COUNCIL OF EUROPE

CONSEIL DE L'EUROPE

Strasbourg, 29 April 2017
[Inf07e_2017.docx]

**T-PVS/Inf (2017) 7**

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

**Standing Committee**

37th meeting
Strasbourg, 5-8 December 2017

_____

# REGULATING THREATS POSED BY INVASIVE ALIEN SPECIES: HARNESSING THE FULL POTENTIAL OF "OTHER LEGAL INSTRUMENTS"

# - FIRST DRAFT -



*Document prepared by*
*Prof. Han Somsen, Professor in EU Law, and Dr Arie Trouwborst, Associate Professor of Environmental Law, Tilburg Law School, The Netherlands*

*On behalf of the Bern Convention*

# TABLE OF CONTENTS

# REGULATING THREATS POSED BY INVASIVE ALIEN SPECIES: HARNESSING THE FULL POTENTIAL OF "OTHER LEGAL INSTRUMENTS"

by Prof. Han Somsen*

*This report provides an analysis of the potential of EU and international legal instruments, outside the realm of nature conservation law, which can help address threats to biodiversity posed by alien invasive species (AIS). The focus is on trade-related rules and on inspections carried out when goods cross borders.*

*A perplexing plethora of rules and institutions exist which, directly or indirectly, do or can play roles in the fight against IAS. The most important recommendation is to establish close coordination and cooperation with these various state and non-state actors. It is suggested that the World Health Organization (WHO) and the International Health Regulations (IHR) provide an inspiring example how such collaboration can be operationalised. In part, this involves investment in ICTs that create deliberative early-detection supernetworks. In part, it will necessitate harmonizing terminology, definitions and even general principles, thus creating a common language that allows for effective communication across the network. The prevailing dichotomy between rules addressing human health and rules addressing animal- and plant health should be reconsidered, which could find expression in a consistent understanding of the concept 'health'.*



## I. INTRODUCTION

Globalisation brings sharp increases in global trade, transport, travel and tourism and, concomitantly, new pathways for live plants, animals and biological materials to be introduced across natural and man-made barriers, including state borders. The rapid development of e-commerce is an important current manifestation of this continuous development.[1] The e-commerce revolution translates in explosive growth of parcel post traffic, and border forces bear a heavy responsibility to examine postal packages arriving from abroad for prohibited or restricted goods such endangered and invasive species.

In order to anticipate and respond to such new trends effectively, legal frameworks designed to prevent and address the spread of invasive alien species (IAS) must be reviewed and adapted constantly. In addition, national and international regulators should fully explore self-regulatory and soft instruments including education, market instruments and technologies.[2]

Nonetheless, binding legal instruments remain uniquely suitable to articulate prohibitions and restrictions pertaining to IAS, but certainly also to craft effective institutions that play vital roles in the implementation of laws and, increasingly, the coordination of fragmented policy efforts targeting various pathways.

It is useful to sub-divide legal frameworks addressing IAS as follows:

a) intentional release (e.g. agriculture, forestry, fisheries, landscaping, recreational and ornamental purposes);

b) intentional containment or captivity (zoos, aquaculture, mari-culture, aquaria, horticulture, the pet trade, etc.);

---

* Professor, Tilburg Law School

[1] See for example F. Humair, L. Humair, F. Kuhn, and C. Kueffer, 'E-Commerce trade in invasive plants, 29 (2015) 6 Conservation Biology, pp. 1658–65.

[2] Numerous mobile phone apps have been designed, turning millions of mobile devices into vehicles to mobilize the vigilance of citizens to protect their local environment against IAS. See, for example, https://www.invasivespeciesinfo.gov/toolkit/monitoringsmart.shtml#apps. ICTs, more generally, allow for dispersed and isolated knowledge pertaining to IAS to be combined into an intelligent 'supernetwork'.

c) unintentional release through pathways involving transport (e.g. ballast water), trade, travel or tourism (the so-called 'four t's').

These latter introductions are widely regarded as constituting more serious threats than intentional introductions, and are the focus of this report.

When IAS pose threats to economic (in particular agricultural) production, policies appear most robust and coherent. Threats to ecological or social values, in contrast, have often invited *ad-hoc* reactive initiatives. The dispersion of efforts is consistent with the call in Agenda 21 to take action to address the impact of alien species in a wide range of sectors.[3] Inconsistencies and inefficiencies associated with fragmentation notwithstanding, the aim of this report is to explore the potential of 'other legal instruments' that could address threats posed by IAS. 'Other' in this context denotes all those laws outside the realm of nature conservation law that could be of use in the fight against IAS. For the purpose of manageability the emphasis will be on movements of goods subject to inspection, be it random or systematic.

Excluded from the scope of this report is international travel, since this already is subject to a specific code of conduct. Marine vectors are not subject to separate attention (in particular ballast tanks etc.), but are covered by this report to the extent that they are caught by border inspection regimes. Neither will living modified organisms (also termed genetically modified organisms) be discussed here, as these are subject to discrete and highly sophisticated (EU) regulatory regimes.[4]

## II. EU LAW AND THE PRINCIPLE OF INTEGRATION

We start our examination of possibilities to have recourse to alternative legal instruments in the battle against IAS with an overview of relevant provisions of EU law. This is appropriate because about half of all parties to the Berne Convention are members of the European Union, but not least also because the powers assumed by the EU have superseded those of the Member States. Progress in the implementation of the Berne Convention hence in effect hinges on the EU's position.

A key question which must first be addressed for our purposes, is whether the pursuit of a policy to prevent entry and spread if IAS through legal instruments whose primary objective is unrelated to environmental protection is legally tenable. The pertinence of that question resides in the fact that, as a corollary to the principle of conferral expressed in Article 5 of the Treaty on European Union (TEU), such a practice could be deemed to amount to a misuse of powers and hence could invite annulment actions by the Court of Justice of the European Union (CJEU).

Yet, there can be no doubt that, as a matter of EU law, use of such 'other' instruments to stem risks posed by IAS is not merely possible, but in view of Article 11 of the Treaty on the Functioning of the European Union (TFEU) in fact is a necessity. This provision, usually referred to as 'the principle of integration', provides as follows:



[3] More than fifty international and regional instruments now deal in one way or another with the introduction, control and eradication of alien species. See C. Shine, N. Williams and L. Gründling, *A Guide to Designing Legal and Institutional Frameworks on Alien Invasive Species* (Environmental Policy and Law Paper No. 40, IUCN, 2000). A useful overview is also provided in 'Considerations for Implementing International Standards and Codes of Conduct in National Invasive Species Strategies and Plans', published on the Internet on https://www.cbd.int/invasive/doc/cbd-invasive-species-strategies-en.pdf.

[4] The main tenets of this regime are Dir. 2001/18/EC on the deliberate release into the environment of genetically modified organisms, OJ (2001) L 106/1; Reg. (EC) No 1829/2003 on genetically modified food and feed, OJ (2003) L 268/1; Dir. (EU) 2015/412 amending Directive 2001/18/EC as regards the possibility for the Member States to restrict or prohibit the cultivation of genetically modified organisms (GMOs) in their territory, OJ (2015) L 68/1; Reg.(EC) No 1830/2003 concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC, OJ (2003) L 268/24; and Dir. 2009/41/EC on the contained use of genetically modified micro-organisms, OJ (2003) L 125/75.

***Article 11***

Environmental protection requirements must be integrated into the definition and implementation of the Union policies and activities, in particular with a view to promoting sustainable development. (emphasis added)

The wording of Article 11 ('*must* be integrated') leaves little room for debate regarding the binding and mandatory nature of the principle of integration. Equally important in this context is the fact that integration is operationalised both in the '*definition*' (the articulation of regulatory instruments by EU institutions) and in the day-to-day '*implementation*' (a task usually residing with the Member States which in that context effectively operate as 'agents' of the Union) of the Union's other policies and activities.

The general principle of integration s reiterated in the specific contexts of the Union's energy policy (Article 194 TFEU) and its internal market policy (Article 114(3) TFEU).

It is this latter provision, in particular, which is of immediate and considerable importance in the fight against the entry and spread of IAS. Article 114(3) provides as follows:

***Article 114(3)***

The Commission, in its proposals envisaged in paragraph 1 concerning health, safety, environmental protection and consumer protection, will take as a base a high level of protection, taking account in particular of any new development based on scientific facts. Within their respective powers, the European Parliament and the Council will also seek to achieve this objective.

It is not merely the EU institutions that can (*must*) pursue its policy regarding IAS through measures that do not have the protection of the environment as their primary purpose. Member States, too, have retained some such powers through Articles 114(4) and (5) TFEU.

***Article 114(4)***

If, after the adoption of a harmonisation measure by the European Parliament and the Council, by the Council or by the Commission, a Member State deems it necessary to maintain national provisions on grounds of major needs referred to in Article 36, or relating to the protection of the environment or the working environment, it shall notify the Commission of these provisions as well as the grounds for maintaining them.

***Article 114(5)***

Moreover, without prejudice to paragraph 4, if, after the adoption of a harmonisation measure by the European Parliament and the Council, by the Council or by the Commission, a Member State deems it necessary to introduce national provisions based on new scientific evidence relating to the protection of the environment or the working environment on grounds of a problem specific to that Member State arising after the adoption of the harmonisation measure, it shall notify the Commission of the envisaged provisions as well as the grounds for introducing them.

Past CJEU case law shows that Member States' powers to derogate from harmonising measures adopted under Article 114(1) is extremely limited, however.[5] In any event, Articles 114(4) and (5) provide Member States with discretionary powers to pursue policies on IAS in the context of the internal market, but do not give rise to any obligation to do so.

Prior to harmonisation, in contrast, Member State powers to act against threats posed by IAS through restrictions on the movement of goods is less contained. In essence, Article 36 TFEU allows Member States to take proportional measures to prevent and stop the spread of IAS by restricting the free flow of goods for reasons justified on grounds of, inter alia, the protection of health and life of humans, animals or plants. Article 36 provides as follows:

[5] See for example P. Wennerås, 'Fog and acid rain drifting from Luxemburg over Article 95(4) EC' (2003) *European Environmental Law Review*.

***Article 36***

The provisions of Articles 34 and 35 shall not preclude prohibitions or restrictions on imports, exports or goods in transit justified on grounds of public morality, public policy or public security; the protection of health and life of humans, animals or plants; the protection of national treasures possessing artistic, historic or archaeological value; or the protection of industrial and commercial property. Such prohibitions or restrictions shall not, however, constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States

The CJEU has consistently interpreted the phrase 'the protection of health and life of humans, animals or plants' restrictively and has given it a meaning distinct from and narrower than 'environmental protection'. Thus, Danish regulations prescribing bottle shapes to facilitate recycling and thereby protect the environment from litter could not be justified by Article 36. For environmental measures transcending the protection of health and life of humans, animals or plants in that narrow sanitary and phytosanitary sense, the CJEU allows national restrictions in so far as these are proportional and non-discriminatory (in academic circles referred to as 'the rule of reason'). Whereas national restrictions to address the spread of IAS will often fall within the scope of Article 36 TFEU, to the extent they do not they can be justified by virtue of the rule of reason, provided that these are indistinctly applicable, i.e. do not discriminate. The non-discrimination requirement may pose problems when goods emanating from a particular territory are targeted.

## III. EU COMPETENCES AND THE PRINCIPLE OF CONFERRAL

'Definition' (see Article 11, discussed above) of EU policy at times is a task reserved exclusively to the EU, and at times is a joint competence. Articles 3, 4 and 6 TFEU provide an insightful and exhaustive guide of 'other' policies, the definition and implementation of which (principle of integration) should (and as has been seen, indeed, 'must') assist the fight against IAS.[6]

***Article 3***

1. The Union shall have exclusive competence in the following areas:

(a) customs union;

(b) the establishing of the competition rules necessary for the functioning of the internal market; (c) monetary policy for the Member States whose currency is the euro;

(c) the conservation of marine biological resources under the common fisheries policy;

(d) common commercial policy.

2. The Union shall also have exclusive competence for the conclusion of an international agreement when its conclusion is provided for in a legislative act of the Union or is necessary to enable the Union to exercise its internal competence, or in so far as its conclusion may affect common rules or alter their scope.

***Article 4***

1. The Union shall share competence with the Member States where the Treaties confer on it a competence which does not relate to the areas referred to in Articles 3 and 6.

2. Shared competence between the Union and the Member States applies in the following principal areas:

(a) internal market;

(b) social policy, for the aspects defined in this Treaty;

(c) economic, social and territorial cohesion;

(d) agriculture and fisheries, excluding the conservation of marine biological resources;

(e) environment;

[6] Art. 5 TFEU concerns the coordination of economic policies and employment policies and hence is not interesting for our purposes.

(f) consumer protection;

(g) transport;

(h) trans-European networks;

(i) energy;

(j) area of freedom, security and justice;

(k) common safety concerns in public health matters, for the aspects defined in this Treaty.

3. In the areas of research, technological development and space, the Union shall have competence to carry out activities, in particular to define and implement programmes; however, the exercise of that competence shall not result in Member States being prevented from exercising theirs.

4. In the areas of development cooperation and humanitarian aid, the Union shall have competence to carry out activities and conduct a common policy; however, the exercise of that competence shall not result in Member States being prevented from exercising theirs.

***Article 6***

The Union shall have competence to carry out actions to support, coordinate or supplement the actions of the Member States. The areas of such action shall, at European level, be:

(a) protection and improvement of human health;

(b) industry;

(c) culture;

(d) tourism;

(e) education, vocational training, youth and sport;

(f) civil protection;

(g) administrative cooperation.

The *definition* of Article 3 policies of potential significance for controlling the spread of IAS are:

- the customs union;
- the conservation of marine biological resources under the common fisheries policy, and;
- the common commercial policy.

Member States have ceded powers to pursue action to fight IAS by means of these policies, because they fall within the *exclusive* competence of the EU. Case 804/79 *Commission* v. *United Kingdom* concerned the question whether, in a situation in which the Council had failed to adopt marine conservation measures, Member States were entitled to take the necessary action. The CJEU ruled in this regard:

*As this is a field reserved to the powers of the Community, within which Member States may henceforth act only as trustees of the common interest, a Member State cannot therefore, in the absence of appropriate action on the part of the Council, bring into force any interim conservation measures which may be required by the situation except as part of a process of collaboration with the Commission and with due regard to the general task of supervision which Article 155, in conjunction, in this case, with the Decision of 25 June 1979 and the parallel decisions, gives to the Commission.*[7]

Article 4 TFEU lists policies in which the EU and the Member States share competences. Apart from environmental policy (pursuant to which, it must be noted, Member States may maintain or adopt more stringent measures than those agreed at EU level), particularly relevant sources of competences to address IAS concern the internal market, agriculture and fisheries, transport, trans-European networks, area of freedom, security and justice, and common safety concerns in public health matters.

[7] Case C-804/79, *Commission* v. *United Kingdom* at para 30.

In respect of the policies enumerated in Article 6, EU powers are confined to supporting, coordinating and supplementing Member State action. However, at times these policies have proved important and highly influential, and it would be a mistake to underestimate their potential effectiveness in the fight against IAS. In fact, the areas protection and improvement of human health, culture, tourism, education and vocational training, civil protection and administrative cooperation directly engage important pathways and threats of as well as possible responses to IAS. As observed above, there certainly is no shortage of legislation impacting on IAS, and the most significance gains in policy effectiveness may well come from coordination, rather than novel legislative initiatives.

The task of *implementing* EU policies resides mostly (although not exclusively)[8] with Member States.

The notion that EU environmental policy must be integrated into all the Union's 'other' activities is reiterated in the specific contexts of the Union's energy policy (Article 194 TFEU) and its internal market policy (Article 114(3) TFEU). As has been observed above, this latter provision, is of immediate and considerable importance in the fight against the entry and spread of IAS.

The next section considers international and EU regulation of such sanitary and phytosanitary measures.

## IV. "OTHER INSTRUMENTS": SPECIFIC EU EXAMPLES

### A. European Border and Coastal Agency (Frontex)

The objective of Union policy in the field of external border management is to develop and implement European integrated border management at national and Union level.[9] The aim is to manage the crossing of the external borders efficiently and address migratory challenges and potential future threats at those borders, thereby contributing to addressing serious crime with a cross-border dimension and ensuring a high level of internal security within the Union.[10] The definition of cross-border crime includes 'any serious crime with a cross-border dimension committed at or along, or which is related to, the external borders.'[11] For this purpose, the European Border and Coast Guard comprises the European Border and Coast Guard Agency ('the Agency' commonly referred to as 'Frontex') and national authorities which are together responsible for border management, including coast guards to the extent that they carry out border control tasks.

An expansive interpretation would mean that 'environmental threats' fall under the scope of the Regulation. However, closer inspection reveals that the Regulation is primarily concerned with migratory flows of persons. For example, the Regulation refers for the central concept of border control to Regulation 2016/399 that is specifically concerned with border control of persons crossing the external borders of the Member States of the Union.[12] That being as it may, the Regulation is potentially relevant for IAS in view of the preamble, which states:

"*when implementing European integrated border management, coherence with other policy objectives should be ensured, including the proper functioning of cross-border transport.*[13]"

In addition, 'national authorities carrying out coast guard functions are responsible for a wide range of tasks, which may include maritime safety, security, search and rescue, border control, fisheries control, customs control, general law enforcement and environmental protection.' Therefore,

[8] At times implementing tasks have been delegated to the institutions or specialized agencies.
[9] Reg. (EU) 2016/1624 of The European Parliament and of the Council of 14 September 2016 on the European Border and Coast Guard and amending Regulation (EU) 2016/399 of the European Parliament and of the Council and repealing Regulation (EC) No 863/2007 of the European Parliament and of the Council, Council Regulation (EC) No 2007/2004 and Council Decision 2005/267/EC, OJ L 251/1.
[10] According to Article 2(2) of Reg 2016/399 'External borders' means the Member States' land borders, including river and lake borders, sea borders and their airports, river ports, sea ports and lake ports, provided that they are not internal borders;
[11] Reg 2016/1624, Article 2(16).
[12] Reg. (EU) 2016/399 of the European Parliament and of the Council of 9 March 2016 on a Union Code on the rules governing the movement of persons across borders (Schengen Borders Code) OJ L 77/1.
[13] Ibid., preamble (4).

the Agency, the European Fisheries Control Agency and the European Maritime Safety Agency have to strengthen their cooperation both with each other and with the national authorities carrying out coast guard functions to increase maritime situational awareness and to support coherent and cost-efficient action. Synergies between the various actors in the maritime environment should be in line with the European integrated border management and maritime security strategies.[14] Indeed, Article 53 calls for cooperation between these agencies.

## B. Food and feed: veterinary border controls

The European Union (EU) is the world's largest importer of food and feed and well aware of the risks associated with such trade. At the same time, it must guard against unwarranted trade restrictions imposed under the guise of sanitary and phytosanitary measures. EU controls must be consistent with standards set by the Codex Alimentarius Commission, the World Organization for Animal Health (OIE) and the International Plant Protection Convention (IPPC) as provided for in the World Trade Organisation's (WTO) Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement), which are explored further below.

In essence, all live plants and certain plant products must be accompanied by an official phytosanitary certificate delivered by the competent authority of the third country in conformity with the model set out under the International Plant Protection Convention before they are introduced into the Union,. Detailed provisions governing imports are provided for in an extensive set of sectorial acts in areas such as plant health, seeds, zoonoses, the control and eradication of animal diseases, animal by-products, food and feed hygiene, genetically modified food and feed, residues and contaminants, pesticides, additives, nutrients, dietetic foods, mineral waters, novel foods, food contact materials and many others.

Food safety requirements are enshrined in Regulation (EC) No 178/2002 (‘General Food Law’).[15] This Regulation states that the EU's food safety policy should ensure free movement within the internal market, seek to achieve a high level of protection of human health, serve consumer interests and ensure that food and feed imported into the European Union complies with requirements able to provide equivalent levels of guarantees as regards safety. Regulation (EC) No 882/2004 (‘Official Food and Feed Controls Regulation’) complements the General Food Law. It establishes the overall framework for official controls carried out by national competent authorities in the Member States and the Commission to ensure compliance with food and feed law, with animal health and welfare rules, and - to some extent - to plant health provisions.

Particularly important is Directive 2000/29/EC on Protective Measures against the Introduction into the Community of Organisms Harmful to Plants or Plant Products and against their Spread within the Community.[16] It contains lists of harmful organisms that threaten plant health in the EU. The Directive covers living plants and living parts of plants, including fruit, cut flowers and seeds.

The Commission has revised this legislation. A new Regulation 2016/31, to come into force14 December 2019, focuses on high-risk trade from third countries and increased traceability of planting material.[17] It establishes better surveillance, and measures to enable the early eradication of outbreaks of new pest species. In addition, the new regime includes elements relating to the natural environment and the effects that pests have on native plants, biodiversity and ecosystem services.[18] In this latter regard, the proposal for the new regulation observed:

A need for ‘greening’ of the regime has furthermore emerged and objectives relating to the natural environment have gained importance. This requires changes to the intervention logic, also in terms of financing, of the regime, which is moving from a private good regime for agriculture to a mixed public/private good regime for agriculture, forestry, natural environment and landscape.[19]

[14] Ibid., preamble (44).
[15] Footnote
[16] OJ [2000] L 169/1.
[17] OJ [2016] L 317/4.
[18] See Proposal for a Regulation on protective measures against pests of plants COM 2013) 267 final.
[19] Ibid, p. 3.

More concretely, the Regulation works with 'protected zones'. The introduction into, movement within, and release into the respective protected zones of protected zone quarantine pests will be prohibited.

Live animals and products of animal origin (e.g. meat, eggs and fish), and animal products not intended for human consumption (e.g. semen and embryos), represent vectors for the transmission of diseases to livestock and humans and IAS. Such products can therefore only enter the EU through approved border inspection posts (BIPs), under strictly harmonised import conditions. When a serious animal disease occurs in a third country, import restrictions may be imposed.[20]

BIP staff carry out mandatory controls including documentary, identity and physical checks to verify that the goods conform to their description and meet EU import conditions. Physical checks are always required in the case of live animals. Once a consignment has satisfactorily undergone these checks, a Common Veterinary Entry Document (CVED) is issued allowing the goods to be released for free circulation.

The Commission Inspection Service of DG Health and Consumers, the Food and Veterinary Office (FVO), carries out inspections, in both Member States and third countries, to ensure EU legislation is respected. The FVO also conducts inspections on the BIPs and DPEs located in Member States to ensure compliance with EU law. Inspections on the ground serve many purposes, allowing for close co-ordination with Member States and third countries and for compliance to be monitored. Possibly most importantly, it also allows for prompt action to be taken to tackle any unacceptable identified risk.

The European Food Safety Authority (EFSA), established under the General Food Law, provides the European Commission with independent scientific advice on all matters with a direct or indirect impact on the safety of the food chain. It has also provided incidental guidance on IAS.[21]

The Trade Control and Expert System (TRACES) provides on-line information on import consignments of live animals and animal products. TRACES is used by both Member States and an increasing number of third countries, and fosters information exchange between competent authorities. It also helps veterinary authorities react quickly to possible health emergencies.

A Rapid Alert System for Food and Feed (RASFF) allows urgent notifications to be sent round-the-clock when food or feed presenting a serious risk is detected. A similar alert system, EUROPHYT, enables the exchange of information when plants and plant material are intercepted for failure to meet EU plant health requirements.



[20] Relevant EU legislation regarding live animals includes Dir. 91/496/EEC laying down the principles governing the organization of veterinary checks on animals entering the Community from third countries, OJ [1991] L 268/5; Dir. 92/65/EEC laying down animal health requirements governing trade in and imports into the Community of animals, semen, ova and embryos not subject to animal health requirements laid down in specific Community rules referred to in Annex A (I) to Directive 92/425/EEC, OJ [1992] L 268/54; Dir. 2004/68/EC laying down animal health rules for the importation into and transit through the Community of certain live ungulate animals, amending Directives 90/426/EEC and 92/65/EEC and repealing Directive 72/462/EEC, OJ [2004] L 139/321; Reg. (EC) No 1/2005 on the protection of animals during transport and related operations and amending Directives 64/432/EEC and 93/119/EC and Regulation (EC) No 1255/97, OJ [2005] L 3/1; Reg. (EU) No 576/2013 on the non-commercial movement of pet animals and repealing Regulation (EC) No 998/2003, OJ [2013] L 178/1.
Legislation on products of animal origin includes Dir. 97/78/EC laying down the principles governing the organization of veterinary checks on products entering the Community from third countries, OJ [1997] L 24/9; Dir. 2002/99/EC laying down the animal health rules governing production, processing, distribution and introduction of products of animal origin for human consumption, OJ [2003] L 18/11; Reg. (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules, OJ [2004] L 165/1; Reg. (EC) No 1069/2009 laying down health rules as regards animal by-products and derived products not intended for human consumption and repealing Regulation (EC) No 1774/2002 (Animal by-products Regulation), OJ [2009] L 300/1.

[21] Published on the Internet at http://www.efsa.europa.eu/en/topics/topic/invasive-alien-species.

## V. IAS, INTERNATIONAL TRADE AND SANITARY AND PHYTOSANITARY STANDARDS

Sanitary and phytosanitary measures, often in the shape of restriction on imports and exports, protect humans, animals and plants (both wild and cultivated) from damage due to pests and diseases. Quarantine measures normally give rise to trade restrictions and must be compatible with, in particular, WTO law, which also binds the EU. We briefly explore the most important provisions below.

### A. The WTO Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement)

The WTO's SPS agreement is intended to settle the question which sanitary and phytosanitary measures members can adopt, and how, without infringing WTO trade rules. Article 2.2. specifies that:

"*members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided for in paragraph 7 of Article 5*"

Annex A of the SPS Agreement defines 'SPS measures' as measures applied:

(a) to protect animal or plant life or health within the territory of the Member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;

(b) to protect human or animal life or health within the territory of the Member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;

(c) to protect human life or health within the territory of the Member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or

(d) to prevent or limit other damage within the territory of the Member from the entry, establishment or spread of pests.

Sanitary or phytosanitary measures include all relevant laws, decrees, regulations, requirements and procedures including, *inter alia*, end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; and packaging and labelling requirements directly related to food safety.

Undoubtedly, measures to prevent or address the spread of IAS fall within this broad definition, meaning that they are disciplined by the Agreement. The terms 'animal' and 'plant' in the SPS Agreement include wild fauna and wild flora, and 'pests' includes weeds. Since 'other damage' may include environmental damage caused by pests, the definition includes measures applied to prevent or limit the spread of IAS.

Article 3(1) and (2) of the SPS Agreement encourage WTO Members to base their measures on international standards as follows:

1. To harmonise sanitary and phytosanitary measures on as wide a basis as possible, Members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist, except as otherwise provided for in this Agreement, and in particular in paragraph 3.

2. Sanitary or phytosanitary measures which conform to international standards, guidelines or recommendations shall be deemed to be necessary to protect human, animal or plant life or health, and presumed to be consistent with the relevant provisions of this Agreement and of GATT 1994.

The three bodies recognised by the WTO (see Article 3(4) are (i) the *Codex Alimentarius* Commission for food safety, (ii) the IPPC for plant health and (iii) the OIE for animal health, including zoonotic diseases (briefly discussed in sections xx – xx below). These rarely explicitly address impacts of invasive species on the natural environment. Hence, there is no comprehensive SPS-recognised source of international standards regarding protection against alien invasive species, other than the IPPC plant pests standards.

One important question is whether the SPS agreement accommodates the precautionary principle. It is doubtful whether this is the case. Article 2.2. of the Agreement insists on SPS measures to be science-based, 'except as provided for in paragraph 7 of Article 5'. This latter provision provides:

In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organisations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.

The decision in *EU Biotech* suggests that 'insufficient scientific evidence' is not the same as 'scientific uncertainty': insufficient scientific evidence cannot justify application of Article 5.7 because scientific uncertainty will always exist.[22] This difference between the SPS agreement, on the one hand, and the CBD and EU law, on the other, is particularly significant for IAS measures intended to protect complex ecosystems, where scientific uncertainty is much more likely to occur than in relation to, for example, maximum residue levels in the context of food safety.

Relevant, too, for our purposes is the deliberative procedure provided for in Annex B of the SPS Agreement, providing as follows:

Whenever an international standard, guideline or recommendation does not exist or the content of a proposed sanitary or phytosanitary regulation is not substantially the same as the content of an international standard, guideline or recommendation, and if the regulation may have a significant effect on trade of other Members, Members shall: (a) publish a notice at an early stage in such a manner as to enable interested Members to become acquainted with the proposal to introduce a particular regulation; (b) notify other Members, through the Secretariat, of the products to be covered by the regulation together with a brief indication of the objective and rationale of the proposed regulation. Such notifications shall take place at an early stage, when amendments can still be introduced and comments taken into account; (c) provide upon request to other Members copies of the proposed regulation and, whenever possible, identify the parts which in substance deviate from international standards, guidelines or recommendations; (d) without discrimination, allow reasonable time for other Members to make comments in writing, discuss these comments upon request, and take the comments and the results of the discussions into account.

This notification procedure pertains to national authorities dealing with IAS and SPS matters, but also offers a platform for international agencies (Lopian, 2005). The Inter-Agency Liaison Group on Invasive Alien Species similarly enhances deliberation and consultation among relevant international organisations in supporting measures to 'prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species'. The WTO and CBD Secretariats, the IPPC and the OIE are members.

## B. The International Plant Protection Convention (IPPC)

According to its Article 1, the IPPC aims at:

"… *securing common and effective action to prevent the spread and introduction of pests of plants and plant products, and to promote appropriate measures for their control* (…)

To that end:

[22] *EC Approval and Marketing of Biotech Products*, 29.9.2006.

"*… the contracting parties undertake to adopt the legislative, technical and administrative measures specified in this Convention and in supplementary agreements pursuant to Article XVI.*"

The fact that the IPPC's scope extends beyond the protection of cultivated plants and includes the protection of natural flora and plant products is particularly important for present purposes.[23] The IPPC targets direct and indirect damage by pests, the latter including weeds. In terms of known pathways for IAS, it addresses vehicles, aircraft and vessels, containers, storage places, soil and other objects or material that can harbour or spread pests.[24] To the extent invasive species may be considered plant pest, they patently fall within the scope of the IPPC, and the Convention hence is potentially highly relevant for the conservation of plant diversity.[25]

Originally the IPPC did not cover risks posed by the intentional introduction of plants in habitats from which they may escape, but after an amendment to ISPM 11 (focused on an assessment system applied to the potential spread from 'intended habitats' to 'unintended habitats' that would in fact become endangered areas around the intentional habitat) this is since covered.

International Standards for Phytosanitary Measures (ISPMs) to facilitate trade and to avoid trade barriers are adopted by the IPPC's governing body, the Interim Commission on Phytosanitary Measures (ICPM).[26] As observed, these standards are recognised under the World Trade Organization Agreement on the Application of Sanitary and Phytosanitary Measures (the SPS Agreement, see further under D below).

The IPPC fosters international cooperation, and is the spider in a web constituted by National Plant Protection Organizations (NPPOs) - whose tasks are defined in Article IV -, Regional Plant Protection Organizations (RPPOs) such as the European and Mediterranean Plant Protection Organization, and other international organisations, including the WTO.[27] The Regional Plant Protection Organizations act as coordinating bodies at a regional level to further the objectives of the IPPC.[28]

The IPPC provides a forum for addressing threats posed by IAS. This is evidenced by its Recommendation ICPM-7/2005. Regarding the precautionary principle, the IPPC appears to adopt an approach similar to that of the SPS Agreement, specifying in Article VII.2a that phytosanitary measures require a technical justification, which is understood as a pest risk analysis. The IPPC also recognizes that the availability of full scientific evidence is not always possible, however, and one of the international standards on phytosanitary measures (ISPM 114) makes provision for uncertainties in the PRA process.

## C. World Organization for Animal Health (OIE)

The OIE is an inter-governmental body, currently counting 167 members, responsible for setting international animal health and welfare standards. It functions outside the UN but collaborates closely with the UN Food and Agriculture Organization (FAO) and the World Health Organization (WHO). The SPS Agreement recognises the OIE as the official body for standard-setting in the area of animal health, including for IAS that are OIE-listed animal diseases.

The OIE has published two codes and two manuals (Terrestrial and Aquatic) as the principle reference for WTO members. The *Terrestrial Animal Health Code* and *Aquatic Animal Health Code* aim to assure the sanitary safety of international trade in terrestrial animals and aquatic animals,

[23] 'Plants' is defined in the Convention as 'living plants and parts thereof, including seeds and germplasm.' See also the preamble which states: '*taking into account* internationally approved principles governing the protection of plant, human and animal health, and the environment'. Article IV(b), finally, refers to 'the surveillance of growing plants, including both areas under cultivation (inter alia fields, plantations, nurseries, gardens, greenhouses and laboratories) and wild flora, (…)'.

[24] 'Regulated article' is defined as 'any plant, plant product, storage place, packaging, conveyance, container, soil and any other organism, object or material capable of harbouring or spreading pests, deemed to require phytosanitary measures, particularly where international transportation is involved.'

[25] See recommendation ICPM-7/2005 on AIS

[26] See Art. XI.

[27] https://www.eppo.int/.

[28] See Article IX.

and their products. These contain 'science-based recommendations for disease reporting, prevention and control and for assuring safe international trade in terrestrial animals (mammals, birds and bees) and aquatic animals (amphibians, fish, crustaceans and molluscs) and their products'.[29] Within the Codes, specific diseases are listed for which standards are provided. When no health standards for a specific animal or animal product exists, countries must carry out risk analyses to determine if a proposed import presents an unacceptable risk to animal health. The OIE Handbook on Import Risk Analysis for Animals and Animal Products provides a framework for countries to conduct such risk analyses.

The goal of the Codes is to prevent the 'introduction and spread, via animals and their products, of agents that are pathogenic for animals and/or humans.' This means that the OIE is not concerned with the ecological impacts of IAS.[30] The OIE considers an IAS only if it causes an animal disease, or if it results in animal infections that can cause human disease. The OIE has issued guidelines related to the risk of non-native animals becoming invasive.[31]

More recently, however, the OIEs mandate has been expanded to cover animal welfare, and animal production food safety. The OIE Sixth Action Program elaborates on this mandate for the period 2016-2020. An IAS-related commitment is 'understanding the relationship between climate change and eco-system health, biodiversity loss, and the spread of diseases that impact on animal health and welfare.'[32] Important is its dedication to '[l]leadership and coordination of international and regional programmes for the global eradication or control of specific diseases of economic and social importance, including canine Rabies, Foot and Mouth Disease(FMD) and Peste des Petits Ruminants (PPR).'

The OIE Working Group on Wildlife, founded in 1994, could play a significant role in relation to IAS. It informs and advises the OIE on all health problems relating to wild animals, whether in the wild or in captivity. A recommendation advises members 'To continue developing science-based standards on disease detection, prevention, and control as well as safe trade measures to harmonise the policies related to disease risks at the interfaces between wildlife, domestic animals, and humans '. Not less important; it is committed to 'supporting and updating the notification mechanisms of wildlife diseases through the global information systems OIE WAHIS and WAHIS-Wild, while carefully considering possible impact of such notification by Members on the trade in domestic animals and their products, and to further promote data sharing at the international level on the GLEWS platform'.[33] The importance of these recommendations, at least if they are taken over in the Terrestrial Code, is that they become OIE standards which create a presumption of compliance with the SPS agreement.

Its more inclusive mandate notwithstanding, the future role of the OIE with regard to IAS also depends on the definition of animal health. Although 'health' is not defined, it appears to denote the absence of specific disease-causing agents in the animal and/or in its source population. A more holistic definition, akin to the one used by the WHO for human health ('a complete state of physical,



[29] See PROCEDURES USED BY THE OIE TO SET STANDARDS AND RECOMMENDATIONS FOR INTERNATIONAL TRADE, WITH A FOCUS ON THE TERRESTRIAL AND AQUATIC ANIMAL HEALTH CODES, published on the Internet at http://www.oie.int/fileadmin/Home/eng/Internationa_Standard_Setting/docs/pdf/A_OIE_procedures_standards_2016.pdf .

[30] Unintentional introductions of pathogens, for example via shipping containers are subject to specific articles in the Aquatic Animal Health Code. International conventions (e.g. the IMO) address the movement of IAS in shipping containers and vessels.

[31] Published on the Internet at http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/OIEGuidelines_NonNativeAnimals_2012.pdf .

[32] Published on the Internet at http://www.oie.int/for-the-media/editorials/detail/article/-c2413e5b86/ .

[33] Published on the Internet at http://www.oie.int/fileadmin/Home/eng/Conferences_Events/docs/pdf/recommendations/Recommendation_wild.pdf .

mental and social well-being, and not merely the absence of disease or infirmity') would bring IAS more comprehensively within the ambit of the OIE, and would capture IAS which are neither plant pests nor OIE-listed pathogens.

## D. The *Codex Alimentarius*

*Codex Alimentarius* ('food code') refers to the Standards, Codes of Practice, Guidelines and Recommendations adopted by the Codex Alimentarius Commission (CAC) under the Joint FAO/WHO Food Standards Programme. The main purposes of this Programme are:

- protecting consumer health,
- ensuring fair trading practices for food, and
- promoting coordination of all food standards work undertaken by international governmental and non-governmental organisations

The CAC counts 166 members and is a subsidiary body of the UN Food and Agriculture Organization (FAO) and the World Health Organization (WHO).

As with the IPPC and OIE, scientific risk assessments for the basis for decision-making. In the area of foods derived from biotechnology, *Codex* provides the human health risk analysis foreseen in the CBD's Cartagena Protocol on Biosafety. The concept of 'disease-free' or 'pest-free' areas is not well-established in the food safety domain, and the CAC therefore does not seem to have a clear mandate in regard to the control of IAS and the preservation of biodiversity.

## E. CITES and EU Law on Trade in Endangered Species of Wild Fauna and Flora

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) offers a platform to pursue policy to address threats posed by IAS. In this regard, CITES Resolution Res. Conf. 13.10 (Rev. CoP14) 'Trade in Alien Invasive Species' directs Parties to:

a) *consider* the problems of invasive species when developing national legislation and regulations that deal with the trade in live animals or plants;

b) *consult* with the Management Authority of a proposed country of import, when possible and when applicable, when considering exports of potentially invasive species, to determine whether there are domestic measures regulating such imports; and

c) *consider* the opportunities for synergy between CITES and the Convention on Biological Diversity (CBD) and explore appropriate cooperation and collaboration between the two Conventions on the issue of introductions of alien species that are potentially invasive.

Pursuit of policy on IAS through CITES can be operationalised, in particular, through:

a) a permit system;

b) an on-line database on international wildlife trade;

c) enforcement through trade bans.

The EU has implemented CITES through a set of Regulations known as the EU Wildlife Trade Regulations:[34]

- *Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating trade therein* (the Basic Regulation);[35]

  The Basic Regulation lays down the provisions for import, export and re-export as well as internal EU trade in specimens of species listed in its four Annexes. It provides for procedures and documents required for such trade (import and export permits, re-export certificates, import notifications and internal trade certificates) and regulates the movement of live specimens. It also sets out specific requirements for Member States to ensure compliance with the Regulation and to impose adequate sanctions for infringements.

[34] See *Wildlife Trade Regulations in the European Union* (Publications Office of the EU, Luxemburg, 2010). Published on the Internet at http://ec.europa.eu/environment/cites/pdf/trade_regulations/short_ref_guide.pdf.
[35] OJ [1997] L 61/1.

The Regulation also establishes a number of bodies at EU level, i.e. the Committee on Trade in Wild Fauna and Flora, the Scientific Review Group and the Enforcement Group, all of which consist of representatives of the Member States and are convened and chaired by the European Commission.

- *Regulation (EC) No 865/2006 laying down detailed rules concerning the implementation of Council Regulation (EC) No 338/97 (*the Implementing Regulation*);*[36]
- *Regulation (EU) No 792/2012 of 23 August 2012 laying down rules for the design of permits, certificates and other documents provided for in Council Regulation (EC) No 338/97 on the protection of species of wild fauna and flora by regulating the trade therein and amending Regulation (EC) No 865/2006* (the Permit Regulation);[37]

In addition, a Suspensions Regulation is in place to suspend the introduction into the EU of particular species from certain countries. Commission Recommendation No 2007/425/EC identifies a set of actions for the enforcement of Regulation (EC) No 338/97.[38]

The two most important differences between CITES and these implementing regulations concern, first, the classification of species in Annexes and, second, the requirement of an import permit for Appendix II species coming from third countries. As for the classification of species, The EU operates four, rather than three Annexes (in the language of CITES 'Appendices'). Annex B of the EU regulation includes the CITES Appendix II species not included in the Regulation's Annex A to which the EU has added species, as if they belonged to CITEX Appendix II, *plus* certain invasive species ('species in relation to which it has been established that the introduction of live specimens into the natural habitat of the Community would constitute an ecological threat to wild species of fauna and flora indigenous to the Community.' Article 3(2)(d)). Article 4(2) of the Regulation specifies the checks and the conditions for obtaining an import permit issued by a management authority of the Member State of destination.

The EU Wildlife Trade Regulations are 'directly applicable' in all EU Member States, i.e. not subject to further implementing measures, the *enforcement* provisions must be articulated into national legislation, as enforcement remains within the competence of Member States, subject only to a minimum EU standard of effectiveness and non-discrimination.

## F. The WHO's International Health Regulations (IHR) 2005[39]

Adopted by the World Health Assembly of the World Health Organization to address the international spread of infectious diseases to humans, the stated goal of the International Health Regulations in Article 2 is:[40]

*"to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade."*

International action to address human-health risks posed by trade- and travel-related disease introductions may include measures targeting IAS posing public health risks. However, the IHR 2005 are important for our purposes, first and foremost, because they provide a proven collaborative model as to how the international community could deal with *environmental risks* caused by IAS.[41]

---

[36] OJ [2006] 166/1.
[37] OJ [2012] L 242/1.
[38] OJ [2007] 159/45.
[39] http://www.who.int/topics/international_health_regulations/en/ .
[40] The Regulations are available on the Internet at http://apps.who.int/iris/bitstream/10665/43883/1/9789241580410_eng.pdf .
[41] The potential for this approach to limit harm from invasive species is demonstrated by the SARS epidemic of 2002–2003. The disease ultimately spread to numerous countries, but was rapidly identified and the WHO coordinated an effective international response.

According to Articles 6 and 7 of the IHR, members must notify the WHO of any event that may have implications for international health. Article 9(1) stipulates that WHO may take into account reports from sources other than notifications or consultations which, after assessment, it communicates to the State Party in whose territory the event is allegedly occurring. Article 9(2) requires notification of any international public health risk due to the movement of people, disease vectors, or contaminated goods. The WHO is then mandated to take precautionary action on behalf of the international community to mitigate the risks posed by the disease.

## VI. CONCLUSIONS AND RECOMMENDATIONS

The international prowess to engage threats posed by IAS appears no match for globalisation's propensity to move organisms. The regulation and governance of IAS thereby invites comparison with responses to epidemiological problems, in the senses that (i), likewise, prevention is more effective (and a lot cheaper) than control, (ii) that all important vectors must be identified and engaged, and (iii) that it is impossible to absolutely prevent a species invading. Regarding this third similarity, realistically, the ambition must be in as far as possible to reduce risks of a species invading, and contain invasions if they occur. It is because of these similarities that the regulatory and institutional experiences gained with the IHR is very instructive. Compared with its failure properly to respond to the outbreak of bubonic plague in 1994, the WHO's response to SARS in 2003 is widely regarded to have been a remarkable success.[42] Fiddler, in his book devoted to SARS governance, observes:

The 'global health governance' and 'global public goods for health' concepts were alive in public health discourse and practice prior to the SARS outbreak, but the management of this outbreak brought the concepts to impressive life in ways their previous uses had not achieved. Although glimpses of the potential of these concepts occurred prior to SARS, particularly in the development of the Global Outbreak Alert and Response Network (Global Network) and various public–private partnerships for health, the SARS epidemic constitutes a 'tipping point' for these new governance strategies because they were implemented effectively in the fires of a global public health crisis.[43]

The development of ICT allowed automated data-mining of on-line news about suspicious outbreaks of disease anywhere in the world, and also cemented what Victor Galaz has termed 'supernetworks', i.e. connected 'networks of networks', consisting of international organizations, state agencies, universities and non-state actors such as NGOs.[44] These supernetworks have the potential to generate collective intelligence with problem-solving capacities, as has been evidenced by the collaborative analysis of SARS in 2002-2003.

It is recommended that the Standing Committee to assume a leadership role in taking active steps to connect currently dispersed actors that do play, should play, or can play important roles in preventing and managing the spread of invasive species in ways that effectively establishes a 'collective IAS super-intelligence'. The establishment of such connections requires the creation of institutional linkages, in turn made possible by ICTs.

In the longer term, this would mean that the SPS agreement would need to be streamlined with the IHR and its governance architecture. Concretely, this means that outbreaks of animal and plant pathogens would be reported in the same way as parties to the IHR report human disease outbreaks and take collective action to control their spread.

To allow for such synergies to develop, in the shorter term it will be important to approximate, in as far as possible, common terminology. The IPPC developed a 'Glossary of phytosanitary terms' (ISPM 5, IPPC, 2011), containing over 200 globally-agreed phytosanitary definitions. The CBD also includes certain definitions such as 'alien species', 'invasive alien species', 'introduction', 'intentional introduction', 'unintentional introduction', 'establishment' and 'risk analysis'. A comparison reveals significant differences, making it difficult for phytosanitary experts to fully comprehend CBD

[42] See D.P. Fiddler, *SARS Governance and the Globalization of Disease* (Palgrave, New York, 2004).
[43] Ibid at p. 187.
[44] V. Galaz, *Global Environmental Governance, Technology and Politics* (Edward Elgar, Cheltenham, 2014)

provisions and guidance concerning IAS, and similarly for environmental experts to fully grasp phytosanitary concepts and strategies.[45] It has been observed that in the context of animal health there is a case for expanding on the current narrower conception as 'the absence of disease'.

Simultaneously, the IPPC, the OIE, and *Codex Alimentarius* could strengthen sanitary and phytosanitary measures for a range of known pests and pathogens.

Efforts have been made over the last decade to develop and enhance cooperation between the Secretariats responsible for the CBD, the SPS Agreement, the IPPC, the OIE, as well as with other related organisations working at a global/regional level. Considerable gains can be realised by further strengthening international institutional cooperation and collaboration on IAS.

Synergies between the various fora will also be fostered by the application of common overarching principles in different institutional contexts, in particular the principles of precaution, prevention, and rectification at source.



[45] For example, commonly-used terms, such as 'introduction' and 'establishment', are defined differently by the CBD and IPPC.