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**13<sup>th</sup> meeting of the  
Bern Convention Group of Experts  
on Invasive Alien Species**

*Batumi (Georgia), 24-25 June 2019*

**REVIEW OF THE REPORTS SUBMITTED BY PARTIES ON  
PROGRESS IN THE IMPLEMENTATION OF THE EUROPEAN  
STRATEGY ON INVASIVE ALIEN SPECIES AND ON THE USE OF  
BERN CONVENTION CODES OF CONDUCT AND GUIDELINES  
ON IAS**

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## ACRONYMS

EC	European Commission
EU	European Union
GoE	Group of Experts
IAS	Invasive Alien Species
UK	United Kingdom

## REFERENCE DOCUMENTS

- [Recommendation No. 99 \(2003\) on the European Strategy on Invasive Alien Species.](#)
- [European Code of Conduct on Horticulture and Invasive Alien Plants](#) (2008) - [Illustrated version](#) (2011)
- [European Code of Conduct on Pets and IAS](#) (2011) - [Illustrated version](#) (2016)
- [European Code of Conduct for Botanic Gardens on Invasive Alien Species](#) (2012)
- [European Code of Conduct on Zoological Gardens and Aquaria and IAS](#) (2012) - [Illustrated version](#) (2016)
- [European Code of Conduct on Hunting and IAS](#) (2013) - [Illustrated version](#) (2016)
- [European Guidelines on Protected Areas and IAS](#) (2013) - [Illustrated version](#) (2014)
- [European Code of Conduct on Recreational Fishing and IAS](#) (2014)
- [European Code of Conduct on Recreational Boating and IAS](#) (2016)
- [European Code of Conduct for Invasive Alien Trees](#) (2017)
- [European Code of Conduct on International Travel and Invasive Alien Species](#) (2017)

## 1. Introduction

The Bern Convention has pioneered inter-governmental cooperation towards controlling the spread of and eradicating Invasive Alien Species in Europe through the creation of a dedicated group of experts, already back in 1992.

Over time, the Group collected and analysed different national laws dealing with invasive species and proposed work aimed at the harmonisation of national regulations on introduced species, particularly on the fields of definitions, territorial scope of regulation, listing of species whose introduction is undesirable, identification of authorities responsible for permits, conditions for issuing such permits and control involved.

The Convention adopted the European Strategy on the eradication of Invasive Alien Species and regularly monitors its implementation. Since 2009, to support the Strategy, the Group has focused its work on the identification and prioritisation of pathways and started preparing targeted Codes of Conduct to address these pathways. These codes of conduct are a tool for increasing awareness on the impact of IAS and federating the efforts of a wide range of stakeholders (including the business sector) through voluntary, sound and specific measures.

The 13th meeting of the Bern Convention Group of Experts on IAS will take place in Batumi, Georgia for 1.5 day (24-25 June 2019). In view of this upcoming meeting, there is several objectives mentioned in the Draft agenda (T-PVS/Agenda(2019)6) and two of these consists in 1) review progress in implementation of the European Strategy on the eradication of Invasive Alien Species and 2) assess the level of implementation of Bern Convention guidance (Codes of conduct) focussing on different pathways for the spread of the species. Another objective is to allow an exchange of good practices and lessons learned in the implementation of IAS control measures at national level.

In order to achieve this objective, the Secretariat prepared a template, to be used by Parties for reporting on progress in implementing the European Strategy on Invasive Alien Species, on the use made at national level of the voluntary guidance tools developed by the Bern Convention and on additional issues identified as emerging topics of concern, namely on IAS and insects' conservation and climate change and IAS.

The objective of this survey was to collect feedback on the use made by Parties of the Codes of Conduct, as well as good practices which could support improving the implementation of the European Strategy and the guidance tools. The template has been sent to all the Parties of the Bern Convention and observers to collect information on the state of implementation of the Strategy and to identify good practices in the use of the Codes of Conduct. In addition, country representatives will be invited to report orally at the meeting, to provide baseline information for the subsequent discussions.

## 2. Replies to the questionnaire

The objective of the present document is to review progress towards the implementation of the European Strategy on the eradication of Invasive Alien Species and the Code of Conducts, developed in the frame of the Bern Convention, by means of assessing the replies to the questionnaire.

The Secretariat received 16 national reports from Armenia, Czech Republic, Estonia, Finland, Georgia, Hungary, Iceland, Moldova, Poland, Serbia, Slovenia, Slovak Republic, Spain, Switzerland, Turkey and the United Kingdom. A report was also received from the European Commission, Directorate-General for Environment. The compilation of national reports is available in document T-PVS/Inf(2019)11.

These replies are analysed in four parts corresponding to the main issues raised in the template:

1. Measures put in place at national level for implementing the European Strategy on Invasive Aliens Species
2. Use and evaluation of the Codes of Conduct developed in the frame of the Bern Convention
3. Work done on the effects of IAS on pollinators and the role of IAS in the decline in insect species
4. The work done on the issue of the effects of climate change and IAS

### 3. Implementation of the European IAS Strategy in the period May 2017 – June 2019

#### 3.1 Building awareness and support

The first point of the European Strategy aims at making Europe's public, decision-makers, scientists and stakeholders aware of IAS related risks and of the importance of their prevention and mitigation. Eventually, they can engage themselves in the development of good practices to achieve this.

National reports inform on the use of media for awareness-raising purposes. Most often, countries mention the use of the web and particularly the official webpages of the authorities in charge of IAS. In Hungary, the website of the Ministry of Agriculture, Department of Nature conservation has a dedicated webpage within the Hungarian State Nature conservation website dealing with this issue. On this webpage, the public can find publications, presentations of conferences but also inventories with plant and animal species from the two European Union IAS lists and inventories of potential IAS in Hungary. On the same basis, the Slovenian Ministry of the Environment and Spatial Planning updated its webpage with several pieces of information about the IAS species to help actors identify them easily. Iceland, Poland, Serbia, Slovak Republic and the EC also take advantage of web media to make prevention regarding this issue. The State Nature Conservancy of the Slovak Republic has a dedicated Facebook page where information is provided for the public.

In addition, countries also use more traditional means for communication, such as publications and nature magazines, for publishing editions especially dedicated to IAS. This is the case in Estonia for example. Scientific publications and research are also made available for the public like in Armenia, Hungary, Slovenia, Slovak Republic and Moldova. The same is done at the level of the European Commission. Moldova's report also mentions the design of a poster to inform the public on the way of spreading, the allergy symptoms and the methods of combating the IAS *Ambrosia*. Leaflets and brochures for public awareness have also been developed for the same species. Czech Republic developed a summary brochure about IAS from the Union List.

Conferences and workshops are also organised for different types of public. Estonia, Finland, Serbia and Spain organise workshops for schools in particular, while all the national reports mentioned conferences for local and national officers working in the environment or for other professionals whose activity has a link to IAS pathways. These events largely benefit of an active participation of Universities, public and private firms, regional and central administrations. Sometimes, events focus on one species - like in Poland - with an educational campaign on American mink (*Neovison vison*). There are also communication activities organised in places like zoos and botanical gardens, for example in Estonia. The EC is currently developing a Frequently Asked Questions on how the IAS Regulation interacts with the EU Nature Directives in order to clarify the link between both.

In Slovenia, Spain, Turkey and the UK, the building of awareness is also planned within European or national projects dealing with the reduction of the harmful impacts of invasive alien species on biodiversity. An unusual practice is the possibility of setting up a pedagogical sanction, ranging from a fine in Hungary to community services sentences for plant eradication actions in Estonia.

The UK has launched the Invasive Species Week in 2015, which has become an annual event. This event brings together a wide range of organisations to raise awareness of invasive non-native species, highlight on-going work on tackling them and inspiring people to get involved and help prevent their spread. This year's Invasive Species week was focusing on the wide-ranging impacts of invasive species, to highlight the relevance of the issue to everyone.

The UK is also preparing for post-Brexit. The Invasive Non-native Species Regulations 2019, which will follow the EU IAS Regulation 1143/2014, is planned to enter into force after the day the UK leaves the European Union and to retain the strict protections established within the EU. Moreover, an Environment Plan has been published in 2018, including commitment for IAS where work with partners to raise awareness of IAS issue and the need to strengthen biosecurity is mentioned.

#### 3.2 Collecting, managing and sharing information

The second part of the IAS strategy stipulates that accurate and updated information is essential to increase the capacity to identify, prevent and mitigate IAS threats as explain in the point of the European

Strategy. The information mentioned in the country reports concerns biology, taxonomy and geography of the different invasive species, including patterns of spread, pathways to penetrate, etc.

The European Commission informs on the information support system called EASIN, that web services users can use to query a catalogue including 14,000 alien species and retrieve species information and it also publishes reports and develops risk assessments. National reports mentioned a wide range of means to collect data like a State funded Plant Atlas in Estonia.

Moreover, Finland, Hungary, Slovak Republic and Poland management plans on IAS are (or are going to be) all based on data repository on IAS of Union concern and on IAS of national concern which follows national IAS legislation.

Switzerland has a national inventory on IAS which dates back to 2006, but needs to be updated. In Serbia, databases have been established at local level rather than at national one, which is another way of dealing with the issue and sometimes more appropriate. Georgia established an inventory of the 50 worst alien plants threatening biodiversity in the country. The Georgian protected areas' monitoring programs work on invasive alien plants and aim to collect baseline data on the presence of invasive alien plants and to evaluate their expansion rate and impact on biodiversity.

The use of a monitoring plan on IAS appears in the majority of the reports and is used in view of making an early detection and a rapid response (see point 1.6 of the Strategy). In EU countries, this monitoring is based on the relevant EU Directives requirement (Habitats, Birds, Water framework and Marine Directive), but countries like Slovenia improve them with specific monitoring, surveillance and management activities on invasive alien species.

For sharing data, some countries use NOBANIS, GBIF and EASIN. Serbia provides information for international databases namely DAISIE, CABI, and EPPO list of invasive plants. Slovak Republic also has national databases namely CDF and DASS.

An interesting point is that the use of citizens' science is now frequently mentioned because of the very local position of people which can be very useful to collect information on IAS spreading. The authorities have largely understood this issue and developed tools for helping people inform about IAS, but also to be kept informed. For example, the setting up of public available maps in Serbia and Finland allows them to know how and where they can help to stop the spreading.

A very good practice has been identified in Estonia and Czech Republic with the development of a mobile app which enables citizens to report on IAS occurrences and thus contribute to early detections of new invaders and to mapping of spread on IAS. Any detected EU regulation species send an automatic alert to relevant officials. The UK 25 Year Environment Plan has also planned an alert system to detect high priority invasive non-native species. Thanks to the information collected through citizen science, countries like Finland, Estonia, Hungary or Slovenia can develop additional webpages and make information regarding IAS even more accessible.

In Estonia, to face the several documents dealing with IAS on many governmental sites, the authorities have planned to establish a new portal on all biodiversity info including strong IAS. The aim is to have one site for people to refer to. Finland establishes a similar web portal containing information on species, legislation and managing the IAS, as well as images and distribution maps of invasive species within its territory. A geoinformation portal is currently under development in the Czech Republic.

A support research project is also developed by the Czech Republic to collect and manage information.

Finally, a good practice is identified in Spain, where the authorities report on the establishment of a Working Group on IAS. It consists of a meeting between representatives of the different Spanish regions, general administration and experts, aimed at collecting and sharing information and taking decisions about IAS in the country. Spain has also launched a cross-border LIFE project with Portugal to reduce the introduction and spread of invasive Species of Freshwater and Estuarine Systems in the Iberian Peninsula. This project responds to the need of cooperation regarding this issue, which is not a national border limited issue. Cross-border project to fight the IAS spread could be used by other countries with shared natural areas in common like mountains, lakes or seas.

### **3.3 Strengthening national policy legal and institutional frameworks**

In order to provide a global and appropriate response to the IAS issue, the European Strategy highlights that it is necessary to increase the legal framework of national policies, but also the coordination between the different official representing different interests linked to IAS. It also recommends strengthening the competent institutions in each country.

The European Commission, Finland and Spain organised specific working groups on this issue, which can be key for sharing information and for ensuring the participation of different key stakeholders. Switzerland has planned the implementation of a national expert group to keep the information on IAS updated.

Concerning legislation, all the EU countries have already or are currently in the process of adopting relevant legislation to transpose the EU Regulation on IAS. They all have one or more laws or management plans related to IAS. Sometimes they go further than the European legislation, like in Finland, whose legislation contains additional provisions on invasive alien species which are not included on the List of species of Union concern, but which can be considered harmful in the Finnish environment.

For the non-EU countries, either legislation has already entered into force or it is in progress or foreseen. For example, Serbia is about to carry out an institutional and legal-gap analysis assessment of respective provisions of national legislation and suggestions for alignment with EU Regulation on IAS. Switzerland works on the harmonisation and modification of the national law dealing with invasive alien species and the organisation of a strengthened national coordination. An annual report of the current state of the environment in Switzerland identifies areas in which further action is required and IAS are included.

Concerning the coordination of the different actors, each national report explained briefly the distribution of competences of the organs in charge of IAS. When this distribution of competences is not yet clearly defined, like in Serbia, the authorities mentioned that they are currently working on the implementation of an efficient coordination between each institution. These matters are also taken into consideration by the Turkish authorities, as their report explains.

### **3.4 Regional cooperation and responsibility**

One of the main tasks of the Bern Convention is to promote cooperation between its Contracting Parties. Cooperation is evidently essential to tackle the issue of IAS introduction and spreading.

As this point is largely present in the EU IAS Regulation too, national reports of EU countries referred to it. According to the EC, this Regulation enables the application of uniform rules across the Union territory without impeding countries to implement more stringent measures. The Spanish authorities mentioned that the constant communication between the EU countries about possible risks posed by new IAS detection can be very helpful in avoiding unintentional introductions.

The national reports of Hungary and Iceland mentioned their support to the work of the Convention's Group of Experts on IAS, which enables cooperation and information sharing between parties. The Serbian authorities inform about the EU Environment Partnership Programme for Accession (EPPA) in the Western Balkans and Turkey, which has as an overall objective the strengthening of the implementation of the EU environmental acquis in areas relevant for addressing trans-boundary environmental issues. Within a Working Group on Nature, Target 5 "Combat invasive alien species" will be covered through regional cooperation models. Slovak Republic report also gave examples of cooperation between its neighboring countries (Czech Republic, Poland) through LIFE projects. Georgia gave as well an example of cooperation with the development of a joint team of Swiss (University of Fribourg, University of Lausanne) and Georgian scientists (Institute of Botany). They were in charge of the assessment of present and future threats associated with invasive aliens' plants in areas of high conservation value in Georgia.

Finally, another good practice has been identified in the Finnish report, informing about a short animated film produced in collaboration with Sweden and Norway, aimed at making travellers to the Arctic area more aware about how they may inadvertently transport IAS to these vulnerable natural areas. Such an initiative links closely point 2.1 and 2.4 of this report).

### 3.5 Prevention

As the European IAS Strategy explains, Europe particularly needs common approaches to prevention because of the number of contiguous States, the high volume of inter- and intra-continental trade and transport and its extensive free trade arrangements which can facilitate transboundary movements of IAS. Common prevention measures are already in place in some sectors (e.g. plant and animal health) but need to be developed for other activities that can lead to unwanted introductions.

Prevention necessarily involves a better identification of the potential IAS and that is why the European Commission developed an identification guidance - to help identification in the field. Therefore, prevention is closely linked with awareness rising (point 2.1). The EU Regulation requires that the States identify the different IAS pathways. This work appears to be progressing in the Czech Republic, Spain and Slovak Republic and is already done in UK. After this analysis of the pathways of introduction, UK produced pathway action plans and its first one is based on the European Code of Conduct on Zoological Gardens and Aquaria and IAS.

All the national management plans for IAS include measures concerning both intentional as well as unintentional introductions, as stated in the Finnish and Polish reports. As an example, in Spain, import is subject to a prior authorization for any alien species, in order to preserve the national native biodiversity.

The Czech Republic, Estonia, Finland, Hungary and Slovak Republic mentioned their continuous work with customs in order to identify IAS, control importations and supervise compliance with the ban on importation from outside the European Union. Estonia has put in place a ban listing several methods of IAS introduction with a range of classification (black or white list). For Hungary, the work with customs is organised in the framework of a valid cooperation agreement (MoU) between the Hungarian customs authorities and the ministry involved in controlling of IAS.

A practice identified in the Hungarian report is the dedicated rescue centres prepared for housing seized or confiscated animals and plants which are sometimes IAS. These centres have a special quarantine facility for rescued animals and submit to specific licensing rules. Licensing rules also exist in Serbia for containment facilities holding potential IAS (e.g. botanic gardens, greenhouses, arboreta, garden centres, zoos, animal-breeding establishments, fish farms, research institutes). A few countries also report on using the practice of quarantine in international and domestic trade in plants and animals.

In order to prevent the spread of IAS, Iceland has a map of distribution of IAS. This map allows an effective eradication of the IAS concerned.

The IAS issue is also taken into account in EIA in Iceland and Serbia, which lead the project managers to consider the potential risks of their project for the introduction or spread of IAS. Mentioning IAS in EIA can allow a better consideration of the issue and consequently a better prevention and reaction against it.

The Republic of Moldova, as other countries, has developed a management plan on the Regulation on Combating and Prevention spreading of the specific species ambrosia weeds (*ambrosia artemisiifolia*) which contains prevention measures. Armenia also developed a Strategy that mentions IAS and whose implementation helped discover new invasive species within its territory.

### 3.6 Early detection and rapid response

The counterpart to prevention at source (before a species crosses a biogeographical barrier) is prompt detection and intervention post-barrier. Early detection of IAS is essential because of the need for rapid action before significant populations are established.

The EASIN NOTSYS platform, based on a notification system provides the opportunity for exchanging information on early detections and subsequent rapid eradication measures between the EU Member States and the Commission. This notification system is well used by Finland and Spain and its implementation is ongoing in the Czech Republic.

Slovenia also uses an information system for collecting data on IAS with its project LIFE ARTEMIS. This system is presented as a tool for early detection of the appearance of invasive alien species in the environment.

Estonia, Finland and Iceland have a clear dedicated body responsible for the actions of eradication and rapid response with the Environmental Board for Estonia, the Centre for Economic Development, Transport and the Environment in Finland and the Icelandic Institute of Natural History in Iceland.

A relevant point in the Estonian report is the cooperation with contracted partners (including universities, hunters etc.), through public procurement procedure. They even involve landowners in this task, when possible. The Hungarian report also gave an example of cooperation with the case of the Egyptian goose (*Alopechen aegyptiaca*) which implied a strong cooperation between three organisations (Hunting authorities, National Park Directorates and Government Offices). Moldova also reports to have organised good cooperation between different bodies to ensure monitoring and control over spreading of the Ambrosia weed.

Early detection and rapid response is mostly ensured by the field officers. In Serbia, protected area staff is in charge of detection and control measures aimed at the suppression of IAS in these areas.

To achieve the goal of an early detection and eradication, the UK has developed a risk management scheme to support the prioritisation of IAS for eradication. The identification of species for which eradication should be prioritised has been used to define current priorities of eradication and develop contingency plans for species likely to arrive in the near future but also this has been used to estimate their future resource needs related to rapid response. Then, the UK carried out rapid response eradications at a national scale for the identified species that have a contingency plan for each of them.

A new practice has been identified in Slovenia after the detection and rapid eradication of *Procambarus clarkia*. A new technique using e-DNA was used in order to monitor the efficiency of eradication. The results of this new method must be monitored to assess if it is effective and more widely usable.

In Poland, the system of alert is currently under legislative drafting.

### **3.7 Mitigation of impacts**

Prevention cannot totally halt the rate of occurrence of new IAS introductions that is why, after detection, appropriate management measures are needed. These responses must take place in the earliest possible stages of invasion to mitigate adverse effects. The European Strategy gives a lot of management tools example to mitigate IAS effects.

It appears in the national reports that management plans are often developed and sometimes specific plan for each IAS exist (like in the UK) or focus on specific ones (e.g. in the Czech Republic). In fact, the mitigation of impacts is not a European Union responsibility, so every EU Member State must undertake its own actions to achieve this goal. Consequently, all EU member states' reports mentioned management plans containing mitigation measures already in force or to be finalised. In fact, mitigation of impacts is often provided through management of species.

As mentioned in point 2.6, the UK developed a Risk Management scheme to support the prioritisation of IAS for eradication, but it has also put in place a research programme. For example, they are supporting the development of fertility control methods for management of grey squirrels. Finland has also a management Act regarding the risks cause by alien species.

The local level is frequently preferred than national level to tackle the issue of mitigation of impacts. In addition, cooperation is a regular way to deal with the issue of the mitigation of impacts and eradication of IAS individuals. The State Nature Conservancy of the Slovak Republic established cooperation with municipalities in order to help them organise elimination of IAS within their urban areas. Hungary counts a lot on hunters supporting the regulation of invasive species, through the implementation of a huntable species' list and the possibility to hunt IAS which are not officially declared as game species in Hungary, such as coypu. Serbia also considers cooperation while involving hunters, the falconry and fisherman in monitoring and mitigation actions. The report by Serbia also mentioned the possibility of establishing a responsibility for landowners and relevant stakeholders to prevent or control further spread of listed invasive alien species. Spain mentioned that specific LIFE projects are also undertaken to mitigate the impacts of some IAS.



In addition, the Regulation for ambrosia weeds in Moldova establishes rules and responsibilities for the actors' responsible for land management to mitigate the hazards caused by the mentioned weed on human health and to ensure a healthy living environment.

In the different reports, it appears that mitigation of impacts has not been a priority compared to eradication actions, although it should be considered first according to the European Strategy.

### **3.8 Restoration of native biodiversity**

This final point of the strategy underlined the need to adopt a holistic approach to go further than the defensive approach and to support restoration measures for species, natural habitats and ecosystems that have been affected by biological invasions. Increased resilience of native biodiversity can in turn provide greater protection against re-invasion or new incursions.

According to the EU regulation, it is the EU Member States' responsibility to undertake restoration measures to assist the recovery of ecosystems affected by IAS. The same will obviously go for other countries, parties to the Convention. However, in the national reports, activities on restoration of native biodiversity are less mentioned, although some actions can be highlighted.

Iceland promotes the use of native plant species of known local provenance in landscaping revegetation and erosion control. On the same page, Slovenia promotes the reintroduction of native species after IAS eradication actions - in the project LIFE for LASCA, a native fish species has been reintroduced into its former distribution. Serbia also develops the revitalisation of natural habitats with expert inspections to implement as efficiently as possible measures for protection against the spread of invasive species in protected areas, ecological network habitats and ecological corridors. In Spain, after the recovery of a habitat, actions of restoration and improving native biodiversity are planned as a measure of avoiding new invasions. Another LIFE project taking place in Slovak Republic is related to the protection of specific habitats against IAs threats within a Site of Community Interest.

Finally, the UK is reinforcing the capacity of its Overseas Territories to resist to IAS invasions in improving biosecurity with specific pathway analysis for example.

As a good practice, the Serbian report mentioned gene banks and sperm cryopreservation that has started in the Laboratory of Hydrobiology and Centre for Conservation of Biodiversity and Fishing in inland waters. This conservation could be used to restore biodiversity in areas where IAS have been devastating for native species.

## **4. Use of the Bern Convention Codes of Conduct at national level**

### **4.1 Examples of the use of the Codes of Conduct and information on the main bodies in charge of their use**

The use of the Codes of conduct developed under the Convention has been advertised and advised a lot in the past years. The European Commission also considers that countries can use the Codes of Conduct to support their work while developing their action plans on priority pathways of unintentional introduction of IAS.

Yet, many countries do not use the Code of Conducts for various reasons. In Estonia, they pointed the financial lack to translate them. In Finland, priority is given to the implementation of the EU and national IAS legislation, which is already very time and resource consuming.

Nevertheless, in some reports, it is mentioned that these codes have been a source of inspiration for work on IAS at national level. This is the case for Iceland which has not implemented the codes directly but adapted their principles and recommendations for their needs. Slovenia also used the principles of the codes in communication and building awareness activities. Serbia used the European Code of Conduct on Recreational Fishing and IAS, on Protected areas and IAS, on Recreational fishing and IAS and the one on plantation forestry.

Poland used the European Code of Conduct on Horticulture and Invasive Alien Plants to establish a national code on this subject. This national code was published and accompanied by a brochure, leaflets on each species and a poster. Besides, there also was a dedicated web page developed and it was

promoted in the fair for environmental protection in Poland. This achievement gave a real visibility to the European Code but also to IAS identification and prevention.

Spain also used the European Code of Conduct on Horticulture and Invasive Alien Plants in the frame of its project LIFE INVASEP, especially for elaborating the national code of conduct to prevent trade of invasive alien plants. This code is used by the Czech Republic, which has translated it into Czech language and distributed to relevant stakeholders. The Slovak Republic reports it has used it as well as all the other codes.

Moreover, Poland has translated into Polish the nine Codes of conduct or guidelines on IAS and sent the Codes to relevant stakeholders to apply them as appropriate. In Finland, the body in charge of the use of the Codes is the Finnish Advisory Board for IAS. In Poland, it is the General Directorate for Environmental Protection promotes implementation of the Codes. In Serbia, the stakeholders in charge of the implementation of the codes are the managers of protected areas and fishermen where there are invasive fish species present in the watercourses. Other local bodies participated to this implementation for invasive plant species. Serbia also counts on cooperation with medias and NGOs in raising awareness of the negative effects of IAS. In Slovak Republic, the bodies involved are mainly Plant Health authorities, the Slovak Union of Gardeners and horticulture actors.

Finally, in Spain, a draft of the future code of conduct based on the European Code of Conduct on Horticulture has been presented to representatives of ornamental horticulture and nursery sector during a meeting.

#### **4.2 Benefits and challenges linked to the implementation of the Codes of conduct**

On the one hand, all national reports state that the Codes of Conduct are considered as very useful tools for reaching out to specific sectors and actors and increasing their awareness of the problems posed by IAS. One of the benefits noted by all the reports is the inspiration that the Codes represent to improve state and local policies on IAS.

Poland also considered the codes as a contribution of knowledge and good practice to society and stakeholders, who are usually not familiar with IAS issues. In addition, the recommendations, made by an international Convention, bring higher political importance to an issue which should be solved.

A main challenge noted by Estonia, Finland, Hungary and Slovak Republic is the translation of the codes into national languages, which represents a significant investment of time, manpower and financial resources. Hungary showed that since the European Strategy has been translated into Hungarian, it has been used at national level easily in helping different stakeholders. Translation of the Codes into national languages is therefore a game changer for ensuring they can be used by the various competent levels of governance, including the local actors, as a main link between policy/legislation and practical implementation.

The European Commission pointed out an emerging challenge with the implementation of the codes of conduct which is the evolution of the EU Regulation that put in place new or different obligations for sectors that may already have agreed on voluntary measures through a code of conduct. Therefore, there might be a need for discussing the issue and for harmonization between the different legislation and requirements at different level.

A last challenge raised by Spain is that, unfortunately, a voluntary code has a little impact compared to a mandatory standard already implemented.

#### **5. Work on the effects of IAS on pollinators**

Globally, Contracting Parties are aware of the threats that IAS causes on pollinators but have not initiated direct work on this subject.

Estonia mentioned several studies on pollinators and the current monitoring of their decline. Mostly, this issue is taken into consideration in other studies and in the implementation of measures against IAS. Spain also mentioned an advanced draft of a national plan of action for the conservation of pollinators, which considered the issue of IAS like *Vespa velutina*. Finally, Serbia initiated three projects that may be considered as initiation of work and good base for assessing the role of IAS in the decline

of insect species and more specifically pollinators. Slovak Republic also began such programs for protected and threatened insect species.

On the 1st of June 2018, the EC adopted a Communication on the first-ever EU initiative on pollinators. This identifies IAS as a key threat to pollinators. The European Commission has commissioned a contract for technical support related to the implementation of this EU Pollinators Initiative. Under this contract, guidance is being developed in support of the initiative's specific action to reduce the impacts of IAS on pollinators. This guidance is expected to become available by end of 2019. Thus, this initiative appears as a good start in assessing the effects of IAS on pollinators and it should be closely followed in collaboration with the EC to improve the work done on this issue at a pan-European level.

Regarding the inclusion of IAS in management plans for threatened or declining insect/pollinator groups, the European Commission informs that EU Member States may be implementing further management plans for threatened or declining insect/pollinator groups. Estonia has planned to do so with a compilation of studies carried out, that leads to a pollinator action plan including a part dedicated to IAS' threat to them. Hungary has already implemented such management plans dealing directly or not with IAS and planned to draft new management plan that include some important pollinators.

## 6. Work on the identification of ways of dealing with climate change effects in IAS management

Regarding the identification of ways of dealing with climate change effects in IAS management today, again the European Commission informs that the EU ISA Regulation requires for Member States to consider "foreseeable climate change conditions" when carrying out risk assessments for IAS.

The importance of this issue is well taken into consideration by countries. For example, Estonia considered climate change as one of the main factors having an effect on both establishments as well as species surviving the transport to Estonia. Iceland also worked on detection of main effects of climate change and IAS have been one of the targets. Spain has funded some research on the effects of Climate change on biological invasions. The Slovak scientific institutions are actually dealing with this issue with a project related to the effects of non-native black locust forests on vegetation diversity and change in microclimate. In Poland, testing of management methods of IAS includes part of the climate change on invasiveness on 118 invasive alien species. Armenia specifically worked on the modeling of the distribution of *Ambrosia artemisiifolia* under climate change. The Czech Republic considered this issue in its National Action Plan on Adaptation to Climate change with a specific target on IAS. The different research efforts quickly mentioned here are detailed in document T-PVS/Inf(2019)11 - Compilation of the reports.

The European Commission further informs it has funded two studies that include 20 risk assessments for the purposes of the EU IAS Regulation. Each risk assessment includes an estimate of the effect of climate change on the potential distribution of the respective species.

All this work can be considered as very promising for the consideration of the link between climate change and IAS, as incontestably, these have a strong and complex cause/effect relation. Good practice sharing in this field should be promoted.