversity, including control of invasive alien species, soil remediation and protection, protection of seabeds, lagoons and coastal areas, approaches against desertification and land degradation, preservation of landscape; forest and mineral management; sustainable management and planning of urban environment, historic resources, cultural heritage and tourism; data management and information services; assessment and foresight relating to natural processes.”
- [Council Directive 2005/94/EC on Community measures for the control of avian influenza and repealing Directive 92/40/EEC](#) (20 December 2005)
- EC Directive 79/409/EEC on the Conservation of Wild Birds ([EC Birds Directive](#)). The Directive provides a framework for the conservation and management of, and human interactions with, wild birds in Europe. It sets broad objectives for a wide range of activities, although the precise legal mechanisms for their achievement are at the discretion of each Member State (in the UK delivery is via several different statutes). The Directive applies to the UK and to its overseas territory of Gibraltar. In particular, Article 11 states “Requirements to ensure that introduction of non-native birds do not threatened other biodiversity.”
- EC Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora ([EC Habitats Directive](#)). The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures Member States are required to take account of economic, social and cultural requirements and regional and local characteristics. “The fundamental purpose of this directive is to establish a network of protected areas through the EU, called NATURA 2000, that is designed to maintain the distribution and the abundance of threatened species and habitats, both terrestrial and marine. Areas are included in NATURA 2000 on the basis of the presence of habitats and species, as listed in the Annexes... However, the Directive also contains species protection provisions which prohibit commercial trade for certain species.”³
- [Commission Regulation \(EC\) No 811/2008](#) of the 13 August 2008 Suspending the introduction into the Community of specimens of certain species of wild fauna and flora
- [EC Commission Directive 95/44/EC](#) of 26 July 1995 establishing the conditions under which certain harmful organisms, plants, plant products and other objects listed in Annexes I to V to Council Directive 77/93/EEC may be introduced into or moved within the Community or certain protected zones thereof, for trial or scientific purposes and for work on varietal selections.³

- [EC Council Directive 2000/29/EC](#) of 8 May 2000 on protective measures against the introduction into the Community of organisms harmful to plants or plant products and against their spread within the Community.
- [EC Council Regulation no. 338/97](#) of 9 December 1996 Protection species of wild fauna and flora by regulating trade therein. (see economic section of table 1 for details)

Government Agencies/Committees Dealing with IAS

- [European Commission: Environment](#)
- [European Environmental Agency](#)
- [Committee on Trade in Wild Fauna and Flora](#)
- [Institute for European Environmental Policy](#)

Major Invasive Alien Species: [DAISE 100 of the Worst](#)¹

Acacia dealbata (tree)	Frankliniella occidentalis (insect)
Ailanthus altissima (tree)	Halophila stipulacea (sea grass)
Alexandrium acatenella (plankton)	Impatiens glandulifera (plant)
Ambrosia artemisiifolia (plant)	Leptinotarsa decemlineata (insect)
Anguillicola crassus (nematode)	Lithobates catesbeianus (amphibian)
Anoplophora chinensis (insect)	Mnemiopsis leidyi (comb jelly)
Aphanomyces astaci (fungus)	Myocastor coypus (semi-aquatic rodent)
Bemisia tabaci (insect)	Neogobius melanostomus (fish)
Bonnemaisonia hamifera (algae)	Odontella sinensis (algae)
Brachidontes pharaonis (mollusk)	Ophiostoma novo-ulmi (fungi)
Branta Canadensis (bird)	Oxyura jamaicensis (bird)
Cameraria ohridella (insect)	Paralithodes camtschaticus (crab)
Campylopus introflexus (moss)	Phytophthora cinnamomi (fungus)
Carpobrotus edulis (plant)	Prunus serotina (tree)
Caulerpa taxifolia (algae)	Rattus norvegicus (rat)
Cervus nippon (mammal)	Salvelinus fontinalis (fish)
Chattonella cf. (phytoplankton)	Sciurus carolinensis (squirrel)
Codium fragile (algae)	Tamias sibiricus (squirrel)
Crobicula fluminea (mollusk)	Threskionis aethiopicus (bird)
Diabrotica virgifera (insect)	Trachemys scripta (reptile)
Dreissena polymorpha (mollusk)	Undaria pinnatifida (algae)
Elodea canadensis (aquatic herb)	
Ensis americanus (mollusk)	

Native Species Exported/Introduced to Non-Native Environments¹

Acer platanoides (tree)	Frangula alnus (shrub)
Centaurea melitensis (herb)	Lotus corniculatus (herb)
Columba livia (bird)	Melilotus alba (herb)
Cotinus coggygria (tree, shrub)	Onopordum acanthium (herb)
Euphorbia esula (herb)	Ostrea edulis (mollusc)

[Phalaris arundinacea](#) (grass)
[Polysiphonia brodiei](#) (algae)
[Rhamnus alaternus](#) (tree)
[Rhamnus cathartica](#) (tree)
[Sabella spallanzanii](#) (annelid)

[Salmo trutta](#) (fish)
[Salsola tragus](#) (shrub)
[Sirex noctilio](#) (insect)
[Tinca tinca](#) (fish)

Table 1 Actions to prevent, detect and manage IAS categorized into three themes: biodiversity, human health, and economic

Note: Actions (such as projects, publications and programs) are classified according to the most obvious theme but may also fit into the dimensions of another.

Theme	Action
Biodiversity	<ul style="list-style-type: none"> <li data-bbox="505 632 1435 1142">• Commission Communication "Towards an EU Strategy on Invasive Species": The Commission adopted on 3 December 2008 a Communication presenting policy options for an EU Strategy on Invasive Species, including measures that can be put in place immediately, such as the Europe-wide early warning system to report on new and emerging species. In the Communication the Commission: <ul style="list-style-type: none"> <li data-bbox="565 890 1406 957">- examines the evidence regarding the ecological, economical and social impact of invasive species in Europe, <li data-bbox="565 961 1325 1029">- analyses the effectiveness of the current legal situation for tackling this problem and <li data-bbox="565 1033 1295 1066">- describes four possible options for a future EU strategy. The communication was developed from the discussion paper "Developing an EU Framework for Invasive Alien Species" <li data-bbox="505 1146 1435 1877">• The European Strategy on Invasive Alien Species (PDF, 296 kb) from 2003 aims to facilitate implementation of international commitments and best practice and to support development of realistic policies, measures and targets. The Strategy addresses these constraints. It aims to facilitate implementation of international commitments and best practice and to support development of realistic policies, measures and targets. Priority actions are proposed that are key in terms of time and feasibility of implementation. Many European States face similar constraints in their Invasive Alien Species efforts. Depending on the country, these may include: <ul style="list-style-type: none"> <li data-bbox="565 1520 1406 1612">- shortage and inaccessibility of scientific information (for species identification, risk analysis, detection and mitigation techniques etc.); <li data-bbox="565 1617 1419 1650">- low public awareness and opposition to government intervention; <li data-bbox="565 1654 1198 1688">- absence of clear and agreed priorities for action; <li data-bbox="565 1692 1334 1764">- ease of introduction and movement (e.g. through the post), inadequate inspection and quarantine; <li data-bbox="565 1768 997 1801">- inadequate monitoring capacity; <li data-bbox="565 1806 1192 1839">- lack of effective emergency response measures; <li data-bbox="565 1843 1023 1877">- outdated or inadequate legislation;

	<ul style="list-style-type: none"> - poor coordination between government agencies, States and other stakeholders.¹¹ • EU Conference on Invasive Species held in Madrid on 15-16 January 2008. Final Declarations of the conference include the recognition that prevention is “the first and most desirable response”, hence the need to promote scientific research on IAS, their pathways and interactions with the environment; the need to invest in early warning and rapid response systems; the development of a uniform legal framework to mitigate IAS; the need to engage the public; and the importance of environmental education in tackling IAS.² • Streamlining European 2010 Biodiversity Indicators (SEBI) as part of Halting the Loss of Biodiversity by 2010 campaign identifies invasive alien species as the 10th indicator in the technical report for the first set of indicators to monitor progress in Europe. • International actions set out by the Halting the Loss of Biodiversity 2010 campaign, include cooperation with the IMO Ballast Water Convention and the 6th Environment Action Programme, as well as ratification by all EU states of the Ballast Water Convention.⁴ • Delivering Alien Invasive Species Inventories for Europe (DAISIE) is an online, searchable database of IAS affecting the European continent, funded by the European Commission. The web site presents information on IAS with the intention of illustrating in as comprehensive a manner as possible, as many of the social and biological variables that interact with introductions, their spread, and their various impacts.⁵ DAISIE Handbook for Europe • The Regional Biological Invasions Centre (RBIC) was a web resource financed by the EU and Russian Federation that offered access to global, regional, sub-regional and national web resources on IAS. (Project is now closed) The RBIC hosted the European Research Network on Aquatic Invasive Species (ERNAIS), the Geographic Information System on Aquatic Alien Species of the Baltic Sea (GIS Invader), and the Caspian Environment Programme: Regional Invasive Species Advisory Group (CEP RISAG), among others.⁸ • The Northern European and Baltic Network on Invasive Species (NOBANIS) is a gateway to information on IAS in North and Central Europe. NOBANIS covers marine, freshwater and terrestrial environments and provides: <ul style="list-style-type: none"> - a distributed but integrated database on introduced species in the region - fact sheets on many of the most invasive aliens - a catalogue of the regulation relevant to invasive species in participating countries - a literature database - connects to regional and global networks and projects of
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	<p>invasive aliens species</p> <ul style="list-style-type: none"> • European Commission’s research project “Assessing Large-scale environmental Risks for biodiversity with tested Methods” (ALARM) seeks to thoroughly assess environmental problems through the use of various modules representing different ecological and social phenomena. Each module is run by experts in the corresponding area, who then examine the interplay of the various modules with one another. Besides IAS, modules representing socio-economy, climate change, environmental chemicals, and loss of pollinators are included.⁷
Human health	<ul style="list-style-type: none"> • See legislature section above
Economic	<ul style="list-style-type: none"> • EC Council Regulation no. 338/97 of 9 December 1996 Protection species of wild fauna and flora by regulating trade therein. The regulation “provides the general legal framework and lays down the provisions for internal EU trade as well as import, export and re-export of specimens of species listed in the four Annexes, including procedures and documents required (e.g. import and export permits, re-export certificates, import notifications and internal trades certificates...). Other subjects covered are the movement of live specimens, types of violations and the establishment of the different bodies at EU level.”³ <ul style="list-style-type: none"> - Article 18 established a Committee on Trade in Wild Fauna and Flora that consists of representatives of Member States’ Management Authorities and is chaired by the representative of the European Commission. The Committee meets approximately three times a year in Brussels and decides on measures to improve the implementation of the EC Wildlife Trade Regulations. The meeting agenda and summaries can be obtained from the EU Commission’s CITES website.”³ - Article 14.3 establishes an Enforcement Group that consists of representatives of Member States’ authorities in charge of wildlife trade controls (e.g. customs and police services and is chaired by a representative of the European Commission. The Enforcement Group meets twice a year in Brussels and examines technical questions related to enforcement matters raised, either on the initiative of the chairman or at the request of a member of the group or the Committee. The meeting agenda is available on the EU Commission’s CITES website.³ - Article 17 of establishes a Scientific Review Group that consists of representatives of each Member States’ Scientific Authority and is chaired by a representative of the European Commission. The SRG meets approximately three times a year in Brussels and examines all scientific questions related to the application of the EC Wildlife Trade Regulations. It also assesses whether trade has a harmful effect on the conservation status of species. The meeting agenda and summaries can be obtained from the

	<p>European Commission's CITES website.³</p> <ul style="list-style-type: none"> Ballast Water Management Strategy for North West Europe have adopted Voluntary Ballast Water Guidelines for Vessels, which includes an action to promote the guidelines and operates under a select ballast water management region.
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Table 2 Actions on IAS in cooperation with other countries

Agreement/ Organization	Countries/ Member	Action
Central European Free Trade Agreement (CEFTA)		<p>Chapter II – Article 15: Sanitary and Phytosanitary Measures includes provisions that states that all parties shall apply their regulations in veterinary, plant health and health matters in a non-discriminatory fashion and shall not introduce any new measures that have the effect of unduly obstructing trade.⁸</p>
European Strategy on Invasive Alien Species (December 2003) under the Convention on the Conservation of European Wildlife and Natural Habitats (the Bern Convention)		<p>The Strategy promotes the development and implementation of coordinated measures and cooperative efforts throughout Europe to prevent or minimise adverse impacts of IAS on Europe's biodiversity, as well as their consequences for the economy and human health and well-being. The Strategy provides guidance to help Bern Convention Parties in their efforts to:</p> <ul style="list-style-type: none"> rapidly increase awareness and information on IAS issues and ways to tackle them; strengthen national and regional capacity and cooperation to deal with IAS issues; prevent the introduction of new invasive alien species into and within Europe and support rapid response to detected incursions; reduce the adverse impact of existing invasive alien species; recover species and restore natural habitats and ecosystems that have been adversely affected by biological invasions, where feasible and desirable (§8); and identify and prioritise key actions to be implemented at the national and regional level. <p>The Bern Convention is a binding international legal instrument in the field of nature conservation, which covers the whole of the natural heritage of the European continent and extends to some States</p>

		<p>of Africa.</p> <p>Its aims are to conserve wild flora and fauna and their natural habitats and to promote European co-operation in that field.</p>
<p>the Pan-European Strategy for Biodiversity and Landscape</p>		<p>The Pan-European Biological and Landscape Diversity Strategy presents an innovative and proactive approach to stop and reverse the degradation of biological and landscape diversity values in Europe. Innovative, because it addresses all biological and landscape initiatives under one European approach. It is proactive, because it promotes the integration of biological and landscape diversity considerations into social and economic sectors. The Strategy reinforces the implementation of existing measures and identifies additional actions that need to be taken over the next two decades. The Strategy also provides a framework to promote a consistent approach and common objectives for national and regional action to implement the Convention on Biological Diversity. Specifically the Pan European 2010 Biodiversity Implementation Plan states:</p> <ul style="list-style-type: none"> - Europe agreed to 9 so called “Kyiv” key sub targets in seven areas: forests, agriculture, ecological networks, invasive alien species, biodiversity financing, biodiversity indicators and monitoring, and public awareness and participation.

Case study

[Scope options for EU action on invasive alien species \(IAS\)](#)¹²

ENV.B.2/SER/2005/0078r

Miller, C., Kettunen, M. & Shine, C.

The aim of this report is to provide advice to the European Commission on determining and prioritising future areas of Community action with respect to IAS. The advice should assist the work of the Biodiversity Expert Group and contribute to the development of future EC policies in this field. For this purpose, the report provides a review of the existing legal and policy framework for IAS at international, EU and Member State level. It identifies areas of relevance to Community competence (totally or partially) in the CBD’s Guiding Principles on IAS and the European Strategy on Invasive Alien Species developed under the Bern Convention. Based on the information on the existing international, EU and national legal/policy frameworks, the report

identifies gaps in the existing EU IAS framework and makes recommendations for filling such gaps.¹²

The Communication puts forward four possible policy responses to tackling IAS in the EU. These options are described in order of increasing intervention, however, according to the Commission they are not meant to be discrete or mutually exclusive and elements from the different options could be combined. The outlined policy options are:

[KBBE-2009-1-2-08](#): Assessing and reducing vulnerability of European forests to climate change and the consequences for industrial and societal needs - SICA (Russia)¹⁰ (In progress)

European forests fulfil multiple needs for forest owners, industry, society and the environment. In recent years, there has been an unprecedented revival in the use of wood as a renewable resource and demand has increased tremendously. At the same time European society has developed an increased appreciation of the biodiversity, environmental protection, and recreational value of forests. Furthermore, the climate is changing at an unforeseen rate leading to increasing pressure on plant species distribution and competition from invasive species. Research is required to increase understanding of the multi-functional nature of natural and planted forest resources in Europe in response to such stress. With growth in international trade, forests in Europe are at ever increasing risk of damage from exotic pests and pathogens. The direct impacts of these alien invasive pests and pathogens include reductions in primary production and elimination of susceptible plant species and their associated flora and fauna. Work in this project will focus on the development of modelling methods enabling more accurate predictions of invasions by alien pests and pathogens, the pathways through which the organisms spread at international, national and local levels, and the potential impacts of these organisms on forests in different climatic zones. Results will be targeted at quarantine organisations in EU Member States and Associated countries and internationally, and to the trade in live plants and associated materials into and within the EU.

Funding scheme: Collaborative Project (small or medium-scale focused research project) for Specific Cooperation Actions Dedicated to International Cooperation

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